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

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Welcome

Welcome to the December 2000 issue of ATPM. Issue 6.12 contains the following articles, reviews, and features. Before we introduce them, though, here is a short look at what happened in November. Happy Holidays!

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Mac News

This November was relatively quiet in terms of major Mac news.

- Apple's marketing vice president, Steve Wilhite, left.
- Oni, the much anticipated game from the former Bungie, finally went gold for PC, with the Mac version soon to follow. The game is said to be released on January 29, 2001.

Poll

Last month's reader poll asked whether you own(ed) any Apple stock. Nearly 50% said that they currently owned Apple stock, while 6% don't now, but used to. This month we want to know how important you think printed manuals are. Go cast your vote; we promise not to take too long figuring out what you voted for.

Columns

Apple Cider: Tidings of Comfort and Joy?

Tom Iovino discusses how anonymity on the Internet can lead to increased profanity and rudeness. Remember that we are dealing with real people and that we should treat them as such.

> "As we enter this year's holiday season, however, I have to wonder about that spirit of friendship and good will toward men, and just how many people actually possess it."

Beyond the Barline: The People vs. the Recording Industry—Part III

David Ozab analyzes three major events in the online music industry: Napster's partnership with Bertelsmann, the conclusion of Universal Music Group's lawsuit against MP3.com, and the official Napster client for the Mac.

> "Who Loses? First, the members of the Napster community. Again, I feel no pity toward them. They associated with thieves and attempted to justify what amounts to petty theft. Now the thieves are in league with even bigger thieves, namely record execs. The old saying, 'there is no honor among thieves,' summarizes a tough lesson for the Napster community."

About This Particular Web Site

Paul Fatula introduces us to LangMaker, your own language generator; ResellerRatings, a rating service for online computer vendors; McSweeney's Internet Concern, a quirky e-zine; Typing Injury FAQ, which informs us about RSI and similar problems and offers advice; and How Stuff Works, which explains the intricacies of how common household items operate.

Graphics and the Internet: Part IX—PNG

Grant Osborne continues his series on *Graphics and the Internet* with an introduction to the PNG file format.

> "One of the other reasons PNG hasn't taken off is ignorance. Whenever you read an Internet graphics tutorial, all you read about is GIF this and JPEG that. PNG rarely gets a mention. It would be good if PNG took, but history has shown that the stronger product doesn't necessarily win the market."

How To: Buying a CD Burner

Gregory Tetrault explains what to look for when you decide to buy a CD burner.

> "First, you should decide whether you want both CD-R and CD-RW capabilities. If all you want to do is create music CDs, only CD-R is necessary. However, if you don't already have a good, high-capacity backup system (like a DAT tape drive), then I recommend you get a CD-R/CD-RW drive."

Reviews

Beach Head 2000

Gregory Tetrault explores Beach Head 2000, a panoramic 3D arcade-style game that puts you in charge of defending a beach head by shooting incoming attackers.

> "BH 2000 joins the long list of games that miss out on greatness because they were ported from Windows. In spite of BH 2000's problems, I enjoyed playing the game. BH 2000 becomes addicting because it's fun to blast lots of enemies and to see if you can reach the next level. The ability to save levels decreases the frustration factor: you can reload a level and try different tactics. This game would receive a Very Nice rating if all the bugs and omissions described above were fixed."

GoClick 3.0.1

Eric Blair introduces GoClick, a nifty Chooser extension that lets you to convert documents to HTML by using an application's Print command.

"I was skeptical when I read how simple GoClick made creating Web pages. Typically, if something sounds too good to be true, it usually is. That's not the case here. GoClick lives up to its lofty billing. There are a few bugs and annoyances that keep GoClick from getting an Excellent rating—mostly the fact that two of the bugs involve major applications on which many people rely—but it is easily the best approach to graphical Web page designing that I have ever seen."

Making iMovies (book)

Jamie McCornack's book review explains why this is a title every aspiring director should own.

"These sins (except for the last one) go back to the 60s, when 8mm movies reached the masses. If you're too young, ask your folks if they remember visiting friends to watch their vacation movies. They'd sit in a darkened room, nursing mixed drinks and nibbling party snacks made from breakfast cereals, while Ralph narrated, 'Here's Martha and the kids standing by the Grand Canyon and waving—except for Clarissa, she's the shy one.'"

Understanding Interactivity (book)

Paul Fatula shares his own insights on interactivity and its role in the computer revolution in this extensive book review.

"Let me be totally up front with you: I want you to read this book. Understanding Interactivity is about just what the title leads you to believe. It gets you thinking about what interactivity is, how it should be used, and how little it is used to good effect in most programs and Web sites that you see today. Rather than being a programming book that tells you how to write code, it tries to give you an idea of how programs should work in order to give users an enjoyable and productive experience."

ZephIR! 1.02b1

Gregory Tetrault reviews ZephIR!, an ADB solution that lets Mac users control various devices with a virtual remote control and complex AppleScripts using an infrared transmitter.

"When I read about ZephIR! I got excited. The idea that I could control all my audio/video equipment with my Macintosh had great appeal. I ordered and installed both ZephIR! and X-10's POWERMID. However, my excitement waned after spending hours trying to create virtual remote controls. It diminished further when I couldn't overcome Playlist and Custom Remote problems even though I am a proficient AppleScript programmer. ZephIR! needs a thorough manual, active help features, extensive offline tutorials, and a larger library of prebuilt components."

Extras

Cartoon

For unto us a child is born…find out why he is real special.

Desktop Pictures: Reader Submissions

Enjoy desktop pictures from various readers, presenting a wide variety of topics such as leaves, ranch landscapes, an Irish Pub, Southern France, the Oklahoma City Bombing Memorial, and Puget Sound.

Trivia Challenge: NCAA Basketball

This month, Edward Goss challenges you to match colleges/universities with their corresponding basketball teams.

Deadly Web Sins

I disagree that long text should be broken into screen-sized chunks. That makes the whole process read a bit, stop, click, wait, wait some more, read a bit, stop, click, etc. I always think that people break articles up so more banner ads can be served.

Please! Let the whole article load! Even if it's long. We can start reading while the rest gets downloaded. Reading further in the article is a simple page down, not the click, wait, wait, read process.

—Tim Selander

I agree that some Web sites are guilty of breaking down articles into unusably small parts. Who wants to have to load a new page after reading every paragraph anyway?

When writing that piece, I was referring to those Web sites that have pages that scroll on for miles and miles, particularly those with lots of images. These can take some time to load, and if a visitor doesn't see the page load up in a few seconds they are inclined to click back to another site.

Remember: if a visitor has found your page via a search engine, your site may be one of many with similar content. If your page doesn't load swiftly, there are many others that could.

Your comments are entirely valid. If an article is split over several pages, it would be certainly nicer to have an option to "see whole article," especially for printing purposes. There's nothing worse than having to do lots of cutting and pasting, just to get a printout. *—Grant Osborne*

A Worm in the Apple

I was just reading the responses to A Worm in the Apple and felt I had to respond. I am, I guess, an "average" Mac user—fairly intelligent, fairly educated, and also fairly results-oriented. The Mac is designed to let the customer do what he wants, and isn't that the main motivation to buy a computer in the first place?

I always have to laugh when I buy dual-platform software, because I know I'll have been using it for half an hour before the Wintel user has managed to get it installed. I don't have to learn a lot of stuff I don't want (or need) to with the Mac. I just start doing what I wanted or needed to do with it.

I knew nothing about HTML or JPEG or any of that Web design stuff, but, after buying Adobe GoLive and a how-to book, I had a Web site online in four days. This was only possible because the hardware didn't get in my way. My seven-year-old son mastered the basics of working with the Mac in two days, even though there were problems with the printer driver that continually caused the computer to freeze. This was a blessing in disguise, for my son learned one of the most important rules of working with computers—*save* your work, *often*!

And all of this hullabaloo over chip speeds—c'mon guys, how many users even notice the difference, really (a faster download doesn't mean you can read your e-mails any faster)? I'll stack my iBook SE against anything the Wintel world has to offer; for speed, simplicity, and value-for-money, the Mac simply cannot be beaten.

—Chris Jones

• • •

I am one of those "Please don't let Apple die" people. I love my Macs and hate the thought of being reliant on PCs. I have one of those PCs here on my desk next to my Mac (heresy!) to remind me of how much more efficient the Mac is than the PC.

Apple seems to always find a way to screw up its advantage and find another once they get close to the bottom of existence. Why does this happen? I seldom hear moans from PC makers. Why must Apple always provide the doom and gloom scenes for the computer world? They have by far the best machine. If you don't believe me, then buy a PC and compare regular functions with a Mac.

Are we (Apple) in danger of "going broke" again? If so, then I want to buy enough Apple equipment to last me for the rest of my life!

—Jim Hathorn

Digitizing Audio from Vinyl

Can you suggest where I can find Mac software for converting vinyl audio recordings to digital? I know you guys aren't a music audio magazine, so I was reluctant to approach you. It is a last resort.

—Jim Brunswick, Toronto

Assuming that you have your stereo plugged into your computer, any audio recording software will do the trick. I personally like SoundEdit 16 from Macromedia because it is very powerful and has a lot of filters for cleaning up sounds. Adaptec Toast also has some utilities for tidying up the clicks and pops in vinyl before burning them out to CD.   —Evan Trent

RealAudio

In the November 2000 issue of ATPM, in a [letter about RealAudio files](#), David Kettlewell wrote:

> "The files are a bit quiet and I would have liked to normalize them in my sound editor…"

This would be a big mistake with RealAudio files. RealAudio uses a lossy compression format; in other words it "throws away" lots and lots of information that it decides is not necessary, in order to get all the information in the audio through the extremely thin pipe available when streaming audio over the Internet. One of the downsides of lossy compression is that any digital manipulation of the audio, such as normalizing or equalizing needs all that other information that is no longer present in the .ra file, and will completely destroy any faint resemblance to audio quality still left in the RealAudio. Evan Trent properly advised amplifying the sound in the analog realm, but I wanted to mention why that was important.

—Trevor Zylstra

Tidings of Comfort and Joy?

Now that we're in the holiday season, it's time for the networks to dust off the old classics and show 'em over and over again until we're ready to barf.

You know the ones I'm talking about. *It's a Wonderful Life*. *A Christmas Carol*. *Frosty the Snowman*. My favorite is *How the Grinch Stole Christmas*. No, not the current Jim Carrey movie, but the old, animated Dr. Seuss classic.

For those of you not familiar with the story, the Grinch hates the arrival of the holidays because all of the Whos in Whoville celebrate so much, it gives him a headache. To derail the Who Holiday celebration, the Grinch devises a plan to snatch the holiday spirit right out of Whoville.

After the Grinch swipes all the presents, decorations, and food for the next day's festivities, the Grinch is surprised to see—and hear—the Whos celebrating the holiday as if nothing had happened. At that, the Grinch realizes that it's not the trappings, but the friendship and love we share that makes the holidays.

Ironically, the live-action version of this tale is one of the most heavily commercially sponsored movies I can remember.

As we enter this year's holiday season, however, I have to wonder about that spirit of friendship and good will toward men, and just how many people actually possess it. Oh sure, during holiday seasons past, not everyone in the world was enjoying peace and harmony. Witness the Battle of the Bulge in 1944 for a classic example. But, now, with the Internet and the anonymity that comes with it, have we somehow lost that spirit?

We all get frustrated or angry from time to time. If the teller at the bank makes too much small talk with a customer ahead of you, or the doctor keeps you in the waiting room when you were on time for a scheduled appointment, it can make you angry. To a certain degree, it's okay to react to this impulse of anger by, say, breathing deeply to calm yourself down.

But there comes a point where behavior is unacceptable. Even those involved in the retail industry—where schmoozing customers is the number one goal—will not hesitate to ask belligerent customers to leave the store if they become abusive. While employees may typically be asked to exercise a great deal of patience, managers know there is a certain level of employee dignity that needs to be preserved, even at the cost of a sale. That's just the way things are, and people usually understand when they're getting close to the point where they're about to go overboard.

Why, then, does it seem that quite a few people on the Internet believe that these mores don't apply in the virtual community? Last month, with the U.S. presidential elections bearing down on us, I thought it would be funny if I strung together a few notable quotes from political figures. As the issue went to bed and was posted on the Internet, I was thinking that my choice of quotes would provide some entertainment to our readers. And I'm sure that it did.

But not for everyone. In the days that followed, I received a few blistering e-mails from some of our readers who believed that my choice of quotes appeared to be skewed toward supporting Al Gore over George W. Bush. In one, the writer didn't mince his words:

> I am stunned that you would take the risk of alienating avid fans by placing a Pro-Gore Anti-Bush Sentiment.…Well I for one will gladly say….Go F%#k Yourself!!! Stay the f%#k out of Politics and stick to the Mac.…Or maybe you should vote for Al Sharpton's pal…Nader!…and please…feel free to remove me from your e-mail subscription list.

For years, my mom and dad told me not to talk about politics or religion, because some people aren't able to differentiate the two, and defend their views on both with an equal amount of zeal. But wow. This e-mail took my breath away. First of all, this writer doesn't know my political views or how I stand on certain issues. To be honest, I'm a conservative leaning moderate, a registered Republican, and I voted for W. Of all of the quotes I

selected for my column, only one was made by a presidential candidate, and that one was made by Al Gore, and only because it had to do with his claimed creation of the Internet. In fact, I purposely looked for quotes from conservatives and liberals alike. But because one of the most prolific gaffe-makers in history (Dan Quayle) happened to be a Republican, this reader somehow thought I was attacking the Republican candidate for president.

Politics aside, how is it possible that a person can feel so free to dash off a scathing, vulgar e-mail to a person he has never met in his life, who has never once done anything to personally offend him?

The answer is anonymity. Unless someone has absolutely no control over himself, he would never consider, say, walking into a grocery store and spewing profanity at a cashier. Once you have to look into the eyes of someone you want to berate, you realize that there's a person there—someone's son, daughter, mother, father, cousin, best friend, or co-worker. Someone with a life and real feelings (and someone who can call the police and have you escorted off the premises).

On the Internet, however, when you look at that Outlook Express e-mail form or at the reply box on a newsgroup, it's easy to pretend that the person on the other end has no feelings. In fact, some people may even forget that they are interacting with actual humans, as they would over the telephone or in person.

You just have to divorce yourself of that idea.

Don't get me wrong. There are *plenty* of things to disagree about, and the free exchange of ideas—even if the ideas are at opposite ends of the spectrum—is what makes the Internet unique. What you do have to remember is that those are real people out there and that it's wise to mind your manners.

A few days after I received the first e-mail, I received another about my October column from a reader in England. While he disagreed with some of my stands on the issue, he never once resorted to profanity or insults. He agreed with some of my points, and helped me see that there was indeed another side to the argument. Through the process, not only did I enjoy the exchange of ideas, I learned something about our readers: namely, that for each person out there who resorts to profanity and insult, there's at least one who

wields respect, a keen mind, and a sharp wit. Remember this holiday season that the words you read on your computer screen were written by real people who have real feelings as well.

During the American Civil War, a Union General prepared a scathing letter regarding the performance of one of his subordinates. He showed the letter to Abraham Lincoln, and the President contemplated the words the commander had penned. Mr. Lincoln suggested that the General tear up his letter and write a new copy, knowing that the General's anger would have subsided after some time had passed. Before you hit that send button, you might recall the wisdom of Lincoln. That way, we might all have a Grinch-like revelation, and keep the holiday spirit alive year-round.

Happy holidays to each of you.

The People vs. the Recording Industry—Part III

Last month, three major news items surfaced regarding the ongoing MP3 copyright controversy. First, Napster partnered with former opponent Bertelsmann (parent company of RIAA member BMG). Second, MP3.com reached a deal with Universal Music Group, the last remaining RIAA member from the original suit. Third, and most importantly for Mac fans, Macster was re-released as the official Napster client for Macintosh. An artist's take on all three items follows.

A Marriage Made in…?

The Napster controversy took an interesting turn when Bertelsmann (the parent company of BMG, Barnes & Noble, and CD NOW) entered into a deal with the online MP3 swapping company, and thus broke from the copyright infringement lawsuit brought by the Recording Industry Association of America (RIAA, which also includes Universal, EMI, Warner, and Sony). Now the controversy is between Napster and its members, who fear an end to the free music sharing (and some would say theft) service. I have little pity for Napster members, for the sole reason that they got something for nothing for too long. The real question is, "Who benefits from this deal, the artists or the record company?" In an attempt to answer this question, I went straight to the sources—the press release and "Q and A" posted by Napster on their Web site. The information, placed here voluntarily, speaks volumes.

What Napster and Bertelsmann Want You to Believe

The press release announces the settlement and subsequent "alliance" between Napster and Bertelsmann. The motivation, according to Napster, is to "find a system that rewards artists for their work when members of our community share their music over the Internet." In the long term, this will mean transforming into a "membership-based service." The "Q and A" attempts to reassure existing Napster users that the character of the service won't change, and that a "free service" will remain after the fee-based membership is implemented. It also reaffirms Napster's independence.

What They're *Really* Saying

Though they claim to be striking this deal on behalf of artists, BMG is a record label, and their investment is about their financial return. It is Napster's agreement with BMI (Broadcast Music Inc.) and negotiations with ASCAP (American Society of Composers, Authors, and Publishers) that will ultimately protect artists, as most artists write their own work (as they have for decades) and make the bulk of their profits from royalties. In the few genres where independent songwriters still make a living (principally country and some Top 40 pop), all the profits come from royalties. In both documents, Napster glosses over the distinction between record labels (the RIAA) and performing rights organizations (ASCAP and BMI), and ignores their radically different goals.

As for the free service, I expect it to remain only as a demographic tool for BMG. Tracking the exchanges within the Napster community will provide BMG valuable information, not only about their own artists but competitors in the same genres. BMG could also turn around and sell this information to other interests. The RIAA's member labels already tried this with their own sponsored service Myplay.com, which never came close to the success of either Napster or MP3.com. (See my column in issue 6.06 for my take on Myplay.com).

Who Loses?

First, the members of the Napster community. Again, I feel no pity toward them. They associated with thieves and attempted to justify what amounts to petty theft. Now the thieves are in league with even bigger thieves, namely record execs. The old saying, "there is no honor among thieves," summarizes a tough lesson for the Napster community.

Second, the artists, who will gain almost nothing from this deal even though they are the ones who bring the record companies all their profits. As long as the RIAA can retain their monopoly on distribution, artists will see next to nothing.

Third, Napster. BMG is just one of the five members of the RIAA. Who knows what the price of a settlement will be for the other four, if they decide to settle at all? Napster could face the same situation as MP3.com did earlier this year when, after MP3.com settled with the other four members, Seagrams (parent company of Universal Music Group) took them to court anyway. In fact, I wouldn't be surprised if this exact same thing happened to Napster. Where will it end up then? Will Napster be able to meet its end of the bargain with BMG and any future partners while paying out a judgment, or will the terms of repayment be Napster itself?

Fourth, ultimately, the RIAA itself. No monopoly lasts forever. As more artists realize that the Internet provides a far more lucrative method of distribution than record labels, they will break off on their own and the record industry will have to pay more money to keep as many artists as they can. Finally, we'll have some competition between labels and "freelance" artists and everyone will benefit.

Meanwhile, in Another Courtroom

Universal Music Group received an award of $53.4 million in their copyright infringement suit. Concurrently, they announced a non-exclusive North American license for the use of their recordings on MP3.com's MyMP3 and BeamIt services. According to Universal, "It was never our intent to put MP3.com out of business," but merely to assure that "copyright owners and artists need to be properly compensated for use of their work."

But Universal is not a performing rights organization either. Neither the judgment nor their subsequent deal with MP3.com will increase artists' royalties. Both, however, will increase record company profits at the expense of both artists and consumers.

None of the press releases issued over the last several months have disclosed details of the individual settlements. Having frequented MP3.com both before and after the court case, though, I can hazard an educated guess. Since July, when EMI became the first label to settle, the MP3.com site has undergone a noticeable change. Now, when you want to play or download a track from an independent artist (we are still the backbone of MP3.com) you must enter your e-mail address, country, and postal code. Upon entering this information, a cookie is stored on your hard disk to identify you during subsequent visits. Who gets this valuable demographic information? The RIAA.

Finally, Macster Becomes Napster

For those of you who frequent Napster (and are still reading after I called you thieves) there is some good news. Macster, the most stable and feature-rich Napster clone, has been adopted as the official Napster client for Macintosh. I tried it out (purely for journalistic reasons, I swear) and found a few improvements that bring it up to par with the established Windows application. So if you're going to frequent Napster, now seems to be the best time with free access and a fully-functional Mac client.

I ask one more thing, though, as an artist. Sample songs, not whole CDs, and buy the ones you like. At most, my "Downloads" folder was about 200 MB in size (equivalent to three CDs in length) and I sampled the tracks as part of the process of planning CD purchases. I never offered any for upload, and I dumped them after I evaluated them. Maybe I'm the one making excuses now, but I know that I haven't cost any musicians a dime in royalties. The RIAA could never honestly claim that.

About This Particular Web Site

by Paul Fatula, pfatula@atpm.com

LangMaker

Web: http://www.langmaker.com
Create Your Own Language

Aren't you sick of all the rules and exceptions to rules and irregular verbs and strange tenses that plague English? Well, stop complaining and do something about it: Create your own language! This site contains a "How To" newsletter for people wanting to create their own model language, a basic English word list to get you started on vocabulary, and a link to a free program designed to let you "Invent your own language in minutes." (Sadly it's Windows-only, but the source code is available, so feel free to port it to your Mac.) The site also contains information about a staggeringly long list of invented languages, from Furbish to Pitakosilano. Sometimes silly, sometimes serious, and always obscure, this is your one-stop source for made-up languages.

ResellerRatings

Web: http://www.resellerratings.com
Comments & Ratings of Hardware Resellers

One of many sites of its kind, ResellerRatings lets you view and post opinions of the many computer hardware vendors online. I'm a bit partial to this site over others such as http://www.bizrate.com because it saved me from buying a digital camera from a company whose customer comments are enough to give nightmares to any Internet shopper. The customer comments give you a much better idea of what a company is like than a mere numerical rating, even if it makes for lengthy reading (depending on which reseller you're checking up on). Before placing an order from a company you've never done business with, check out this site.

McSweeney's Internet Concern

Web: http://www.mcsweeneys.net
McSweeney's Quarterly Concern, on the Web

The Internet version of the very small print journal, *McSweeney's Quarterly Concern* ("a quarterly journal published three times a year and distributed as best we can") ranges from humorous to experimental to inane, with a new article posted every day on topics

such as "Shampoo" and "What 100 People, Real and Fake, Believe About Dolores." The zine is edited by Dave Eggers, whose *Heartbreaking Work of Staggering Genius*, published earlier this year, pretty much lives up to its name. This is also the place to find out about the public appearances of Neal Pollack, who is unquestionably the best writer who ever lived. McSweeney's is well worth checking out if you're amused by that kind of thing, otherwise just throw it across the room.

Typing Injury FAQ

Web: http://www.tifaq.com
All About Repetitive Strain Injuries

While this site provides lots of information for people who suffer from Carpal Tunnel Syndrome and other injuries caused by excessive computer use, my favorite section of the site is its listing of alternative input devices. There are many different keyboards designed to prevent (or at least minimize) RSIs, but finding one can be difficult, especially if Mac compatibility is an issue. This the place to start looking. Similar information is offered for furniture and mice, so go ahead and design your ideally ergonomic workstation, even if you could never afford it.

How Stuff Works

Web: http://www.howstuffworks.com
The Name Says It All

Go here satisfy your curiosity about common household appliances, electronics, foods, computers, car parts, and even Big Brother's best buddy, Carnivore. The site is generally not too technical; it won't give you all the information you need to make your own widget, but it will give you a good layman's understanding of things. In addition to an item works, you'll find out about its history. And the site's search engine makes it easy to find whatever you're looking for; you can even browse by category. There's also an article on how How Stuff Works works for the self-referentially inclined.

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Part IX: PNG

The PNG format (Portable Network Graphic, pronounced PING) has often been touted as a replacement for GIFs, but so far it doesn't seem to have taken off. This month we're going to find out a bit more about it.

Currently, you'll find two main graphics formats on Web pages: GIF and JPEG. GIFs and JPEGs are pretty wonderful but they can also be a little bit irritating at times, too.

GIFs are lossless so you won't lose any image quality, but they only support up to 256 colors. JPEGs support millions of colors, but they are lossy and aren't particularly good at rendering text. File sizes are significantly reduced by JPEG compression, but the resulting quality can be poor.

As you can see, both image formats have their limitations. PNG gives us an alternative.

One problem with GIF is that it is not an open format, meaning that if you plan to write some GIF creation software you'll be required to obtain a licence from Unysis. That may be okay for big companies like Adobe, but not so fun for freeware and shareware programmers.

In 1994 Unysis started actively chasing up these licenses. As you can imagine, the Internet community was annoyed, so a group of enthusiasts led by Thomas Boutell put together plans for a better, free, lossless graphic format to replace the GIF: PNG.

I feel that the following are the major features of the PNG file format.

Colors

While GIF only supports 256 colors, PNG supports 'truecolor' images.

Transparency

GIF lets you choose to make a certain color transparent so everything underneath shows through. However, if you have a shadow edge (for example) on an image, unless you know the background color, the resulting image will look odd. PNG supports alpha-channel transparency so that regardless of the background the image is placed over, it looks fine. This is better explained in the example below.

As you can see, the shadow area on the GIF image doesn't look as good as the PNG.

File Size

PNG boasts file sizes up to 25% smaller than GIF.

Gamma Correction

That sounds a bit scary, doesn't it? Well, it's not as bad as it sounds. Images created on a Mac generally look darker on a PC, and PC-created images look paler on a Mac. This is because different computer systems and monitors interpret color values differently. Gamma correction makes allowances for these differences. PNG supports gamma correction, so a PNG image should look almost identical on all major platforms.

Animation

Unlike GIFs, the PNG format doesn't support animation—which, believe me, is a *good* thing!

So Why Hasn't PNG Taken Off?

While PNG has been accepted by the World Wide Web Consortium (W3C), and most image editors (such as Photoshop, CorelPaint, and GraphicConverter) can write PNGs, browsers have been slow to accept the format and to implement support for all of PNG's features. This is happening gradually; if you want to use PNG images, try them out on a few non-essential images on the site and see what visitor feedback you get.

Netscape (Mac & PC) from version 4 and Internet Explorer from version 4 (PC) and version 5 (Mac) all support the PNG format, although they don't yet fully support all of its features. iCab supports PNG very well, but doesn't support some features like gamma correction. To see if your browser supports PNG visit this page. The image is quite large, which gives you the opportunity to see PNG's interlacing as it downloads.

One of the other reasons PNG hasn't taken off is ignorance. Whenever you read an Internet graphics tutorial, all you read about is GIF this and JPEG that. PNG rarely gets a mention. It would be good if PNG took, but history has shown that the stronger product doesn't necessarily win the market.

• • •

Although this column has covered just the basics of PNG, you can learn more at the PNG Web site. If there is enough interest, I may return to PNG in a future column.

Happy holidays, everyone!

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Extras: Desktop Pictures

This month we feature desktop pictures from ATPM readers. About the particular motifs:

Ranch (9 images)

These pictures were taken by Anne and Tony Harris on their 25-acre ranch in Marin County, CA (where they plan to build a two-story home that they picked out from an Internet site). Tony teaches multimedia classes at San Marin High School in Novato and Anne is an Assistant Principal at San Jose Middle School in Novato. They are both avid Mac users, although Tony uses both platforms in his classes. The pictures were taken with a Kodak throw-away camera, and Janet Mobley scanned them in using her Epson Stylus 870 scanner.

Leaves (6 images)

The pictures were taken by Jens Grabenstein on Long Island and in New York's Central Park. He shot them with a Canon EOS 300 using a 28–80mm zoom lens and 200 ASA 35mm Kodak Gold film. The images were scanned using a UMAX flatbed scanner and resampled and retouched with Adobe Photoshop 5.5.

Durras Pub (1 image)

This is a picture that Pat Maguire took in Durras, West Cork, Ireland (the birthplace of his great grandfather). It is the end of one of the Pub walls (Public House a.k.a Inn)—one of six in a village of 150 people—all of them thriving. :)

Southern France and Oklahoma City Bombing Memorial (8 images)

These pictures were taken by Barry in Southern France and along the Canal du Midi as well as from the Oklahoma City Bombing Memorial. You can find *many* more interesting pictures from these two areas at the two links above. Barry's trip through the French canal must have been quite an adventure!

Puget Sound (1 image)

Bob Whitney shares his favorite view with us: the Olympic mountains and Puget Sound as seen from his home.

Previous Months' Desktop Pictures

If you haven't seen the rest of the series, it includes: Yellowstone National Park, Drops, Toronto, Niagara Falls, Monaco, Montréal, Bahamas, Clouds, Aerial, Made with Macs, Landscapes, Northwest, Animals, Spring Flora, National Parks, Insects, Konstanz, Mark Montgomery's Desktop Pictures, Konstanz Part II, British Columbia, New York, France, Northeast, and From ATPM Readers.

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 publish 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 8.5 and Newer

Go to the Appearance control panel. Click on the "Desktop" tab at the top of the window. Press the "Place Picture…" button in the bottom right corner, then select the desired image. By default, it will show you the images in the "Desktop Pictures" subfolder of your "Appearance" folder in the System Folder, however you can select images from anywhere on your hard disk.

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

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

Mac OS 8.0 and 8.1

Go to the "Desktop Patterns" control panel. Click on "Desktop Pictures" in the list on the left of the window, and follow steps similar to the ones above.

Random Desktop Pictures

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

DeskPicture

An alternative to Mac OS's Appearance control panel is Pierce Software's DeskPicture, reviewed in issue 5.10 and available for download.

Buying a CD Burner

Question

I'm ready to purchase a CD drive for burning music CDs. I already have fifty CD-R disks that apparently are not as good as CD-RW, but I don't foresee needing to overwrite these. So, what things do I look for? I have a Blue & White G3, so I think I have a FireWire port but I don't know for sure.

I don't understand what those 4x4x12 numbers really mean in the real world. I just want to be able to combine some of my favorite songs from separate CDs onto a few good ones, for traveling music or whatever. Advice welcome. Thanks.

Answer

For burning music CDs you *need* CD-R disks. (They don't have to be special audio CD-R disks—any good quality CD-R disks will work.) CD-RW disks mostly are used for computer data. Audio CD players can't read CD-RW disks even when they contain only CD audio tracks. I use CD-RW disks for backups. To get the equipment that best meets your needs, you should consider all the following items:

First, you should decide whether you want both CD-R and CD-RW capabilities. If all you want to do is create music CDs, only CD-R is necessary. However, if you don't already have a good, high-capacity backup system (like a DAT tape drive), then I recommend you get a CD-R/CD-RW drive.

Second, you should decide whether you want an internal or external drive. The external drives cost a bit more and take up more space, but they have two advantages: you can use them with a different computer (like an iMac), and you don't have to bring in or disassemble your tower if they need service. Also, there aren't many Mac-compatible internal CD-R/CD-RW drives.

Third, you need to decide which is more important to you: higher speed or lower cost. You'll pay a premium for getting faster drives. The three speed numbers represent how fast a drive (1) records CD-R disks, (2) records CD-RW disks, and (3) plays CD-ROM disks. Today, a low-end drive would have speed ratings of 4x4x12. What does that mean? Well, a full CD of music lasts 74 minutes. A 4x CD-R drive could record all that music in less than 19 minutes. (A 4x CD-RW could write the equivalent amount of data in the same time.) So what about getting a really fast drive like a 16x12x32? Well, for music recording it turns out that you can't reliably use speeds greater than 4x. (The technical reason for this is that at high rotation speeds there's not enough time for the CD burner's laser burst to create good microscopic bubbles on the disk.) I generally burn my music CDs at 2x. At 4x I end up with CD-sized coasters about one time in five.

Fourth, if you decide to buy an internal CD-R/CD-RW drive, you won't need to worry about FireWire versus USB. The connection will be SCSI or IDE. (Note from Evan Trent: The newer G4 towers contain internal FireWire connections, so you can install an internal FireWire CD burner.) If you go with an external drive, you actually have three choices: SCSI, FireWire, or USB. I would avoid USB drives because the USB connection is slow. Since the Blue & White G3 towers don't have a SCSI port (unless they contain a PCI SCSI card), you should opt for a FireWire drive.

Fifth, you should try to get a drive that includes good software for recording. I use Adaptec Toast Deluxe. Many drives come with Adaptec Toast. I recommend paying to upgrade to the Deluxe version. It includes CD Spin Doctor, a good program for recording and cleaning up music from phonographs or tapes. The main Toast program has a feature you will like: Toast's Greatest Hits. Suppose you want to put selected tracks from four CDs onto a single audio CD. You load each CD into your Macintosh and drag the desired tracks onto Toast's window. You can arrange the tracks in any order. When you start recording, Toast will tell you when to insert each CD and will record the tracks in the order you picked. Neat, huh? If you'll be using your drive to make backups, you'll need good software that works with CD-R and CD-RW media. Toast can do backups, but dedicated programs make backups easier. I recommend Retrospect Express (see my ATPM [review](#)).

For my beige G3 tower I selected an external 4x4x16 ClubMac (with a Yamaha-built drive). The Yamaha- and Plextor-built drives perform well and generally receive good reviews. I'm not as familiar with the Sony or LaCie CD-RW drives.

You can download a [specification sheet](#) for a FireWire Yamaha drive. [FireWiremax](#) and [allFireWire](#) sell FireWire drives, including CD-R/CD-RW. You can also try the usual mail-order and Web stores. MacReviewZone features [CD burner reviews and links](#).

I'll end by listing a few CD recording tips:

I strongly recommend creating at least one 700–800 MB hard drive partition that you can use for files you will transfer to CD-ROM or for creating a CD image file. For example, when I convert phonograph records to audio CDs, I first record the phonograph music onto my special partition using CD Spin Doctor. Once the CD is burned, I erase the partition to get it ready for the next time. Erasing the partition prevents disk and file fragmentation that can slow down data transfer.

I also recommend giving your CD recording application plenty of RAM. Finally, make sure that you don't have background tasks running when burning a CD. Turn off your screen savers, e-mail programs (that might check for mail on a schedule), and reminders. I wrecked one CD because Toast didn't like my screen saver, and another when my Now Up-to-Date program decided to remind me about a relative's birthday in the middle of a CD burning session.

—Gregory Tetrault, Contributing Editor/Reviews

Response

Thanks for all the suggestions and advice. I ordered a 4x4x32 EZQuest from your sponsor [Small Dog](#). Now I just gotta figure out which port is the FireWire. Probably the one with nothing plugged into it. :-)

Review: Beach Head 2000

by Gregory Tetrault, gtetrault@atpm.com

Developer: Digital Fusion, Inc.
Web: http://www.wizworks.com/macsoft/BH_2000Mac/BH_2000Mac.html
Price: $20
Requirements: 225 MHz 603 processor, Mac OS 8.1
Recommended: G3 processor, 64 MB of RAM
Trial: None

ATPM RATINGS
OKAY

Overview

Beach Head 2000 brings panoramic 3D graphical effects to a shoot-'em-up arcade-style game. You protect a beach head by fighting from a bunker armed with a dual-barrel anti-aircraft gun, an anti-tank gun, and missiles. Your enemies include landing barges filled with troops, tanks, or armored personnel carriers; attack helicopters, jet fighters, and bombers; and troop choppers. Your only ally is a supply plane that drops extra anti-aircraft gun ammunition and shielding for your bunker. The enemy lands troops, tanks, and APCs that move toward your bunker and attack. Fighters, bombers, and attack choppers strafe, bomb, or launch rockets at you.

Destroying all enemy elements (except bombers, which don't have to be destroyed) completes the level. Everything you destroy earns points that vary with the potential destructiveness of the item. The sixty levels get progressively harder. You can replay levels without experiencing the exact same attack, but the enemy constituents and general assault pattern are fixed for each level.

Installation

A CD contains the Beach Head 2000 installer. Installation places the 38 MB "Beach Head 2000" folder on the drive you designate. QuickTime 4 will be installed if necessary. The application itself is small, at only 172KB in size. Three other folders contain Photoshop files, A/V and program code files, and preferences. The CD is not needed after installation.

Look, Feel, and Sound

BH 2000 opens with a scene that looks like the inside of a high-tech bunker looking out on a beach. The areas above and below the beach view contain buttons. This view does not carry over into the game. In the game itself, you see the ends of your weapons and then the beach, sea, and sky (Figure 1). The imagery looks fairly realistic when using the high resolution option.

Figure 1

You pan up and down and circularly by moving the mouse. Your upper and lower fields of view are limited, just as if you were looking out a firing slit from a rotating turret. Rapid rotation of your weapon causes pixellation and blurring. Pixellation also occurs when you look all the way down (Figure 2). I mastered mouse control of my weapon after about 15

minutes of game play. My attempt to use a joystick controller, however, failed spectacularly; I could not find a combination of joystick and game sensitivities that would allow rapid panning and fine control.

Figure 2: Pixellation

The sound effects—bombs, guns, rockets, missiles, tanks, jets, etc.—are high-quality and realistic, except for the dying soldiers' grunts and yells. The game does not make use of stereo panning or Doppler effects (see "Bugs and Omissions" below).

Game Play

When you launch the BH 2000 application you get a screen with two top menus, File and Quit, and five on the bottom: Credits, Options, Play, Help, and Scores. Your options include three screen resolutions (trading off better resolution for speed) and an "Invert Mouse" option that reverses mouse control of up and down aiming. Clicking Play starts the game at Level 1. To launch a saved game, select Load Game from the File menu.

The initial levels send only a few barges and aircraft against you. This gives you an opportunity to master the controls, learn your aiming points, and memorize the sound cues (each aircraft and land vehicle has a distinct sound). Be sure to learn what your resupply aircraft sounds like. It drops extra ammunition for your anti-aircraft gun (a crate with a yellow "X") or extra shielding for your bunker (Figure 3). Shoot the crates before they touch the ground to be awarded their contents.
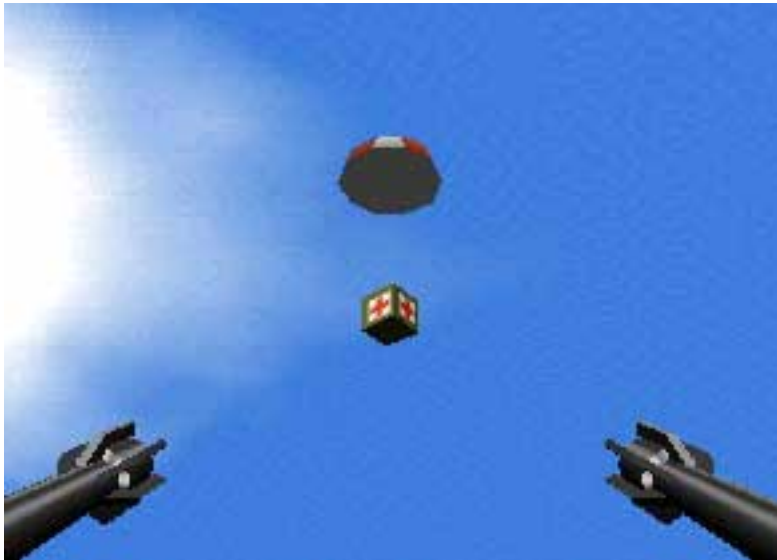

Figure 3

I found BH 2000 tips on numerous Web sites. Many of those game playing tips would steer you the wrong way. I completed 53 levels in less than ten hours of play, so I feel qualified to give the following tips:

- It is best to shoot the barges with the anti-tank (AT) gun before they reach the beach. The larger barges carry either tanks or armored personnel carriers (APCs).

- Use your anti-aircraft (AA) gun on troops as they are leaving barges or APCs. The troops are tightly clustered and easy to kill with relatively few rounds.
- Unless you are under direct attack by tanks or attack choppers, don't waste a missile on a jet making a strafing run. Use your AA gun to take it out.
- Don't waste missiles on troop choppers. Instead, let them fly behind you and shoot them with your AT gun just as they land.
- In the lower levels, don't worry about the bombers. They aren't very accurate and don't do much damage. You can complete a level without destroying them.
- At higher levels the bombers are devastating. Try to take them out with missiles before their first bombing run. This will be difficult, because they typically attack along with jets and choppers which may divert your heat-seeking missiles. It's best to send a missile when the bomber is at a 30–45 degree angle above the horizon (Figure 4).

Figure 4

- Keep listening for the resupply plane. It alternately drops shielding and AA ammunition. Watch for the parachute and then shoot the crate. However, if you don't need the crate, ignore it and shoot enemies.
- Attack chopper rockets can heavily damage your bunker, so deal with them quickly. Use missiles from a distance if you have enough of them. The AA gun can destroy the attack choppers, but they are hard to hit from a distance.
- Don't bother shooting at the distant ships. The game doesn't recognize attacks on them.

- The empty bunkers on either side of you are not solid. You can shoot through them to hit APCs or soldiers.
- Don't let your AA ammo drop below 20 rounds. You will need those rounds to hit resupply crates. Your pistol can also shoot the crates, but it has little accuracy.
- If you are low on AA ammo, use the pistol to shoot soldiers close to your bunker; soldiers close enough to throw grenades can do significant damage.

Figure 5

- When you face many simultaneous attacks at higher levels, don't focus on just one group of attackers. Go for the highest threat, then look at other attackers.
- Your AT gun must pause between rounds. Use the lag time to fire a missile at an enemy aircraft, then go for the next ground target.
- Your AT gun can take out a nearby hovering attack chopper with one round.

Levels 52 and above are incredibly difficult: you have few missiles and AT rounds but many enemies that fire accurately. I was unable to get beyond level 53 without cheating. (I'd like to hear from anyone who gets above level 54 without cheating.) How do you cheat in BH 2000? You can edit the level files located in the Beachhead 2000 folder. These files are named "Level_##" and can be opened in any text editor or word processor. There are four ways to cheat: give yourself more ammo, lower the "aggression" of the enemy units, add an artillery strike, or change the frequency of supply drops.

The second line of each level file looks like this: "Ammo 200 10 8." The numbers are for AA rounds, AT rounds, and missiles. You can change this to something like "Ammo 999 99 99". The enemy aggression numbers are on the fifth line (e.g., "Aggression 9 9 9 9"). You can decrease any or all of the four numbers to lower the aggressiveness (and accuracy) of tanks, jets, and attack choppers. The sixth line indicates whether the level allows you to call for artillery support. You can change the number from 0 to 1 to add artillery. Finally, the end of the level's text file has specifications related to your resupply plane. You can shorten the delay number under the "/*** C130 ***/" heading to decrease the wait time between supply drops.

Instructions and Help

BH 2000 comes with a small instruction booklet that provides an adequate amount of information on system requirements, installation, game controls, game play, scoring, enemy unit characteristics, and how to get technical support. The Tips section provides only minimal tactical guidance.

Clicking the BH 2000 Help button reveals a three-item menu: Game Controls, Game Interface, and Game Overview. The first choice shows you the keyboard controls. The second describes the game screen elements such as shield strength and enemy force bar graphs. The third shows a brief overview of your weapons and how to get resupplied. All this information is found in the instruction booklet.

Technical support consists of 24-hour voice response, "Faxback" systems, and Monday through Friday live support from 7:30 AM to 7:30 PM Pacific Standard Time. Support requests can also be submitted by fax or snail mail. Like many other software companies, MacSoft provides no e-mail or Web form support, even for reporting bugs.

Bugs and Omissions

One major bug occurs when BH 2000 changes your monitor's resolution on launch. A Finder error message appears shortly after launching. When you quit the game your desktop becomes a disaster. Desktop icons on the left are shifted towards the center of the screen. Tabbed folders at the bottom of your desktop become opened folders stacked on top of each other in the middle of the screen. The only way to avoid this bug is to set your monitor's resolution to 640 x 480 before launching BH 2000.

A second bug is the inability to get through level 56. Even after destroying all enemies, the game believes that at least one enemy remains. Levels 57–60 cannot be accessed without completing level 56.

Minor bugs include the appearance that your gun has cut through your bunker when you pan all the way down (Figure 2) and the lack of solidity of adjacent bunkers (you can shoot through them).

The biggest omission is the lack of aiming reticles for the AA and AT guns. Even WWII era weapons had gun sights. Some users resort to placing transparent tape on their monitor and drawing-in crosshairs! Also, the pistol simply replaces the right barrel of the AA gun. It should be centered at eye level for easier aiming.

BH 2000 does not support InputSprockets or GameSprockets. This may account for the poor joystick control I experienced. You cannot change the keyboard controls. There is no support for using just the keyboard to play. PowerBook users without a mouse cannot play.

Finally, BH 2000 does not use directional sound cues or Doppler effects. This makes it hard to tell from where a plane or vehicle is coming or in what direction it is moving.

Conclusion

BH 2000 joins the long list of games that miss out on greatness because they were ported from Windows. In spite of BH 2000's problems, I enjoyed playing the game. BH 2000 becomes addicting because it's fun to blast lots of enemies and to see if you can reach the next level. The ability to save levels decreases the frustration factor: you can reload a level and try different tactics. This game would receive a Very Nice rating if all the bugs and omissions described above were fixed.

Review: GoClick 3.0.1

by Eric Blair, eblair@atpm.com

Developer: Terry Morse Software
Web: http://www.terrymorse.com/products/goclick/gcinfo.html
Price: $159 (retail); $79 (academic); $49 (upgrade from Myrmidon).
Requirements: 68020 processor, System 7.5, QuickTime.
Trial: Fully-featured (30 days).

Since the early days of the Web, there has been a nearly constant argument about the best way to create Web pages. There are those who prefer to write their HTML code by hand; others prefer to design Web sites with a graphical editor, just as if they were creating a brochure or pamphlet. Coders argue that graphical editors create bad code—extremely dense and often in violation of the HTML specification. Designers argue that it's difficult to create intricately designed pages using only code. Generally, both sides are correct; many people have difficulty visualizing how code will translate to a Web page. On the other hand, often just opening a technically perfect Web page with a graphical editor is enough to introduce errors.

Recently, both sides have been making improvements in remedying their deficiencies. Cascading Style Sheets (CSS) have made it easier to uniformly specify design attributes across multiple Web pages. Graphical editors have gotten better at generating HTML code. At the same time, though, graphical editors have introduced tags that only the specific editor can render. For example, Adobe GoLive generates non-standard attributes in the <TABLE> tag for its grid system. Web browsers will ignore these attributes, but they show up as errors when you validate your code against the standard.

I could spend a good deal of time describing the differences between coding sites and designing sites, but Michael Tsai did a fine job of it in his article WYSIWYG: Is it What You Want?.

Generally, there are two types of graphical editors: dedicated Web site designer apps, like GoLive, and applications with Web site export capabilities, like QuarkXPress, Microsoft Word, Adobe PageMaker, and a whole slew of others. These exporters tend to generate the worst code. They typically generate extremely long code in order to exactly preserve the formatting, lose aspects of the formatting, or some combination of these two. [Adobe

FrameMaker+SGML, which we use to produce ATPM, is a notable exception. —Ed.] For instance, a 3x3 table created in Excel required 186 lines of code when output to HTML. Most of this was a style sheet to accurately preserve the text formatting. However, even with all this formatting, the table borders were not retained.
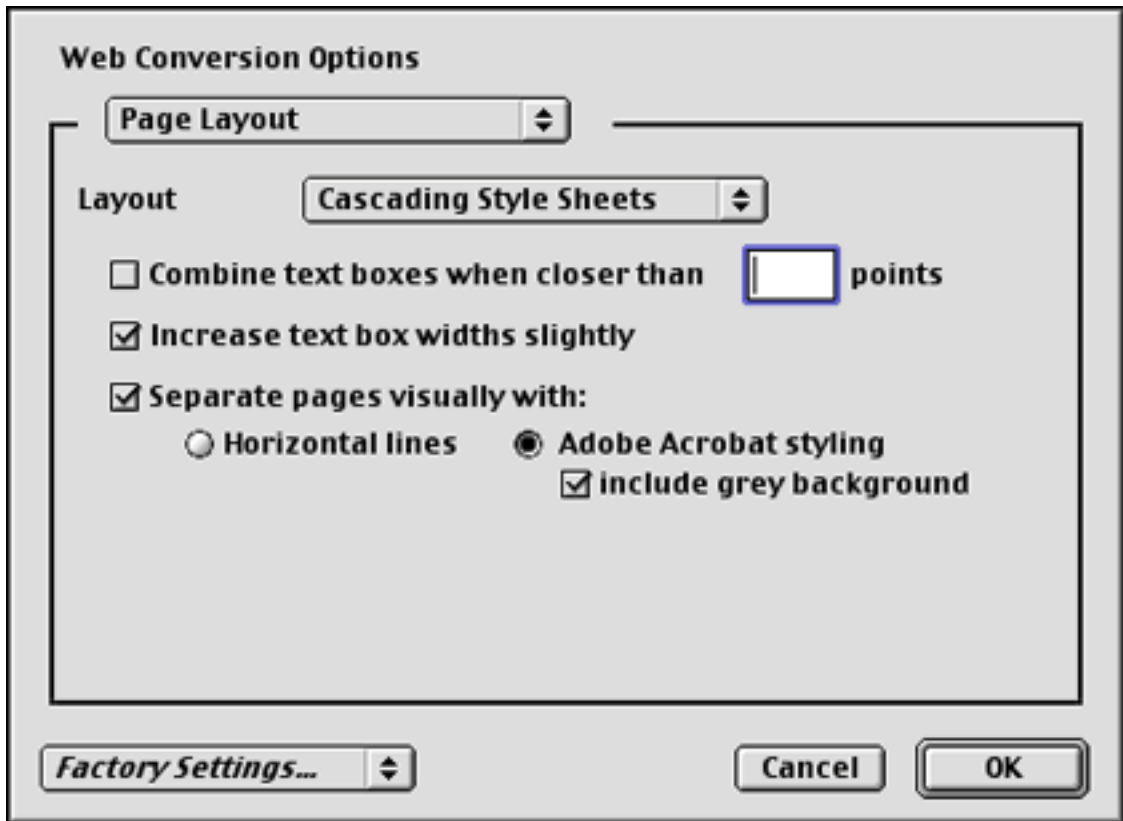
There really is no consistency in the methods used to export HTML. If you plan on exporting HTML files from a variety of programs, you could be in for a shock. Documents that look good together when viewed with their respective programs can look vastly different when exported to HTML. Terry Morse Software's GoClick steps into this void. GoClick is a Chooser extension that works like a printer driver. After selecting GoClick in the Chooser, you select the GoClick options from Page Setup, and you output to HTML with the Print command.

Design Options

Most coders I know have a preferred way to code their Web sites. Some prefer strict HTML code, some prefer to add browser-specific HTML tags, and some like to augment their HTML with style sheets. This is an advantage of coding over many graphical designing pages. Although some Web site design apps will allow you to specify things like style sheets, most Web site exporters use set rules when outputting to HTML. GoClick gives designers a semblance of the formatting control that was previously the near-exclusive domain of coders.

For starters, GoClick lets you choose among four methods of formatting pages. These are standard HTML tables, Cascading Style Sheets, no formatting, and GoLive "GRID" tables. Standard HTML tables were essentially the only way to do any serious formatting before the version 4.0 browsers were released. The 4.0 browsers introduced (partial) support for Cascading Style Sheets. CSS provides another method for specifying Web site formatting. CSS's main advantage over HTML tables is that CSS is typically easier to read. On the downside, only newer browsers support CSS. No formatting simply outputs plain text

without additional formatting. This is useful if you want to generate HTML that can be added to an existing Web page. Finally, the GoLive "GRID" tables adds the aforementioned grid attributes to make editing pages in GoLive simpler.
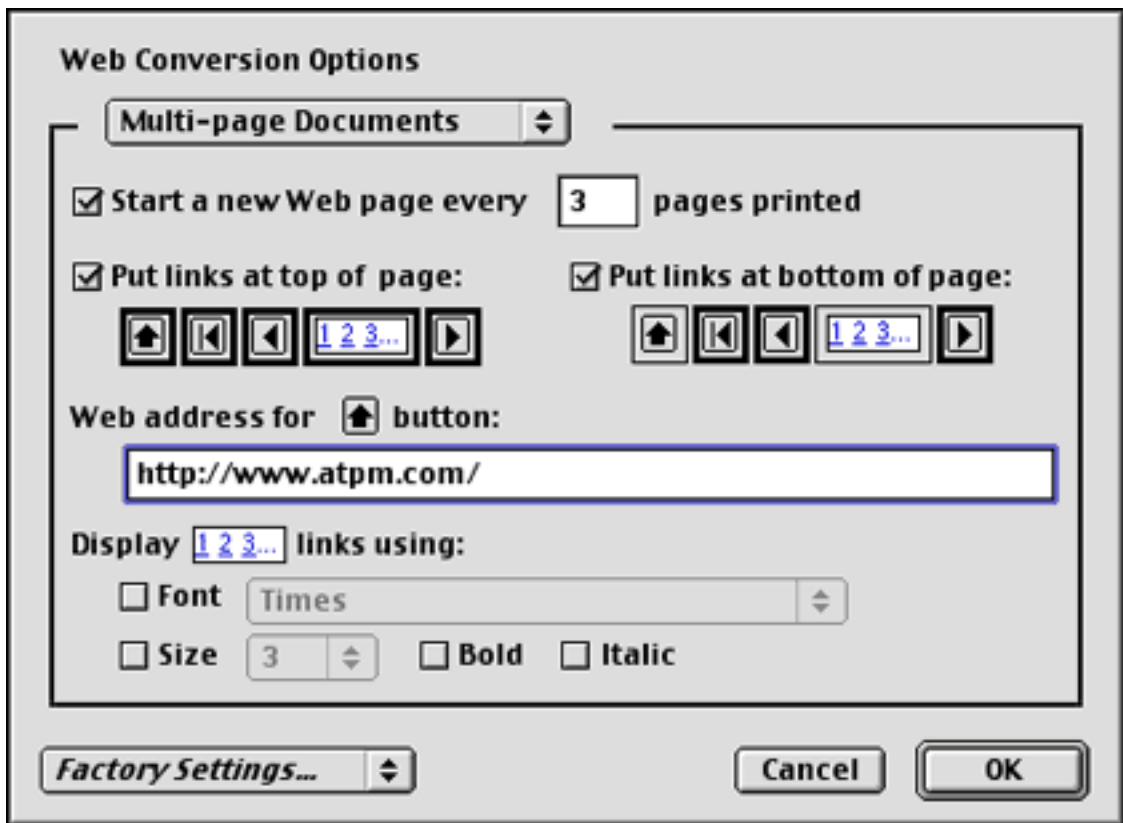

Some of GoClick's page layout options.

Along with specifying the layout type, you also get to specify how you want the page to translate to HTML. GoClick generates HTML based on how the document looks—it does not read the formatting marks like the newline character. Instead, you specify things like how much space between text blocks indicates a new paragraph, what a heading looks like, and which text markers specify a list.

You can also choose how much document formatting you want to preserve. Unless you specify things like exact font size or font face, Web browsers default to a certain font and base size. Also, text usually flows to fill its container, usually the window or a table cell, unless there is a line break. GoClick allows you to specify how much of the document

formatting you want to preserve. For instance, if you want the lines of text to exactly match what is on the screen, you can elect to place a line break at the end of every line. GoClick also lets you retain the font size, font face, text color, and other attributes like bold and italic. For most attributes, you can choose between the HTML implementation or the CSS implementation. Also, some attributes allow you to include the code for both implementations, so your Web page can take advantage of the newer browsers while maintaining some compatibility with older browsers.

GoClick also provides some rudimentary Web site creation options. You can choose to have GoClick add navigation buttons like Home, First Page, Next Page, and Previous Page to the top and bottom of your pages. You can also include a list of page numbers that link to the different document pages. As for page creation, you can specify how many printed pages appear on a Web page.

Specifying navigation options.

When you have several printed pages on a Web page, you can choose to acknowledge the page breaks if you wish. Normally, this is done with a horizontal line between pages. However, if you are using the CSS layout option, you can emulate the layout of a PDF document, complete with the gray background around and between the pages.

Finally, GoClick gives you the option of including a GoClick badge on the bottom of every page. These types of badges are common on the Web. They are usually only on a single page of a Web site, though. Most of the time, it's either the About This Site page or the home page, if there is no About page. It would be nice if GoClick provided the ability to have the badge on a single page.

It can be difficult to keep track of all these options, especially if you have different sets of options for different projects. Fortunately, GoClick lets you save and edit sets of attributes. Sets are edited through the Page Setup dialog. When you go to print, you can choose which set you want to use, which is a nice touch.

The Page Setup dialog, complete with set selection.

The Output

Let me start off this section by saying that I'm a bit of a perfectionist. When I do something, I want to make it technically perfect. That said, you can probably guess that I'm a coder. I've dabbled with graphical editors a few times, mostly when I had a job that needed to be done yesterday or when I needed a mock-up for somebody. When push comes to shove, though, I like to dig into the code and make sure everything is just right. My feeling is that I can eliminate a lot of the ambiguity in the rendering of pages if I stay as close to the HTML standard as possible.

That's probably my biggest complaint of graphical editors. Whenever I run the code they generate through a validator, the validator returns a slew of errors. In one of my early tests, I used GoClick to export a PageMaker document to HTML. I was not surprised when I viewed this page in iCab and saw the validator frowning at me. I was surprised, however, by what I saw when I viewed the error log—only one distinct error. The error was the <NOBR> tag, which was created by Netscape but supported in many browsers. This held true for documents created using the HTML tables formatting, CSS formatting, and no formatting. Obviously, more errors were returned as a result of using GoLive "GRID" tables, but this is by design—all the additions are used by GoLive and ignored by the Web browser. GoClick easily generates the best HTML I have ever seen from a graphical editor. Also, the HTML files retain a good deal of the look and feel of the original document.

Our team proposes to build a database management system for system will track the movies in the store, the store's custome employees. A database is necessary to manage the store's inv interactions between the movies, the customers, and the emp:

Solution Requirements

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Employees will use this system to handle customer inquiries about certain movies, inventory management, and customer management. Several tables are required for tracking all the

The original Word document…

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Solution Requirements

customer acc
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information – one for tracking movies,

…and the converted Web page in Internet Explorer.

Unfortunately, because GoClick only gets to work with what the application would normally send to be printed, there are certain things it cannot do. First off, it is limited in how it can create links. You must include the address as text in the document. GoClick recognizes text beginning with "http://," "www.," "ftp://," "ftp.," and "mailto:" as valid links. For instance, if I ran this review through GoClick, the link to the GoClick home page would appear as a link, but the link to Michael's WYSIWYG article would not.

Furthermore, if you include HTML tags in the body of your text, they appear as text in your Web page. It would be nice if GoClick had an option to recognize and apply HTML tags within the body of the text.

GoClick also has some trouble with tables. Remember the aforementioned Excel table? Exporting it to HTML using HTML tables formatting creates a single image containing the cell borders and the text. The same thing happened when I exported with an AppleWorks spreadsheet. The situation is slightly better under CSS formatting; the table is still drawn as an image, but the text is layered over the table as text. Unfortunately, this can lead to situations where the text no longer fits into the box GoClick creates.

Since GoClick doesn't do it all, you will most likely need to edit your Web site in another application to add links, if for nothing else. For simple stuff like this, you can probably get away with using a text editor. However, unless you export your pages with no formatting,

you will probably want to use a graphical editor for serious editing, to help you sort through all the tables or layers that get created. Personally, I think it's a shame that you need to do this, since graphical editors really wreak havoc with GoClick's HTML.

Not Quite Perfect

While using GoClick, I did run into a few things that didn't work as expected. When I did the table test with Excel and AppleWorks, I also tried two Word documents with embedded tables. In both cases, GoClick missed some lines that were in the table. I don't know if this is a general table issue or if it is restricted to Word.

I also had difficulty with PowerPoint. I was curious if GoClick could be used to create a minimalistic Web-based slide show as opposed to the PowerPoint's Java and frame-based version. When I exported the slide, though, elements were just missing. I don't have AppleWorks 6, so I couldn't test GoClick with the AppleWorks Presentation module, but I'd be willing to bet that this is a PowerPoint-specific problem.

At one point, GoClick seemingly lost the ability to create background images. As far as I could tell, all of the graphics options were active; nevertheless, anything with a colored background would be drawn with a white background. I was able to fix this by throwing away the preferences, but this also caused me to lose the attribute sets I created.

Finally, every time I tried to print from iCab with GoClick active, I received a type 10 error and needed to reboot my computer. I really can't think of any reason why you would want to export a Web page as a Web page, but this is worrisome for two reasons. First, if an incompatibility exists with iCab, it could exist with other programs. Second, it's not that difficult to forget to switch Chooser devices when you're finished with GoClick. In this case, if you forget to switch, you've lost whatever unsaved work you happen to have had on your computer. It's possible for extensions to modify the File menu; it would be nice if GoClick changed the Print command to something like a Publish command, so users could be reminded that they still have GoClick active.

It is easy to forget to switch devices in the Chooser. Over the years, people have come to realize this fact and have come up with a few ways to generally avoid the Chooser. The first method I've seen is the modifier key approach. Most fax modem drivers have this feature. By holding down a modifier, like Option, the Print command becomes the Fax command, allowing you to send a fax without travelling to the Chooser.

The second method is the Desktop Printer. When you create a Desktop Printer, a printer icon appears on your desktop. Double-clicking on the icon brings up a PrintMonitor-like window. Even better, you can drag documents to the icon and have them "printed." The reason I have printed in quotes is because there's nothing that says a Desktop Printer must send data to an actual printer. At the moment, the only printer on my desktop creates PDFs when files are dropped on it.

Either of these approaches would be welcome additions to GoClick. Of course, anything that saves a trip to the Chooser is a plus in my book.

In Summary

I was skeptical when I read how simple GoClick made creating Web pages. Typically, if something sounds too good to be true, it usually is. That's not the case here. GoClick lives up to its lofty billing. There are a few bugs and annoyances that keep GoClick from getting an Excellent rating—mostly the fact that two of the bugs involve major applications on which many people rely—but it is easily the best approach to graphical Web page designing that I have ever seen.

Review: Making iMovies (book)

by Jamie McCornack, jmccornack@atpm.com

Developer: Peachpit Press, written by Scott Smith
Web: http://www.makingimovies.com
Price: $39.99
Requirements: iMovie software, FireWire- and DVD-equipped Mac.

It's a pleasure to see such good iMovie stuff out there. I expect we'll be able to do an iMovie story each month for a while, either a book review or a tricks-and-tips tutorial. And someday, when Apple releases its stranglehold on iMovie's architecture (I love using high-tech buzzwords—they make me feel like I know what I'm talking about), there will be third-party effects to add to our transitions and titling palettes. But for now, the bulk of what's available for iMovie users is information on how to use what you've got. As we ride the cutting edge of the digital video wave, making our iMovies and mixing our metaphors, we need all the information we can get.

Scott Smith's iMovie tutorial, *Making iMovies*, takes a unique approach to iMovie documentation. First, Smith subscribes to the theory that iMovie users don't really need documentation for their software. Hey, look, it's a valid opinion. Admittedly it's not my opinion (see my review in ATPM 6.10 of David Pogue's iMovie: The Missing Manual), but it's apparently Apple's opinion or they'd have supplied documentation when they supplied the software. If you want my opinion, read last month's ATPM—but don't think my opinion is "right" and Smith's is "wrong," or you'll miss out on some useful information.

Second, Smith believes that iMovie users mainly need to know how to make films. He writes and edits for *RES: The Magazine of Digital Filmmaking* and is a founding partner of a digital effects house that serves the Hollywood folks that can't afford Industrial Light and Magic. He's a long-time digital filmmaking professional, and thus has a unique perspective on the needs of iMovie users. And from that perspective, he's got it down solid. (Hey, I wouldn't give this book a Very Nice if I didn't think it was worth reading and absorbing and adding to your library.) But I do get the feeling the author considers iMovie so easy to use it's barely worth discussing.

Now, compared to the professional editing software Smith's been using throughout the 1990s, iMovie is ridiculously easy to operate. If you've been using a Mac for some years, and you've been working with After Effects or Premier or Final Cut Pro, hey, iMovie is a walk in the park. And if you and your friends have been sharing your iMovie films, where have you noticed their most glaring defects? Seriously, now, what have you seen that you don't like? What makes the average iMovie film as challenging to sit through as was the average home video? Or the average home movie before that?

Okay, I won't make you pick on your friends—especially since your iMovie-making friends probably read AT℗M, and they'd be saying the same things about you. I'll make this a rhetorical question, and give away the answers:

- Storytelling failures. Distraction, lack of continuity, lack of direction, and sometimes just plain lack of story.
- Camera-handling failures. Background clutter, inappropriate wobbles, poor choice of point-of-view, and a failure to focus (literally) on the center of attention.
- Editing failures. Inappropriate cuts between scenes, too much irrelevant footage, too many pans and zooms (and not enough Dramamine), and feeping creaturism.

These sins (except for the last one) go back to the 60s, when 8mm movies reached the masses. If you're too young, ask your folks if they remember visiting friends to watch their vacation movies. They'd sit in a darkened room, nursing mixed drinks and nibbling party snacks made from breakfast cereals, while Ralph narrated, "Here's Martha and the kids standing by the Grand Canyon and waving—except for Clarissa, she's the shy one."

Home video made things worse, because with tape so cheap and no film development cost, Martha and the kids could afford to wave at the camera for a minute or two at a stretch. Also, sound was recorded with the video, so Ralph didn't have to narrate any more. His voice came right out of the TV, saying, "Here's Martha and the kids standing by the Grand Canyon and waiving. Clarissa? Clarissa? Come on honey, wave to the camera. Wave to Daddy now. Clarissa. Clarissa, I'm not going to tell you again. We're all going to stand here until you wave. I'm warning you, young lady, if you can't follow a simple order I can see we won't be bringing you along any more…" and so on and so forth until the Low Battery warning begins to flash.

Then the camcorders came, and then they got fancy, and then they got special effects built in, and the creatures began to feep. "Here's Martha and the kids standing by the Grand Canyon and waiving, and here's what they look like with everything turned blue, and here they are made into big boxy pixels like how Yul Brynner saw things in *Westworld*, and Clarissa's not waving. How come, honey, are you feeling kind of—watch this, everybody—feeling kind of…*blue*?! Ha ha ha, get it?"

iMovie has only made feeping creaturism worse. Of what earthly use is a radial transition? Or twenty-three seconds of Flying Letters titles? And while iMovie titles look quite professional, they're too dang easy to use and thus you see them everywhere. Yep, in Flying Words and Typewriter, you can now read about Martha and the Kids Standing by the Grand Canyon. Also, iMovie titles look professional enough to violate the voluntary Cutesy Warning Standards of the Consumer Electronics industry. (You see a professional-looking title, you get comfy in your chair and say to yourself, "Hey, this is looking pretty good"; you see Titles by Clarissa, in crayon on notebook paper with ducks and bunnies, you know from the get-go it's going to be so twee you'd better go back to your car and grab the insulin out of your glove compartment.)

And that, my friends, is where *Making iMovies* comes in. I've got to tell you, I read *Making iMovies* from cover to cover and did not learn one thing about using iMovie software (admittedly I'm pretty good with iMovie, and this isn't the only book I own on the subject), but I learned one heck of a lot about digital filmmaking and how to improve my own videos. Best of all, *Making iMovies* uses the medium a budding iMovie videographer will best understand—actual digital video. You're interested in iMovie because you're a visual person; you want to communicate through digital film; motion on screen appeals to you, talks to you, touches your mind (and maybe even your heart and soul). So what better way to reach you than through actual iMovies, with sample projects you can load and run on your own Mac?

There's no better way; that was a rhetorical question. Making iMovies comes with a DVD in the back, containing all the files necessary for three complete iMovie projects. And these aren't dumb little washing-the-dog projects; these are full-fledged short films: an extreme-sport/coming-of-age romp, a film *noir* romance, and a war epic—all scaled down to joke-and-a-rimshot size.

Make that "very short"—one minute for the shortest, 2–1/2 minutes for the longest. But they are genuine little films, with stories and everything. That's right, a beginning, a middle, and an end, with a laugh at the end, entertainment in the middle, and a teaser intro at the beginning. And with the exception of the Storyboard lesson, everything in these lessons and advice seems like something you and I could do just as well as the author. This is a challenge in the ed biz, particularly for experts in their field. The finished films are not intimidating. The equipment is not intimidating. The techniques are not intimidating.

Every step of the way (okay, except for the Storyboard part—I can't draw, since drawing requires talent or skill or something—which would have been fine if the author had used stick figures) I found myself thinking, "Yeah, I can do that, probably even better, because I know better jokes and my friends are funnier looking…" which is exactly what I thought while watching *The Making of Matrix* except then I had to think, "…but I don't have 80 million dollars," which kind of ruined the effect. All three demo films look like they were shot on a budget of $27.85 with volunteer help saying, "Me, me, I want to be in your movie!" Truth is, the budgets were probably closer to a hundred bucks, and Scott Smith has some talented friends, but don't let that stop you. With his guidance, you can make some decent short films that won't have your friends squirming in their chairs, and your mother saying, "You know I'll always love you, no matter what you do."

The advice is down to earth. It's probably all stuff you'd learn in your first semester of film school, but I never had a first semester of film school and don't have the time to take it now. I'm better off spending $39.99 and adding *Making iMovies* to my short stack of iMovie books. My very short stack of iMovie books. *iMovie: The Missing Manual* is the only iMovie book I rate as "Must Have." *Making iMovies* is the only one rated "You Really Ought to Have It Because Your iMovie Productions Are Going to Come Out a Whole Lot Better Once You Learn This Stuff."

The enclosed DVD is what really makes this book. It holds 1.8 GB of files and projects, so if they were on CD, it would take three CD-ROMs to hold all the data, and if you downloaded them from AOL over your phone line it would take you until next Thursday. The book by itself? It would be worth adding to your library if it were half the price and if you were pretty deeply committed to iMovie, but it's not detailed enough to serve as documentation, and the lessons wouldn't have much impact without the examples up on

your screen. So if you don't have DVD playing capability—and I mean a DVD drive on your Mac, not on your television—you probably don't need this book yet. It's still Very Nice, but you can't take advantage of the Nicest part.

There's also bright side to the lack of documentation-level detail. This book and DVD package works just fine for iMovie 2 and won't need revising for a long time.

Review: Understanding Interactivity (book)

by Paul Fatula, pfatula@atpm.com

Developer: Chris Crawford
Web: http://www.erasmatazz.com/book.html
Price: $30

Trial: Chapters 1–5 available on the Web site.

Let me be totally up front with you: I want you to read this book. *Understanding Interactivity* is about just what the title leads you to believe. It gets you thinking about what interactivity is, how it should be used, and how little it is used to good effect in most programs and Web sites that you see today. Rather than being a programming book that tells you how to write code, it tries to give you an idea of how programs should work in order to give users an enjoyable and productive experience.

At times the book seems almost philosophical, examining ideas behind interactivity, how media over the course of time has become increasingly less interactive, and the value of play. Where it points out specific examples of things that need improvement, it does so to illustrate a bigger point—dare I say it—to try to encourage programmers to think about their users as they write their programs. If you'd like a solid understanding of what makes a program seem good or bad, this book is for you.

Uncommon Sense

As I read *Understanding Interactivity*, I often caught myself saying, "yeah I know that already"; at times, the book seems to be preaching common sense. Unfortunately, the sense it is preaching doesn't seem particularly common in the real world.

To take an example used in the book, most of the time when you want to print a document, you want one copy of it. Nothing fancy. But you hit Command-P, and instead of it printing, you get a dialog box full of options—options that nine times in ten, you don't want. Wouldn't it make more sense for Command-P to actually print one copy, and some other combination, Command-Shift-P, perhaps, to bring up the dialog box?

One of the astonishing things about bad interactivity is how easy it is to fix, in many instances. In the case of this example, some programs have taken a step in the right direction by adding Command-Shift-P to "Print One Copy" (leaving Command-P to bring up the dialog box), so at least you have the option to print quickly. But wouldn't it make even more sense for the most commonly desired action to be activated by the simpler key sequence? Programs get it right with the "Save" command: Command-S saves the document, and no dialog box comes up as long as the document you're saving already has a name. If you want the dialog box, you can do a "Save As…" from the File menu or with a more complicated key sequence.

Tempting as it must have been to write a book chock full of examples where user interfaces need help, that's not what Crawford did. There is one chapter, "Bloopers," which does that. Both entertaining and instructive, it comes about a third of the way through the book, offering a sort of intermission from weightier material, as well as practical examples of interactivity gone wrong. Such examples can be found scattered about in other parts of the book, especially in the earlier chapters, before things start getting too theoretical, but they're always used to illustrate a point, or to provide a framework for discussing a particular aspect of interactivity.

So What's the Problem?

All of us, as users of computer programs, visitors to Web sites, etc., have an idea of what constitutes good versus bad interactivity. When the Mac refuses to empty the trash because "an error of type -110 occurred," we are uniformly annoyed at the worthlessness of the error message. It doesn't explain what's wrong or offer up a solution. (I finally gave up and restarted.) Wouldn't it be a great improvement if the error message said explicitly, "Sorry, there's a problem. You'll have to restart before the trash can be emptied."? That sort of error message would sure cut down on tech support calls from confused users.

Crawford doesn't just recommend that error messages be worded more clearly to give the user useful information. He goes to the root of the problem: programmers are programmers, not interactivity designers. They're perfectly happy with an error message giving a number designating the kind of error. They know what it means, and can track down the problem or respond accordingly. Maybe they think the problem won't occur, and so they don't see a need to bother with a user-readable error message. Programmers know what their program is designed to do and what its limitations are, and they accept those limitations without thinking about it.

Users, on the other hand, aren't nearly as intimately familiar with programs they interact with. The result is that users see problems that programmers never encounter and that, even if they did, they wouldn't think problematic. There are a few solutions to this kind of problem. One of Crawford's favorites is, learn to program. This is admittedly a long-term solution, but people with some artistic sensibilities, who understand that a good program is more than a haphazard collection of technically cool features, would do well to start learning how to design programs on their own, to work as they should. In a lot of cases, such people end up as shareware authors: programming isn't their main job, but they do it astoundingly well, because they put a lot of thought into their work.

Which brings me to another suggestion offered in the book. A program goes from development to alpha to beta to sale. The beta stage is used to work out bugs, either in-house or by letting users mess around with the program and give feedback. But usually, feedback about anything other than bugs is ignored: the company isn't interested in hearing that it'd be nice if you could skip the dialog box when you want to print a document, or that an error message is worded in a confusing way. Fixing such problems would delay the product getting to market, and hey, there's already an error message there, so what's the problem? The beta is feature-complete as it is; making the Print command easier to use would be a new feature.

Software companies need to start paying attention to these kinds of comments, either during the beta period or during a separate stage, Crawford suggests, when bugs have been squashed, and programmers are open to suggestions on last-minute tweaks of the user interface, before the product goes to market.

Definition, Please?

Hey, my degree is in philosophy. If I'm going to read a book about a vague computer term that I've seen used in all kinds of different ways in countless different contexts, I want a definition of the word—clear, robust, and precise—preferably with references to Kantian metaphysics.

The definition given of interactivity, however, is simple and straightforward, a nice little soundbyte of a definition, bolstered later on in the book by discussion and examples, but left somewhat hazy around the edges. I'm going to take it on, but first let me point out explicitly that what's going on here is that I started out with only a vague idea of what interactivity is and a handful of dislikes about how programs work; then I read

Understanding Interactivity, and now I'm thinking about how to come up with a better definition of interactivity. This is a good thing: whether I (or you) fall to my knees and praise Crawford's definition or not, the point is that both users and programmers should be thinking about this term, because we are all heavily affected by it.

"Interaction: a cyclic process in which two actors alternately listen, think, and speak."

Sounds good to me. It uses metaphor, and the metaphor comes from the earliest form of interactivity: two human beings having a face to face verbal discussion. Ideally, a computer should respond to us as well as a person would, and that fact is stressed by saying e.g. "listen" rather than "accept input." Crawford simply points out that a computer listens through the keyboard and speaks through the monitor and thinks with the CPU. The problem, of course, is gray areas. When you open your refrigerator door and the light goes on, are you interacting? Well, technically yes, Crawford admits, but not in any particularly interesting way. There isn't much thinking ("delivered content") going on there, on the part of the refrigerator.

Trying to avoid the stigma of having presented a subjective definition, Crawford introduces the idea of degrees of interactivity. That seems on the face of it to work well, but it still leaves the definition subjective: my opinion of whether something represents relatively high interactivity may differ from yours. Let's muddy the waters a bit with an example from the book. "To a child, a bouncing ball appears to possess its own free will, and therefore in the child's mind, the ball is an active agent. To an adult, the same ball is merely a rubber sphere, obeying simple laws of physics, and therefore the adult sees no active agent in it." This places the entire question of whether something is interactive, *at all*, in the mind of the interactor.

The objection that leapt into my mind when I first read this was, well, to a really good computer programmer who knows his way around hardware and software, a computer program is just a bunch of electrons jumping around according to laws of physics. Clearly we can't place the question of whether something is interactive in the mind of the beholder. It would also be really nice, and useful towards a real discussion of interactivity, if we could eliminate from consideration the extremely uninteresting cases of stimulus and response. A more objective and picky definition is required. To say that a ball obeying the laws of gravity is "thinking," even metaphorically, even on a really low level, is a pretty long stretch.

So where do you draw the line between where the metaphor works and where it doesn't, if you want to do so objectively? I'd propose this: for an agent to be an interactive agent, it must be capable of interacting with itself as well as with another agent. That clearly rules out the ball. It still allows a computer to be an interactive agent: when you tell the computer to save a file, it asks itself, is the file already saved? If so, where and what is it called? What do I do with all these new bytes of data? If not, I need to get a name and a place to put it from the user. In other words, the computer does something that might acceptably be called "thinking," at least metaphorically. You can interact with animals: we've all seen them do things on their own. But you cannot interact with a stuffed animal, even one that says a random phrase when you pull a string. Even if you believe in your heart of hearts that Teddy Ruxpin is alive, Mommy, he really is. What this does, then, is rule out certain examples of what Crawford would consider extremely low-level interactivity, the uninteresting, unmeaty stuff, from consideration. It draws a line in the sand, insisting that a toy company may not market its basketball as "interactive."

There may be some flaws with this add-on of mine to what can constitute an active agent, and I'd love to see some discussion on the matter. But what it does do, I think, is make the question of whether something is interactive an objective one. It also suggests a partial criteria for deciding whether remaining interactions are high- or low-level: how much self-interaction is going on in the minds of the two interacting agents? (I'll spare you my argument as to why this isn't circular.) I say partial because good interactive design requires good speaking and listening on the parts of the agents as well; thinking alone won't cut it.

Conclusion

I've only touched on a few of the issues discussed in *Understanding Interactivity*. It is an insightful and thorough book that makes many observations and suggestions from which software and Web site designers would benefit greatly. Ordinary computer users are encouraged to think about what makes a program enjoyable versus bothersome to use and given an idea where the problems come from. While some of the book, towards the end, gets fairly abstract, it is very readable throughout, and is written in an enjoyable style that makes it engaging and understandable to a reader without programming experience.

If Crawford is right (and I'm convinced he is) that interactivity is "the essence of the computer revolution," then this book deserves a place on the bookshelves of all us revolutionaries.

Review: ZephIR! 1.02b1

by Gregory Tetrault, gtetrault@atpm.com

Developer: studioZee, Inc.
Web: http://www.thezephir.com
Price: $49.95 (direct from studioZee)
Requirements: ADB port, 11 MB application RAM, AppleScript
Trial: None

ATPM RATINGS
OKAY

Overview

The ZephIR! ADB (Apple Desktop Bus) device can interact with most audio and video components that use infrared remote controls. You use the ZephIR! software to create virtual remote controls on your Macintosh. These virtual remotes can be programmed with AppleScript to perform simple or complex tasks. For example, one button click can turn on your audio receiver, turn on your CD jukebox player, load a playlist of songs and CDs, and start playing your music. Or you can use ZephIR! to turn on your cable TV box at a pre-set time, tune to a selected channel, turn on your VCR, set a recording time, and start recording.

Figure 1

Hardware and Software Installation

The ZephIR! device (Figure 1) plugs into an ADB port. It has a piggyback plug so you can reconnect your keyboard, monitor, or pointing device. The ZephIR! CD contains 68K and PowerPC versions of the ZephIR! application. You can run the ZephIR Installer, or you can copy the files to your hard drive. I recommend using the Easy Install option. If you want to use the included HyperCard stacks, you must manually copy them from the CD.

Getting Started

When you launch ZephIR!, a splash screen appears and then the ZephIR Browser window opens (Figure 2). The browser window contains a list of components that can be controlled by ZephIR!. Only a few components are installed from the CD, so the odds are low that your equipment will be among those listed.

Each component consists of buttons that represent those on a remote control. You position the ZephIR! device so that it points toward the equipment you wish to control. When you click a button, the appropriate infrared signal is beamed to your equipment.
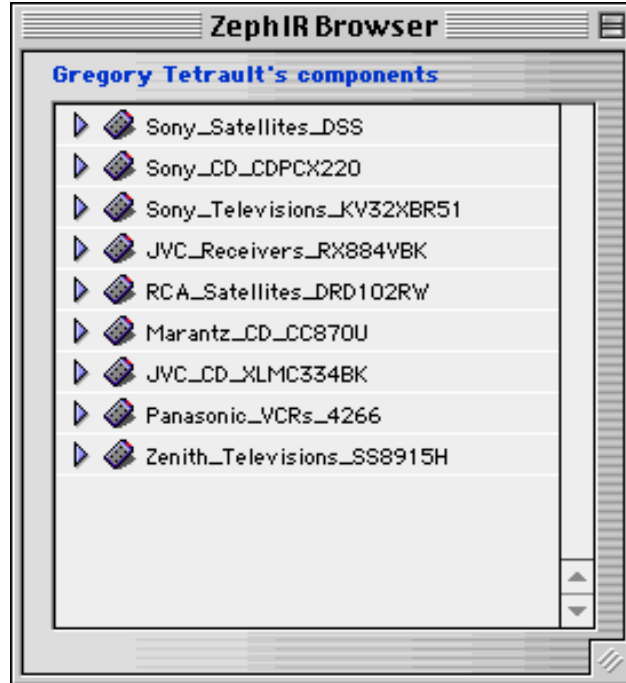

Figure 2

Long Distance Runaround

What can you do if your Macintosh is not in the same room as your audio and video equipment? StudioZee recommends using the POWERMID wireless infrared remote control extender (Model PM5900 from X-10 Inc.). You plug in the POWERMID transmitter and place it in front of the ZephIR! device. You place the POWERMID receiver (Figure 3) where its infrared beam can control your equipment. I had no difficulty using the ZephIR!/ POWERMID combination except for finding a convenient place for the receiver.

Figure 3

Downloading Components (Quick Remotes)

ZephIR!'s Browser menu has an "Import component" command. If you have an Internet connection, choosing this menu selection opens a "WebztIR" window. This window contains a list of manufacturers with sublists for types of devices (e.g., TVs, CD players,

VCRs). You may be able to find a ZephIR! component for your equipment. Double-clicking the component adds it to your list. It will also appear in the Quick Remotes submenu of the Remote menu. The Quick Remote is immediately ready for use.

Creating Your Own Components

My home audio/video equipment includes a TV, VCR, digital cable box, DVD player, CD jukebox, receiver/tuner, and cassette tape player. None of them had a prebuilt ZephIR! component! I tried using similar components (e.g., SONY CDPCX300 for my CDPCX350) but had no success. I do recommend downloading similar components; even if they do not work, they can help you create your own Quick Remotes.

To create a new component, you choose "New" from the File menu and select the Component submenu. Two windows appear at the far right of your screen. Enter the name of your component in the Properties window, then close the window. The Component window has an "I" (information) button in the upper left, a comment window at the top, and a larger tabbed window below. The Commands tab window

allows you to create buttons that will send infrared signals identical to those sent by your remote control. To create a command button, double-click on "UntitledCommand1." A command programming window will appear (Figure 4).
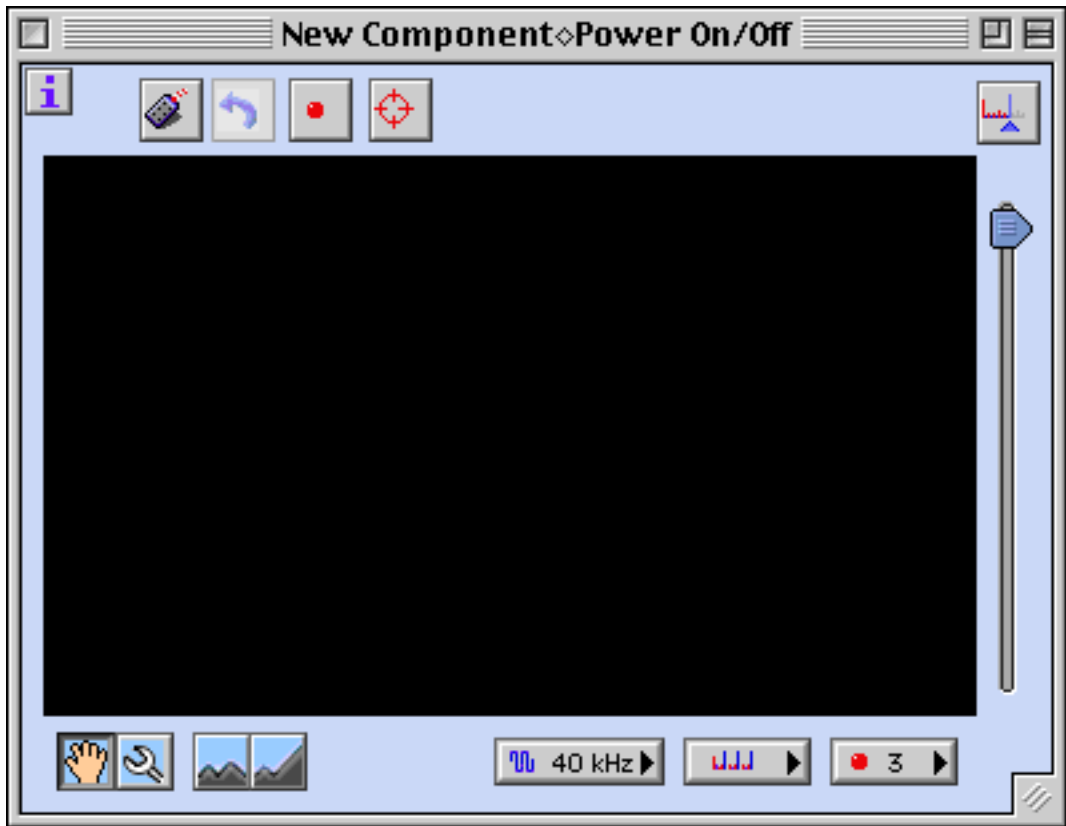

Figure 4

Click the "I" button in the corner to show the command Properties window. Rename the command appropriately (Power On/Off in my example). Now the real fun begins. You have to figure out what infrared frequency your remote control uses (40 or 56 kHz), how many pulses or repetitions it sends (1 to 5), and how many remote control button presses it will take for ZephIR! to learn how to duplicate your remote's signal (1 to 7). How can you know these facts? If you have downloaded a similar component, look at its commands and try using the same settings. If your equipment is unique, you will have to use trial and error to arrive at the best settings. To teach ZephIR! the new command, you click the "red dot" button near the top of the command programming window. You then point your remote control at the ZephIR! device and press and hold the appropriate remote control

button until the red light on the ZephIR! device goes out. You repeat this for the number of times shown on the "red button" popup menu in the lower right corner of the command programming window. Your command programming window will now have a pattern of red and blue vertical lines (Figure 5).
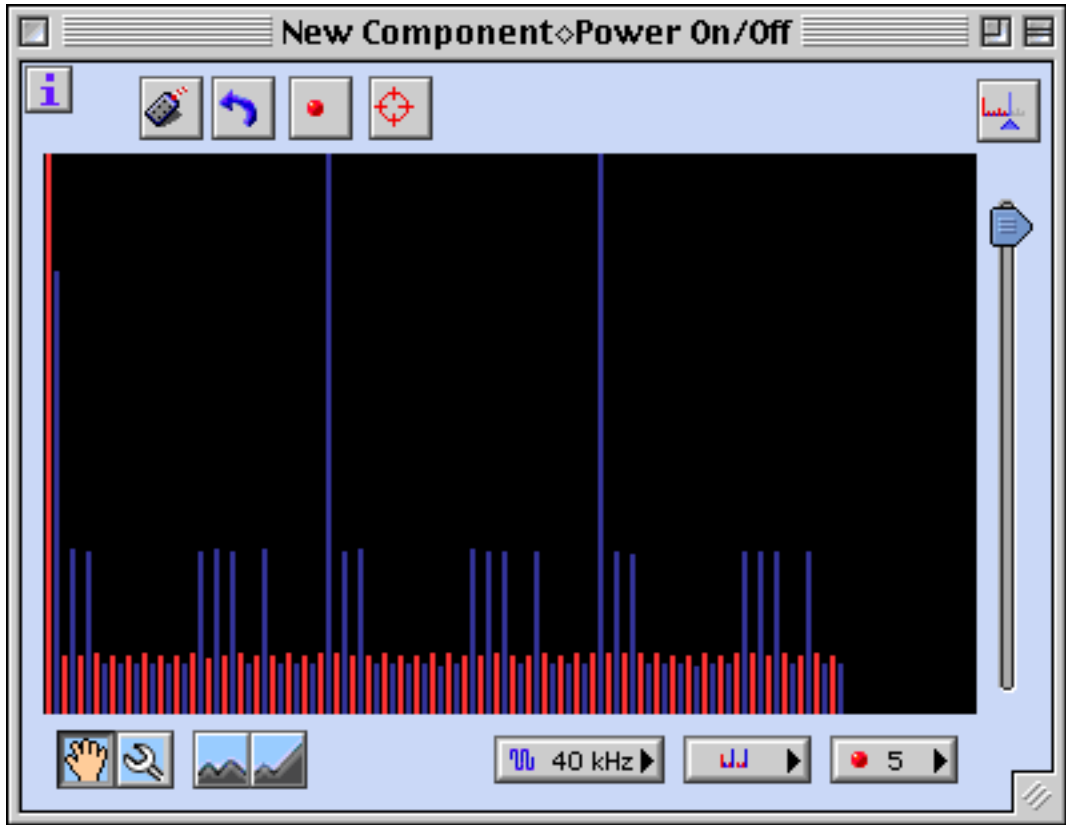

Figure 5

You now have to truncate the signal (my example is too long). You do this by pressing the truncate button in the upper right corner of the command programming window. A light blue vertical line demarcates the recommended truncation point (Figure 6).
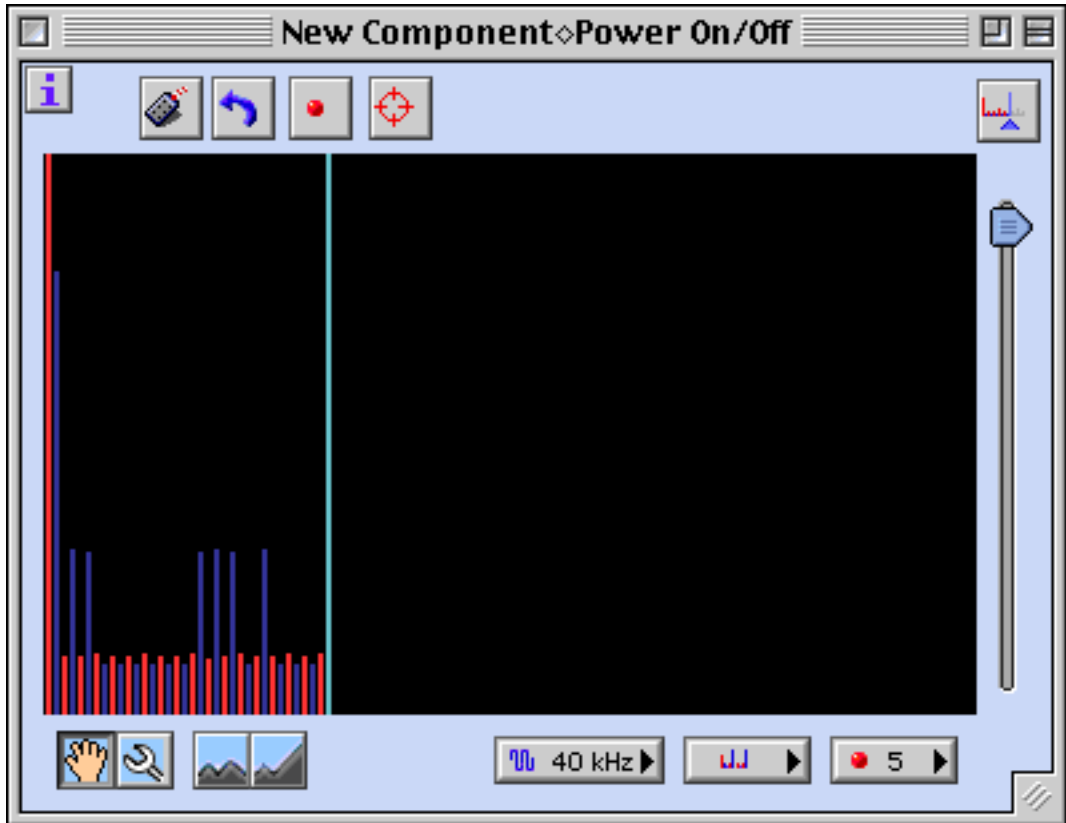

Figure 6

You still aren't done! The signal intensities (indicated by the heights of the blue and red lines) need to be equalized. You do this by moving the slider control on the right downward until there are only a few different line heights (Figure 7).
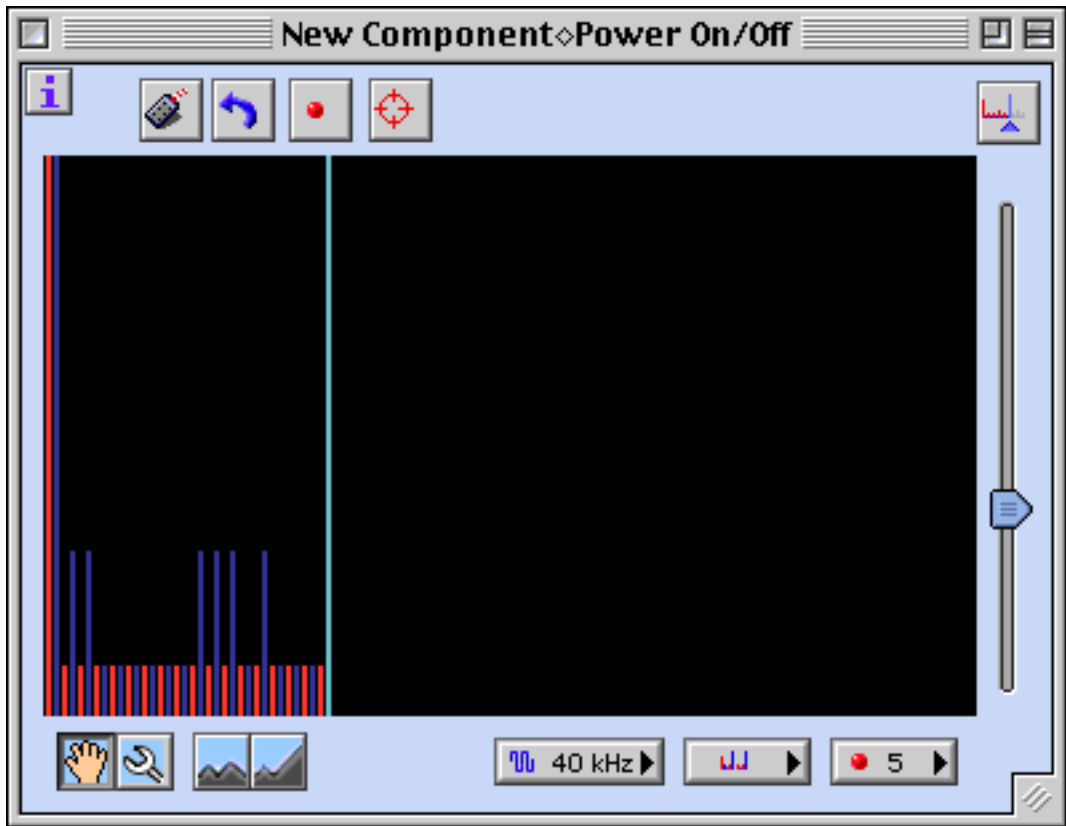

Figure 7

I found that moving the slider down by half to two-thirds usually worked. Now you need to test the command. Point the ZephIR! device at your equipment (or your POWERMID transmitter) and click the "remote control" button at the top of the command programming window. If it worked, click the close window button and save. Voila! You have created your first command. Now do this for every relevant button on your remote control. Wasn't that fun?

Adding a Channel Guide

You can greatly increase the usefulness of a ZephIR! virtual remote by adding a channel guide that lists specific channels (for TVs, cable boxes, VCRs, and other equipment). To do this you need a setChannel handler script for your component. If you are lucky, your downloaded component (or a close cousin) includes a setChannel handler script. Otherwise, open any TV component, click on the Script tab, and copy the setChannel handler script (Figure 8).

```
property myComponent : the name of me

on setChannel(theChannel)
  -- use this to 'wake up' the unit- otherwise it is less reliable
  -- fire zephir command "exit" of component myComponent
  -- convert the number to a string that we can 'step' through
  set channelString to theChannel as string
  -- pad with zeroes (the protocol of this particular unit)
  repeat (3 - the (length of channelString)) times
    fire zephir command "0" of component myComponent
  end repeat
  -- step through the channelString
  repeat with j from 1 to the number of characters of channelString
    fire zephir command (character j of channelString) of component
myComponent
  end repeat
end setChannel
```

Figure 8

Open your new component, click on the Script tab, and paste the handler. You must click the small AppleScript button in the lower left corner to save the script! Now click on the Channel Guide tab. Double-click on UntitledChannel1 and change the channel name. Then double-click "00" to edit the channel number. To add another channel, click the Channel Guide button in the lower left corner of the Component window. The ZephIR! Channel Guide always displays channels in the order you enter them (you cannot sort by channel name or number).

Using NetCD to Create a CD Magazine

You can combine ZephIR! with a CD database to enable you to play specific CDs and tracks. NetCD, a free utility created by Toby W. Rush, can catalog your CD collection by comparing CDs placed in your Macintosh with an extensive audio CD database (CDDB) on the Internet. After you have catalogued CDs with NetCD, you can create a CD Magazines in ZephIR!. After doing so, click the "I" button to show the Properties window (Figure 9).
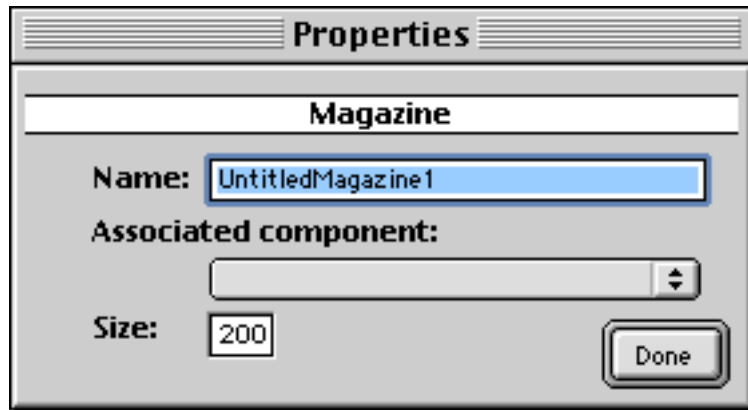

Figure 9

Give the magazine a name, use the pull-down menu to choose an associated component, and type in the maximum number of entries for the magazine. (The latter would be the entire capacity of a jukebox or the number of CDs in an exchangeable magazine.) Now click the Done button. You now have a blank CD magazine window. To add entries you must open the CD Library (in the Manager menu). You then drag an audio CD title from the CD Library window to the appropriately numbered row of the CD Magazine window. This process becomes very tedious for a 300-CD jukebox.

Using the CD Magazine

Once you have created one or more CD Magazines, you can use them to instantly select a CD or an individual track to play. Open the CD Magazine of interest. To play an entire CD just double-click the title. ZephIR! will send commands that tell your CD player to load and play the chosen CD. To play a particular track, highlight the CD title and click on the track button (the two eighth notes in the lower left corner). The CD Magazine window splits

into two parts. The lower part lists the individual tracks. Double-click the track you wish to play. ZephIR! will send commands that tell your player to load the chosen CD, jump to the selected track, and play it.

Creating Playlists

If your audio/video equipment supports programmed playlists, you may be able to create and control them with ZephIR! Choose CD Playlist from the "New" menu item of the File menu. Open your CD Library. Drag either disk titles or individual track names to the Playlist window (Figure 10). You can rearrange titles by dragging them up or down. When you are ready to start, click the Play button at the bottom center of the Playlist window. I could not test this feature, since I received script error messages that I could not resolve.
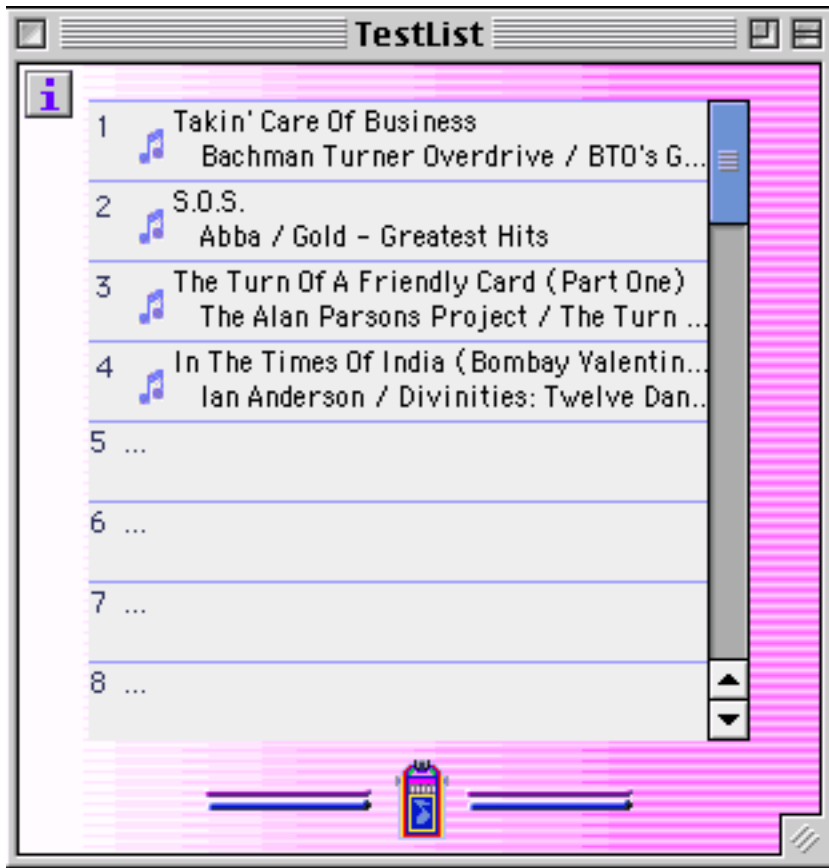

Figure 10

Creating Custom Remotes and Scripts

To experience the full power of ZephIR! you need to create custom remotes and scripts (Figure 11). Creating custom remotes is a complex task. You open a blank Custom Remote window, create and name buttons, and insert one or more AppleScript commands for each button.

Figure 11

The most common AppleScript command is to activate a button on a Quick Remote component (Figure 12). A Custom Remote can combine buttons from multiple components and can have unique buttons with complex AppleScripts (e.g., turn on cable

box, pop-up a channel list, tune to the channel I select, turn on VCR, activate "one-touch recording"). You need a solid background in programming with AppleScript to achieve this degree of sophistication.
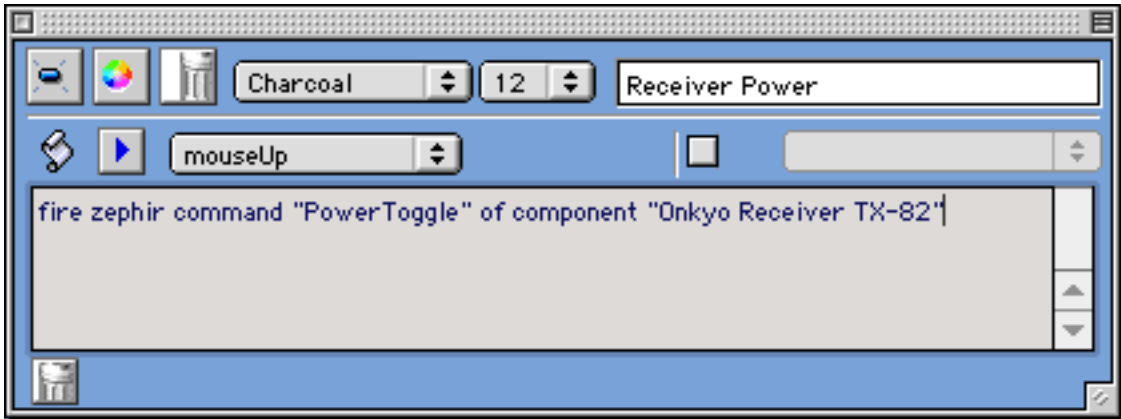

Figure 12

ZephIR! and Other Applications

You can use all of ZephIR!'s features within any application that can send Apple events. Instead of creating Custom Remotes and Playlists with the ZephIR! software, you can work entirely within HyperCard, SuperCard, or FileMaker Pro.

Strengths of ZephIR!

- Can control nearly any device that responds to infrared signals.
- Online Web browser tutorials can guide you through some tasks.
- Channel Guide feature makes it easy to jump to a desired channel.
- Works with NetCD to create listings of CD magazine or jukebox contents.
- Works with some equipment to create customized playlists of audio CDs or tracks.
- Can create sophisticated custom remotes with AppleScript.
- New lower price (was $74.95).

Weaknesses of ZephIR!

- Requires ADB port (USB version is planned).
- Too few prebuilt components.

- Difficult and time-consuming to program virtual remote controls.
- Cannot import entire listing of CDs or channels, must enter them individually.
- No layout or design tools for building Custom Remotes.
- No manual or help files.

Summary and Recommendations

When I read about ZephIR! I got excited. The idea that I could control all my audio/video equipment with my Macintosh had great appeal. I ordered and installed both ZephIR! and X-10's POWERMID. However, my excitement waned after spending hours trying to create virtual remote controls. It diminished further when I couldn't overcome Playlist and Custom Remote problems even though I am a proficient AppleScript programmer. ZephIR! needs a thorough manual, active help features, extensive offline tutorials, and a larger library of prebuilt components.

If you are in need of a way to control infrared-responsive equipment with your Macintosh, ZephIR! is your only choice. ZephIR! would also be a good choice for geeks who love to play with AppleScript and audio/video equipment. If you would like an easy way to control audio/video equipment with your Macintosh, wait for a more sophisticated future version of ZephIR! (or for someone to make something better than ZephIR!).

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**, an **Interviews Manager**, a **Copy Editor**, and a **Publicity Manager**. Please contact us if you're interested.

How Can I Subscribe to ATPM?

Visit the subscriptions page or send an e-mail to subscriptions@atpm.com with the word help in the subject line. Instructions for subscribing and unsubscribing will be returned, shortly.

Which Format Is Best for Me?

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

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

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

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

What Are Some Tips for Viewing PDFs?

- You can download Adobe Acrobat Reader for free. If you have a Power Macintosh, Acrobat Reader 4 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.

How Can I Submit Cover Art?

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

How Can I Send a Letter to the Editor?

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

Do You Answer Technical Support Questions?

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

How Can I Contribute to ATPM?

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

Segments: Slices from the Macintosh Life

This is one of our most successful spaces and one of our favorite places. We think of it as kind of the ATPM "guest room." This is where we will publish that sentimental Macintosh story that you promised yourself you would one day write. It's that special

place in ATPM that's specifically designated for your stories. We'd really like to hear from you. Several Segments contributors have gone on to become ATPM columnists. Send your stuff to editor@atpm.com.

Hardware and Software Reviews

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

Shareware Reviews

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

Which Products Have You Reviewed?

Check our reviews index for the complete list.

What is Your Rating Scale?

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

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

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Where Can I Find Back Issues of ATPM?

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

What If My Question Isn't Answered Above?

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

Match-up Madness

I'd like to congratulate last month's *Trivia Challenge* winner: Ohioan John Jacobs. Your ATPM T-shirt is on the way! This month's prize of a dynamite ATPM T-shirt goes to the first two correct entries I receive at egoss@atpm.com. Individual readers are eligible to win only once every twelve months.

This month's *Trivia Challenge* is aimed at the NCAA Basketball junkie. As my favorite time of year swings into action, try to match up the college and university names on the left with their basketball team names on the right, as you take part in:

Trivia Challenge 6.12—Match-up Madness

1. University Of Connecticut	A. Hawkeyes
2. Temple	B. Cardinal
3. Duke	C. Huskies
4. Maine	D. Matadors
5. Boston College	E. Longhorns
6. University Of Nevada, Las Vegas	F. Silverswords
7. Ohio State	G. Terrapins
8. Iowa	H. Runnin' Rebels
9. Texas	I. Owls
10. Stanford	J. Hurricanes
11. Arizona	K. Buckeyes
12. Chaminade	L. Eagles
13. Maryland	M. Black Bears
14. Miami	N. Wildcats
15. Cal State Northridge	O. Blue Devils

Last Month's Answers—6.11—VPs If You Please

1. John Adams	F. George Washington
2. Martin Van Buren	C. Andrew Jackson
3. Millard Fillmore	G. Zachary Taylor
4. Chester A. Arthur	A. James A. Garfield
5. Theodore Roosevelt	I. William McKinley
6. Calvin Coolidge	B. Warren G. Harding
7. Harry Truman	H. Franklin D. Roosevelt
8. Richard M. Nixon	E. Dwight D. Eisenhower
9. Lyndon B. Johnson	J. John F. Kennedy
10. Gerald Ford	D. Richard M. Nixon

The Rules

Each question has only *one* correct answer. The answers are stored in a hermetically sealed envelope guarded by a clever cat named "Kippur" who lives in our house.

This Month's CD Recommendation

"Rollin' Into Memphis: Songs Of John Hiatt" by various artists. Here's a fabulous idea that I wish I'd thought of first: Gather a group of the best session musicians you can find, including G. E. Smith on guitars, Paul Ossola on bass, and Dan Hickey on drums. Then invite a truly eclectic group of guest artists including C. J. Chenier, Irma Thomas, Odetta, Chris Smither, Cliff Eberhart, Patty Larkin, and a few others, and let them record their interpretations of songs from the best songwriter in rock music today, John Hiatt. The result is a lovingly recorded testament to their collective talents. My highlights are Chris Smither's version of "Real Fine Love" and C. J. Chenier's cover of "Falling Up." This is a must-own for Hiatt fans, and a real musical odyssey for the uninitiated.