ATPM

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

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Welcome

by Robert Paul Leitao, rleitao@atpm.com

Welcome to the July edition of *About This Particular Macintosh!* In just a few days, mission Deep Impact may provide clues to the origins of the universe. The project is one only NASA could design. Think about it: a man-made spacecraft is racing across the cosmos on a course to collide with a comet the size of Manhattan on Independence Day in order to create a crater the size of the stadium that sits at One Patriot Place. It's a star-spangled kind of thing that may give July 4th fireworks a whole new meaning. NASA is looking for celestial clues to the beginnings of Earth.

Deep Impact is scheduled to complete its fiery mission less than a month after Apple Computer set off some fireworks of its own. Think about it: the renegades of the PC industry who inspired us to Think Different may be creating a deep impact of their own by abandoning an 11-year chip partnership with their first nemesis, to set the company on a collision course with its one of its first developer partners and recent 11-year nemesis. The first battle of the operating systems has long been over, but the second big battle may be about to begin. The switch to Intel may come six months from now, but the clues to Apple's product planning may take several more months to unearth.

The Intel on Intel

To the surprise of only a few people in the WWDC audience, Apple Computer CEO Steve Jobs announced in early June that Mac OS X has been compiled over the years for both the PowerPC and the Intel chip architectures. What surprised some people in the audience is the announcement that Apple will be migrating the Macintosh to the Intel chip architecture beginning in 2006 with the transition mostly complete by the end of 2007. To the surprise of just about everyone in the audience, the computer used by Mr. Jobs during the keynote address was an Intel computer running Mac OS X.

The Big Why?

Why would Apple transition from the PowerPC to Intel chips? In the words of Mr. Jobs, it comes down to power consumption in relation to performance. In other words, future Intel chips offer more punch for the power. Using what's called "universal binaries," developers can prepare Mac OS X applications for both PowerPC and Intel chips.

The Big Lie?

Two years ago Steve Jobs promised the WWDC audience that Apple would soon release a 3 GHz G5. Unfortunately, IBM's G5 chip development lagged behind expectations. It wasn't that Steve Jobs lied; his plans for faster Macs ended up being denied. Apple will continue to release PowerPC-based G5 computers until the transition to Intel chips is complete.

Color My World

Or at least color my iPod. Responding to several months of product speculation, in late June Apple announced its first color-screen iPods that aren't called "iPod photo." Of course, this product release hasn't squelched more speculation. Mac users are a surly lot! Many now speculate Apple will eventually release a video iPod no matter the size of the iPod's small screen. In the meantime, the color iPods are ideal for viewing photos and will display album artwork in their original hues.

The new color iPods come in 20 and 60 GB varieties and will carry as many as 25,000 photos. For those of us who use an iPod to color our world with music, the new iPods add a bit of visual panache to our songs.

Color My Radio

In announcing the color iPods, Apple also announced the release of iTunes 4.9. The newest version of iTunes supports podcasting, a word that has quickly entered the American vernacular. Podcasting has been called "TiVo for radio." It allows iPod users to download pre-recorded content through iTunes to their iPods and listen to the content at their convenience. iTunes supports subscription arrangements, allowing users to "subscribe" and automatically download new podcasts as they become available.

With the new color iPods adding color to one's music, the array of audio content available through podcasts adds a bit of "color" to what's available on the "radio."

When Does a Leopard Get its Spots?

Actually, that should read "When does Leopard get its spot in the Apple product line?" The answer: late 2006 or early 2007. Leopard is the code-name for the next version of OS X. Many of us are still wrestling with Tiger, and yet another OS X beast is now being tentatively scheduled for release.

Leopard will find its spot just as Microsoft's long overdue update to Windows XP is scheduled to hit store shelves. Tiger has brought new features to Mac users and has set new standards in functionality for popular operating systems. Leopard running on Intel chips may provide Apple with the bounce it needs to pounce on much of Microsoft's share of the operating system market. By the time Leopard and Longhorn are available to consumers, both operating systems will have the Intel chip architecture in common.

The Spirit of 76

That's the percentage of market share of the digital music player market held by the iPod in all of its various forms. The spirit of continued innovation that's bringing the color iPod to market may help Apple maintain its commanding share of market through the balance of the calendar year. The iTunes Music Store is close to reaching one-half billion songs sold.

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We welcome you to our July issue and all of the explosive news and views our digital pages may hold. Our July issue includes:

Publisher's Letter

Michael Tsai introduces ATPM's new publishing system and what the changes will mean to you.

The Candy Apple: It's Just Business and Other Items

Ellyn considers Apple's Intel chip announcement and some other stuff.

Segments: Hit Me Again

"This is the best possible time, ever, for Apple to be doing this transition [to Intel chips]. This extremely difficult and risky chasm must be crossed now, while iPod, iTunes, and Mac sales are hot."

Segments: Love at First iBook

Does technology push us apart or bring us together? It all depends on how you use it and whether you are open to the possibilities.

Segments: Podcasts: Number One on the Hype Parade

"The business of content is all about presentation and marketing. Quality comes far behind availability and access. Consumers will settle for mediocrity if they can get to it easily and reliably."

How To: Filemaking

Charles Ross provides a tutorial on simple relational databases using FileMaker 7.

How To: Marcus in Widgetland

With Tiger has come Dashboard, a feature that allows for easily accessible tiny applications called widgets. And with Dashboard there's a deluge of widgets in every shape and size. Get started on the road to widget wizardry.

Desktop Pictures: Guitars

Reader Mark Montgomery shares several artistic and desktop-worthy images of guitars.

Cortland

Cortland's family pays a visit, and a sinister plan is unfolding in the back room.

Frisky Freeware

Frisky the Freeware Guinea Pig checks out Mac-MAME.

Review: Altec Lansing FX6021 Speaker System

The Super Speakers with the Silly Name (with apologies to Price Pfister).

Review: Altec Lansing XT1 Speaker System

These speakers might not save the modern-day Willy Loman from his personal demons, but at least his sales presentations will sound good.

Review: Curio 2.4

A review of Zengobi's Curio, a brainstorming and development application that helps graphic designers track projects from concept to final draft with integrated design, search, and organizational tools.

Review: Graphire Bluetooth

Wacom's latest graphics tablet offers the precision of a stylus and the convenience of a bluetooth wireless connection.

Review: Headphones

David Zatz compares the Noisebuster ProTech NB-FX headphones to the Sennheiser PX100.

Review: vSpace Master 2.0

vSpace Master's 3D presentations work exactly as intended and offer a significant advantage to many other 3D presentation technologies by eliminating the need for browser plugins.

E-Mail

AppleScript: The Missing Manual[1]

I bought and read this book with working knowledge of programming, but before I had even used an AppleScript. It's really nice and probably useful for the average home office user, but it tells you way too little about the language to script applications that are not mentioned in the book. Understanding dictionaries seems to be an arcane art, and after frustratingly long trial and error sessions I will now get Matt Neuburg's Definitive Guide[2].

> *—Tobias Weber*
>> Indeed, Neuburg's book is excellent at teaching you how to learn to script other applications.
>> *—Michael Tsai*

Mac OS X Themes[3]

The sad thing is that themes can only be applied with *one* program at this time: ShapeShifter. There used to be several options, mostly free. Not that ShapeShifter will break the bank by any stretch. . .but now that everyone releases only a .guikit version, you're locked in and have to pay to play. Never mind that most themes are really pretty much unusable for all-day use.

> *—Michael*

• • •

Themes are a great idea but the one thing they make (sometimes) painfully obvious is that GUI design is best left to the pros.

> *—Smartin*

• • •

You can also use ThemeChanger[4], which is a free alternative to ShapeShifter. In my limited experience the program works well.

> *—Katerina*

• • •

I used Windows since 3.1. There is a utility called Windowblinds at WinCustomize[5] that allows one to radically alter the OS appearance. In all my time searching thousands of entries, I always wound up most satisfied with a "mimic" of the Mac.

That said, what I have seen in the Mac alterations has not swayed me that anyone has improved on the original. I think Apple got it right the first time.

> *—Michael K.*

Buy a Mac mini or Upgrade Your Cube?[6]

I am so proud of you! And happy to see someone writing[7] about the beeeuteefull Cube. I have had just about every Mac since the IIcx! And I still have a working IIx. But there is *nothing* more lovely than a Cube. (Mine is elegantly displayed on a glass desk and the effect is astounding!) I haven't done any upgrades. . .yet, but as of now my Cube is running my digital audio studio with the help of the new Tiger OS without skipping a beat (no pun intended). Thanks to your article; I will definitely be doing an upgrade in the very near future, and I'll be thinking of you every step of the upgrade. What tops the cake and makes this upgrade a real right-on situation is I don't have to transfer my files to another Mac. Power to the Cube, baby!

> *—Drummergirl*

• • •

I think Grover Watson is in for a rude shock. Tiger does not support all the upgrades he's got on his Mac. I know from sad experience: I bought Tiger for my G3 Blue & White that has a processor upgrade, and it will not load every way I tried. He's probably stuck with 10.3.9 like me.

> *—Tom O'Grady*

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Matthew Glidden writes:

> And as mentioned above, saving the trouble of moving all your applications to a new machine is a big win.

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[1] http://www.atpm.com/11.06/applescript-mm.shtml
[2] http://www.atpm.com/10.04/applescript.shtml
[3] http://www.atpm.com/11.06/customizing.shtml
[4] http://themechanger.sourceforge.net/

[5] http://www.wincustomize.com/software.aspx?u=0
[6] http://www.atpm.com/11.06/e-mail.shtml
[7] http://www.atpm.com/11.05/cube.shtml

Baloney! The first thing a new purchaser of a new Macintosh sees is a option to connect your old computer to the new one via FireWire and sync the two systems. This is painless and complete, even copying my old account data, grabbing my personal files in Documents folder, and preserving my personal settings and account data in Mail and Safari. My third-party apps were exactly where I put them on the old machine.

If it weren't for the new case on my AlBook-G4/1.5ghz, I wouldn't have known there was anything different. I'm an Apple tech in my area, and could have done the whole thing by hand, but the FireWire sync feature saved me hours of setup and config time. Kudos to Apple all around!

—*Paul Pollock*

> It depends. The migration assistant doesn't transfer all Unix software, and some applications will require re-entry of their registration information. So it can still be a pain to move everything to a new Mac.
> —*Michael Tsai*

Tiger's New Stripes[8]

You might also give kudos to Apple for finally fixing Rendezvous printing via AirPort.

My example: I own a AlBook and use it at home via an AirPort Express and print via a Brother HL-1440. At first, all was well and everything worked. (I could print wirelessly and still keep things moving on the Internet without problems, until OS X 10.3.5.)

Apple changed the protocol for AirPort Printing, requiring a compatible printer driver. None was ever forthcoming from Brother.

Enter Apple's Bonjour software within Mac OS X 10.4! Load up AirPort Setup Assistant, upgrade the firmware in your AirPort, try to print a document, and select Bonjour from the print dialog. Voila! The printer shows up as an option. Henceforth, all print jobs route to the printer wirelessly. What is happening here (and why it required new AirPort firmware) is that there is no longer any need for a specific protocol. All USB printers now print via AirPort by routing the print drivers' output (as if it were printing via a cable) and sending the standard printer driver output to a place other than the USB port. It gets rerouted to the AirPort and thence via the USB port there, to the printer.

Complicated to do (for Apple), but child's play to use. While you may not do this sort of thing at

home, this is a huge change for 10.4 and bodes well for other networking functions that are related. Users are going to find that many hard things are much easier.

—*Paul Pollock*

Bloggable: Upgrade Madness[9]

All the way up to and including Mac OS X 10.3.9, OS X would run on Macs with upgrade cards in them. Not Tiger; I wonder why?

—*Tom O'Grady*

> Apple does not support Tiger on Macs with upgrade cards (which means that Apple won't help you troubleshoot problems even with paid support calls), but many upgrade cards are compatible with Tiger. Sonnet, PowerLogix, and Daystar G4 CPU cards are reported to work, although some require software updates. Accelerate Your Macintosh[10] has info on specific cards and Tiger compatibility.
> —*Gregory Tetrault*

NetNewsWire 2.0 Review[11]

The new release of Safari's well-known ad-filter plugin, PithHelmet, is now compatible with NetNewsWire. Those used to ad filtering know it was a pain to switch from (filtered) Safari pages to the same, non-filtered ones in NNW. Now, NNW *really* integrates Safari.

—*Hervé Sainct*

• • •

Regarding saving open tabs, try Saft[12]. It can automatically save your open web pages/tabs when you quit or if Safari crashes.

—*Don Morris*

Shoebox Pro 1.2 Review[13]

I agree that Shoebox has some growing up to do. I recently bought the non-pro version and I have grown to love it, in spite of its limitations.

The best thing, in my opinion, is the use of aliases. By setting up some thought-out alias folders, Shoebox knows that "Nathan" is my nephew, and my daughter's cousin, and one of my sister's offspring. I love being able to show different versions

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[8] http://www.atpm.com/11.06/segments-tiger.shtml

[9] http://www.atpm.com/11.06/bloggable.shtml
[10] http://www.acceclerateyourmac.com
[11] http://www.atpm.com/11.06/netnewswire.shtml
[12] http://pimpmysafari.com/plugins/saft-v770
[13] http://www.atpm.com/11.06/shoebox.shtml

of the same photo-set this way. (I can see all pictures of "Nathan," for example, or all of my daughters cousins, one of whom is Nathan).

I suppose you could do similar stuff with keywords in iPhoto, but it feels slicker to me in Shoebox.

It may feel like a downgrade from iView (which I never got the knack of) but, to me, it was a huge step forward from iPhoto where I never really felt organized.

I've had Shoebox for a couple of weeks and feel like I can find photos quickly—for the first time since I kept them in a real shoebox!

—*DS*

iceKey Review[14]

I love the iceKey too. I love the feel of the keys. I would describe it as low-effort, yet precise.

One peculiarity is worth mentioning…all the keys have the same contour or profile, regardless of which row they're on. This means if you want a Dvorak keyboard, you can easily swap the key caps around and convert the iceKey into one. With many (I would say most) other keyboards that isn't practical.

—*Tony Belding*

TransPod FM[15]

I saw your review of the TransPod. I have one for my Honda Accord with my fourth-generation iPod. I don't know if it is the radio of the Accord or what, but the TransPod works great without any interference—always great. Also, the positioning of unit with the cigarette lighter works out great. Unfortunately, for the Odyssey 2005, no such luck. I saw your article, and like the position of the iPod, but the problem is that I don't really see how you anchored the unit via the velcro to the various mounting pieces supplied with the TransPod. Also, did you run the power cables down to the lighters? Does the unit appear pretty stable with your use of velcro? Any insights and or pictures would be appreciated.

—*Ed*

> Yes, I ran the power cable down to the AC at the base of the center console. The cable stretches tight, but not too tight, and hugs the contours of the console pretty well, staying out of the way.
>
> With regard to the mounting, rather than drill two holes into my dashboard, I used some Velcro strips I had on hand. I simply took two,

and placed them on the back of the mounting bracket, then stuck that to the dash. The mounting bracket stays in the van all the time, and I just put the TransPod module on it when I need to.

> The stability of the Velcro I used is what I would call borderline acceptable. I'm not sure if there are varying degrees of strength in Velcro; if there are, I would recommend the strongest available. I always feel like the mounting bracket may pull free from the dash when the main module is in place, but it hasn't yet.
>
> Please note I did *not* use either of the mounting arms provided in the kit. This was done only with the dashboard plate, the one with the two holes in it for the screws to go through.
>
> —*Christopher Turner*

Pod People[16]

I never even tried the iPod earbuds (after reading numerous reviews complaining about them). I also went to HeadRoom (from whom I had previously purchased some excellent Sennheiser headphones) and bought Etymotic Research ER6 earphones. The ER6 headphones are comfortable even after hours of use (including falling asleep with them). They block >20 dB of noise just by being inserted, and they deliver good sound. (I use the Small Speakers EQ setting.) I play my iPod in airplanes and while mowing my lawn, and I found the noise-blocking ability of the ER6 earphones to be equal or superior to noise cancellation headphones.

One caveat is the need for replacement filters. ER6 earphones use tiny filters mounted in a steel cylinder. The filters are required, and they eventually need replacing due to buildup of waxes, sweat, etc. (The filter can look clean but still be unusable.) Replacement filters are sold in packs of six with a list price of $15. The cheapest price I've seen is $13. I go through a pair of filters approximately every six weeks. Exercising or use in hot weather shortens filter life due to sweat and thinner ear wax.

Even with the need for filter replacement, I am pleased with the ER6 earphones and recommend them.

For anyone who, like me, has tinnitus, the ER6 earphones are highly recommended. I don't listen to pure white noise, but I ripped a few CD albums

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[14]http://www.atpm.com/11.06/icekey.shtml
[15]http://www.atpm.com/11.05/transpod.shtml

[16]http://www.atpm.com/11.06/pod-people.shtml

of natural sounds (tropical rainfall, ocean surf, burbling streams, etc.) and some electronica music that I play through my iPod to reduce the annoyance of the constant buzzing, humming, or whistling noises of tinnitus.

—*Gregory Tetrault*

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Long live the first-generation!

My good old Pod is still going strong. Sometimes I'm tempted by those new-fangled features like text notes or on-the-run track rating, but it still does what I bought it for beautifully, so it stays.

My white ear buds didn't last long either (eaten by a lawn mower!). My B&O buds, with the nifty ear hooks, are much more comfortable with sound great sound.

—*Oliver Boermans*

LaunchBar 4.0.1 Review[17]

It's sort of like Orloff, but different. I used Quicksilver for months and was quite happy. I used LaunchBar for three days—and bought it. If you don't have either one of these utilities, you work too hard.

—*Aunt Martha*

Tetris Elements Review[18]

This package is a great mix of different variations to challenge all levels and methods of play.

I'm primarily a console gamer and have played Tetris on Nintendo as well as various clones, completed "The New Tetris" on Nintendo 64, and am currently working with "Tetris Worlds" on PlayStation 2. All are addicting and long since have learned to use alternate audio selections from my own collection in place of the given soundtrack to extend game play endurance.

Working with Tetris Elements, it was a refreshing change to find a computer based version that had the verity to keep a seasoned veteran enthused about the series. I've recommended Tetris Elements to numerous friends and family because its high customization ability allows for an experince tailored to any skill level in each variation.

—*James A. Fitch*

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[17]http://www.atpm.com/11.03/launchbar.shtml
[18]http://www.atpm.com/11.04/tetris-elements.shtml

Outlining and Styles[19]

Aw, man, what a bummer. I loved the history of XML article, and was curious for more. I am a quiet archeologist of these kinds of things, the histories that get us to where we are and why we do things the way we do. More to the point, the accidents and hidden choices that get us there. (Why, for example, do we use = to say equals? What a fascinating glyph, but it took a *long* time to arrive at that common language...)

Anyway.

About this article, thanks for the additional detail about Notebook. A colleague swears by it, and the indexing and other aspects do seem quite powerful. Perhaps I will finally check it out...

—*mc*

> As it happens, I've made a study of the appearance of that equals sign. It is no small matter, neither in its history, nor in the implications behind it. The sign itself is one thing, but the notion of developing a graphical convention for equivalence is another. Having a "right side" and a "left" is one of those profound "geometry-meets-text" notions of which I think outlining is one.
>
> Both the sign and the left-right idea were invented by Thomas Harriot in the 1580s, while studying Native American "mathematics" on an early voyage. You may know little of him as he never published and was always burning his notes to avoid a heretic's death.
>
> I found the actual site where he stayed with the Indians that winter and was able to purchase it for my home.
>
> A neat coincidence you bringing that up.
> —*Ted Goranson*

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The XML column was quite a complex one, and I still haven't fully digested it. It certainly goes against a trend that we see in many places of dumbing things down to get instant "Hey, that's cool!" responses. Lack of response doesn't signal lack of interest, though I guess there's no way for you to know that!

You've certainly piqued my interest with styles, but I can imagine wasting a lot of time playing around with fonts and colors and coming up with a mess that wouldn't really help me at all. I'd love to hear what styles you (or other more savvy users) use, or what you learned from cockpit displays.

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[19]http://www.atpm.com/11.06/atpo.shtml

—Rick Levine

We'd love to hear your thoughts about our publication. We always welcome your comments, criticisms, suggestions, and praise. Or, if you have an opinion or announcement about the Macintosh platform in general, that's OK too. Send your e-mail to editor@atpm.com. All mail becomes the property of ATPM.

Publisher's Letter

Michael Tsai, mtsai@atpm.com

This is the first issue of ATPM produced with our new publishing system. The formats remain the same—two HTML and two PDF editions—but we're producing the issues using new tools. The new system should let us produce better PDFs in less time. Although we had been using the old system for nearly five years, ATPM has had several format changes over the years, so I thought I would take a little time here to examine them.

DOCMaker

From April 1995 to April 1996, ATPM was available exclusively in DOCMaker[1] format. DOCMaker was a nifty application that provided a primitive, SimpleText-style editing environment. DOCMaker didn't support spell-checking, tabs, or wrapping text around graphics, but its signature feature was that instead of saving its documents in SimpleText format, it could save them as *stand-alone documents.* These "documents" were actually *applications*: your document, combined with the software needed to view it. So, you could double-click an issue of ATPM, and it would display itself in a nice interface, complete with a search feature and commands for navigating between different articles. Most people received the ATPM DOCMaker files via e-mail or downloaded them from AOL or eWorld.

HTML

In May 1996, we first made ATPM available on the Web in HTML format. At first, Evan Trent and Nancy Ross converted the DOCMaker issues to HTML by hand. Starting with ATPM 3.09, I began using Myrmidon[2] to do this (mostly) automatically by *printing to HTML.* Most people, however, preferred to download the DOCMaker files from our FTP site. They were compressed with StuffIt for faster downloading and, once downloaded, provided a faster and more Mac-like reading experience. Web browsers weren't always as nice as they are today.

PDF

A few years later, Adobe Acrobat was widely available, and ATPM readers were clamoring for PDF-formatted issues. There were a variety of reasons for this. DOCMaker documents didn't print well. Graphics would shift around because the layout was done using spaces, and sometimes graphics or even lines of text would be split across page boundaries. The main body font that we used, Geneva, looked great on-screen, but wasn't optimal for printing. DOCMaker couldn't embed fonts, so text using fonts that weren't built into the Mac OS had to be converted into graphics. (This also let us "de-bump" the edges of the text, since font smoothing wasn't yet built into the Mac OS.) Anyway, these fonts were rasterized at screen resolution, so they looked blocky when printed.

In July 1999[3], we introduced the first PDF version of ATPM. Aside from printing better (because of better pagebreaks, vector graphics, and embedded fonts), PDF offered a number of benefits. Since it was a cross-platform format, ATPM readers could download and view it using Windows machines at work. By this time, URLs were more common in ATPM articles. DOCMaker, via ICeTEe[4], could make URLs in the text clickable if you held down the Command key. We wanted to include more URLs, but sprinkling too many of them throughout the text made the paragraphs unreadable. PDF had the ability to make *any* text clickable, just like the Web, and the actual URL could be hidden at the bottom of the page (so it would be visible when printed).

Finally, switching to PDF made it much easier to produce ATPM. We could now use Adobe FrameMaker, a real word-processing and page-layout program. Besides providing a nice editing environment, FrameMaker made it possible to set up the clickable links and bookmarks (for article navigation) ahead of time. Most other software, even today, requires a separate, manual pass using Adobe Acrobat to add these features. Aside from being more work (you have to draw boxes to set the clickable area for each link), this wasn't feasible for us because it would have to be done at the last minute, after converting the issue to PDF. Finally, in addition to exporting to PDF, FrameMaker had a customizable HTML

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[1] http://atpm.com/Back/pdf/ATPM-101.pdf
[2] http://www.atpm.com/4.02/page14.shtml
[3] http://www.atpm.com/5.07/publishersletter.shtml
[4] http://kb.iu.edu/data/abmq.html?cust=839575.13421.
30

export feature, which actually generated pretty good HTML, needing just a little post-processing via a Perl script.

eDOC and Offline Webzine

The PDF-formatted ATPM got a great reception, but many ATPM readers continued to prefer the DOCMaker format because it was easier on the eyes (on-screen) and because Acrobat Reader was slow and unwieldy. With ATPM now bring produced in FrameMaker, it wasn't possible (given our staff and time constraints) to continue producing a DOCMaker version. However, FrameMaker had some powerful features that allowed us to solve this problem with the help of a wonderful utility called eDOC[5]. Like Myrmidon, eDOC is a printer driver that intercepts drawing commands to create a file instead of a printed document. However, instead of creating HTML, it creates a stand-alone document that's similar to DOCMaker, but that supports arbitrary layout (like PDF). Thus, with the help of FrameMaker's stylesheets and its conditional text feature, we were able to produce PDFs as well as stand-alone eDOC documents from the same source files. The eDOC version of ATPM was introduced in August 1999[6], along with the Offline Webzine edition that continues to this day.

Screen and Print PDFs

In May 2000, we had to stop producing the popular eDOC edition. The eDOC driver had stopped working with FrameMaker, and despite a clean installation and help from eDOC's author, we were not able to get it working again.

Instead, we upgraded from FrameMaker to FrameMaker+SGML. FrameMaker works like a word processor, with both character- and paragraph-level stylesheets. The more powerful FrameMaker+SGML is designed for creating *structured* documents. Instead of having two styles (character and paragraph), each run of text is part of a tree of *elements* (think HTML tags). This richer markup enables the creation of context-sensitive layout rules, and this made it possible to create screen- and print-optimized layouts, which we debuted in August 2000. The screen version had larger fonts and a smaller page size, while the print version had a two-column US Letter layout with smaller fonts and footnotes showing where each URL would lead.

Goodbye FrameMaker

This combination of four formats, online and offline HTML editions and two PDF formats generated with FrameMaker+SGML, has served us well. Each has a loyal following, and FrameMaker+SGML's power, combined with various scripts developed over the years, made this a comfortable combination of formats to produce. However, the Mac world has changed in the nearly five years since we started using FrameMaker+SGML. FrameMaker (version 7 incorporates the SGML features and is simply called FrameMaker) is out of favor at Adobe, which is now focussing its development efforts on InDesign. FrameMaker, which started out as a Unix application, was behind the times interfacewise when we started using it. The latest version is little better, and Adobe has halted development of the Mac version of FrameMaker. It will never be Carbonized for Mac OS X.

FrameMaker continues to run very well in the Classic environment. In fact, it's the only Classic application that I use regularly, and it runs much faster now on my G5 with Mac OS X 10.4 than it ever did running directly in Mac OS 9. All that said, it's time for a change. FrameMaker has bugs and limitations that add several hours to the production of each issue of ATPM. It no longer makes sense to live with them now that it's clear that they'll never be addressed. Also, the upcoming Macs with Intel processors will not be able to run Classic, which means that in a few years Apple will no longer make any Macs that run FrameMaker. (It seems that Apple's own technical writers are in the process of switching from FrameMaker to a system using XML and XEP[7].)

New Tools

There are surprisingly few options on Mac OS X for producing rich PDFs (with bookmarks and clickable links) and HTML documents from the same source. One might first consider Microsoft Word, or Apple's new Pages, but the Mac version of Word can't create rich PDFs, and neither can Pages, despite Mac OS X's overall excellent support for PDF. Plus, both have poor HTML export abilities. Adobe InDesign can, but it's more for page-layout than word-processing, and it lacks some of FrameMaker's

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[5] http://perso.wanadoo.fr/michel.touchot/edoc-eng.html

[6] http://www.atpm.com/5.08/publishersletter.shtml

[7] http://www.renderx.net/Content/tools/xep.html

powerful auto-formatting features. Every time I contemplated switching to InDesign, I vowed to continue using FrameMaker, even if that meant running it on an older Mac if it stopped working with the latest Apple hardware and software.

Fortunately, Mac OS X's Unix base provides new options in the form of open-source software that can be programmed to do what we want. The core of our new publishing system is Docutils[8], a text processing system designed for use with the Python[9] programming language. I now format ATPM articles in reStructuredText[10] format, a plaintext markup language that's similar to Setext[11] and Markdown[12].

Docutils includes a *parser*, which reads reStructuredText files into an internal representation. Then, a *writer* translates the internal representation into an output format such as HTML. The beauty of the Docutils system is that both sides of this process are extensible. reStructuredText doesn't have support for the blue ATPM article headers, but I was able to teach it about them by extending the parser. Similarly, Docutils doesn't have writers that generate ATPM-style HTML or PDFs, but it lets you plug in writers of your own. As a programmer[13], it was simple for me to make these and other extensions, and Docutils' good design meant that I didn't have to re-invent the wheel to do so.

Actually, developing a writer for the PDF format would be quite a bit of work; PDF is much more complicated than HTML. Instead, I created a writer that, with the help of PyObjC[14], generates output in LaTeX[15] format. LaTeX is a somewhat arcane publishing system built on top of Donald Knuth's TeX language, and TeX incorporates a lot typesetting knowledge, such as how much space to put between each word so that the edges of the columns are flush. In fact, it's significantly better at this than FrameMaker, or pretty much any other program. So, the writer produces LaTeX (slightly different LaTeX for the screen and print versions), which I then feed into the open-source pdfLaTeX program to produce the PDFs.

My ATPM holy grail is to be able to edit and assemble the articles for an ATPM issue, press a button,

and have all four formats automatically generated. With this new publishing system, we are finally close to this goal. Since it's programmed using lower-level tools rather than off-the-shelf applications, it's possible to get the new system to do exactly what we want (subject to the limitations of my LaTeX skills), and easier to automate it. In 1996, I never would have expected that ATPM would someday be published in this way, but Mac OS X opened the doors for this new system, even as it hastened the end of the old FrameMaker-based one.

Finally, it occurs to me that nearly all of ATPM is now produced using BBEdit[16], the flagship product of our current sponsor, Bare Bones Software[17]. BBEdit provides spell-checking and various other tools for editing ATPM. Its function pop-up lets me navigate the articles by section, and its text formatting tools make it easy to convert our submissions into reStructuredText format. But BBEdit is also a programmer's editor, and so it was essential in writing the Python, Perl, and Make code that comprises the new publishing system, in debugging the HTML and LaTeX files that said code generated, in writing the content management system that combines the HTML files into the ATPM Web site, and in helping to store all the text and code files safely using the Subversion[18] version control system[19]. I suppose every Mac user has one primary application, be it a mail program, an outliner[20], Photoshop, or Microsoft Word. For me, all roads lead to BBEdit.

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[8]http://docutils.sourceforge.net
[9]http://python.org
[10]http://docutils.sourceforge.net/rst.html
[11]http://db.tidbits.com/getbits.acgi?tbart=03282
[12]http://daringfireball.net/projects/markdown/
[13]http://c-command.com
[14]http://pyobjc.sourceforge.net
[15]http://www.atpm.com/4.12/page7.shtml

[16]http://www.atpm.com/8.12/bbedit.shtml
[17]http://www.barebones.com/1900
[18]http://subversion.tigris.org
[19]http://www.atpm.com/7.03/voodoo-personal.shtml
[20]http://www.atpm.com/Back/atpo.shtml

It's Just Business and Other Items

I am failing to understand the foofaraw over Apple's announcement that it will use Intel chips soon enough. To me, the thing that matters about Macs is the way we interact with them, not so much the guts that make them run. I know the engineer types will disagree with me, and that's fine. But it is the software and the interface that matter, not so much the hardware—for me anyway. So if it makes good business sense to use one chip instead of another, because it is cheaper or better made, so what?

It is not as if Apple is committing treason, by giving aid and comfort to the enemy. In business, you sometimes have to work with the enemy. Besides, I think Microsoft is the enemy, not Intel. But I'm probably oversimplifying. I do that.

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You can look for me on *Jeopardy* on July 20, 2005.

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Looks as if I planned my trip to Yankee Stadium just in time. They are building a new one just north of the existing one. The field dimensions will be the same, but some of the stadium dimensions will change. So if you want to see where Mays, DiMaggio, and Mantle played, and not just park on that spot, get over there. But there's no big hurry—the new one will not be ready until 2009.

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I love the business concept of the iTunes Music Store. You can listen to enough of a song to decide if you want to buy it, and you can buy just one song. It's as if we have returned to the 1950s again, with record stores that had samples. The only improvement I would suggest is a way for users to rate the products, but right now that might interfere with the clean presentation style of the store.

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If you are looking for a way to help someone, consider adopting a soldier. Plenty of folks serving in Iraq and Afghanistan could use magazines, paperbacks, music CDs, or DVDs. You can think of other items, but not everything will get the media postal rate, so plan carefully. You can start at Books for Soldiers[1] to get some ideas, or just ask your friends to find somebody's nephew who's serving. A shipment once a month or so can let our soldiers know we support them, regardless of whether we support the war. If you send stuff other than media, put it in baggies. Stuff can open in transit, and coffee grounds everywhere are not fun.

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Summer movies are out, and it makes me hope that we will not someday only watch movies on laptops. Like I hope we will not someday only read newspapers online. There is something communal about a movie and something tactile about a newspaper that transcends the information we are receiving.

Disclaimer: I work for a daily newspaper, so it is in my interest for them to stay in business. But if someday there is a better model, I'll bow to that.

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Speaking of online newspapers, I had a little thing published at mine[2] recently. The piece is about helping hungry folks. I got some bad reaction from a group of folks who only read the headline, which I didn't write, and the first four paragraphs. I think it is like watching the first five minutes of *The Wizard of Oz* and turning away because it is gray, depressing, and about farmers. But some folks felt qualified to comment on it anyway. I had a correspondence with the moderator/host of the forum where I found the comments, and she was very nice. I said I did not expect everyone to agree with my arguments, but that I wished they would at least read them before they dis-

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[1] http://www.bookforsoldiers.com
[2] http://www.charlotte.com/mld/charlotte/11875645.htm

missed them. But I do understand that lots of folks do not want to register with the newspaper site. In that same vein, I did not want to register with the forum site.

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That's it. Onward.

Hit Me Again

Mac OS on Intel. Great. Wonderful. And no sarcasm either.

The Mac has, for me, always been about the user interface. Aside from the GUI, what I love about being a Mac user is the great software I can use. There must be a special kind of mentality to people who use the Mac and people who create products for it. Things on the Mac just seem more elegant in solving problems, whereas stuff on that other ubiquitous platform feels kinda jerry-rigged. Features really aren't much more than additional menu items and buttons, for the world's most prevalent desktop operating system, and no matter how much lipstick they paint onto the elephant, or what they append to the end of the word "Windows," it's pretty much the same old, same old, year after year.

Maybe it's just statistics. Maybe the vast majority of people either can't appreciate or don't need a more refined computing experience. Maybe good enough is good enough. Which is perhaps why the third most important thing I like about being a Mac user is being part of the Mac community. We're what the media call "Macintosh fanatics" or "the Cult of Mac." Whatever. I simply prefer being more productive with my time, spending less on effort and total cost of ownership, and having fun while working. If the rest of the world is satisfied to aggravate daily on their PC, I say live and let live, but you just don't get the same thrill popping open the Start menu, as when you press the hot key for Exposé or Dashboard.

So that's why, when Steve hit us with the bombshell of a keynote, I knew we were in for even better days. I know some of us in the community don't feel the same way (assuming, of course, that the negative commentary is from real Mac users rather than paid shills) with some people even saying they'll never buy a Mac again. So, what, they'd rather use a Windows PC? It just doesn't make sense. Desktop Linux is not refined enough yet, either.

Let's put aside all the emotional angst. This sure as heck ain't the first time Apple dangled low-hanging breakthrough fruit in front of us, before quietly kicking it under the carpet. Old timers will remember a slew of trademarks, including Game Sprockets, Pow-

erTalk, Publish & Subscribe, OpenDoc, AV features, and, let's not forget, e-frickin'-World and the Newton. Leaving aside the litter of false starts over the years, the Mac has, generally speaking, remained the best computing choice in the world. And since Steve returned to the captain's chair, Apple has been just insanely great.

This latest megashift in technology, arguably the most significant yet for the Macintosh, is not occurring in a vacuum. A phase change was "instantiated" in the Apple universe when the iMac launched. Forget "Switch." The consumer line of iMacs and iBooks captured an important market segment, and paved the way for the incredibly successful iPod campaign. In a market monopolized by the office applications of Word, Excel, and PowerPoint, Apple expertly fielded the iLife suite. Hell froze over, and iTunes for Windows was made available for the world to experience. And I haven't even mentioned Mac OS X, the most advanced, innovative, powerful, and elegant operating system yet created by humanity.

I don't know who's behind Apple marketing. Steve gets all the credit, but the brains behind some of the best ideas in the industry don't always get due credit. But at least Steve gave his permission to go ahead with the strategies, and kudos to him for that. While Mac folk see the wisdom in his decisions, not everyone is so tuned in. I remember reading an article from one of the more mainstream news outlets that said Apple was "quirky." That's kinda like living in a totalitarian society and saying democracy is "unpredictable." These are conservative Wall Street types talking about a West-coast technology powerhouse.

People who don't understand the passion behind the Mac community, or say they don't like the Mac OS, most likely have never actually used it (or secretly love it but hate not being able to afford it). Tapping on a few keys in the computer showroom, or spending five minutes watching over the shoulder of a Mac user, is no more experiencing the Macintosh than is sitting in the driver's seat of a Ferrari in an auto show and saying you've driven one. The vast majority of people continue to use Windows probably

not because they've consciously made a decision to choose Windows, but because they've never had the chance to use a Mac. It's like thinking a Windows CE (or whatever it's called this week) PDA represents all the PDAs in the world. The "test drive" campaign of the mid-1980s tried to address this issue, but it wasn't very successful. The only thing that's going to work is having more people show their friends what a Mac is. It's probably always been that way. And Mac on Intel is going to help, tremendously.

Forget the arguments about PowerPC architecture versus the Pentium roadmap. Let's not get stuck in a quagmire of speculative details. The fact is, we don't really know how the Intel chips are going to be implemented, but what we do know is that basically they are going to be the same chips that run Windows. And this means, what? This means that, very likely, we will be able to run Windows applications at near native speeds.

VirtualPC was extremely innovative in translating CPU instructions on the fly, but, as many of us know, real world performance on VirtualPC pretty much sucks, even on a top-end machine. I think Connectix did more to help Mac sales by removing a major hurdle for new buyers (the fear of completely leaving the Windows apps they grew up with) than actually provide a realistic Windows solution. Yes, VirtualPC is a far, far cry from that yesteryear product SoftWindows, but if I wanted to run Windows apps, I'd do so on a cheap PC.

But with a real Pentium chip on board (and not one of those doppleganger wannabe NuBus cards like we had on the first Power Mac AV systems) we can look forward to better Windows provisioning. However it's implemented, it will be the best solution to date for running hosted operating systems on Mac OS, and it will be critical to bridging the "fear gap" for old Windows junkies to find enlightenment on the Macintosh, as well as opening up the case-hardened numbskulls of CIOs hitherto fearful of choosing an alien hardware platform for their organization.

I just wonder whether Microsoft will continue to deliver VirtualPC or, for that matter, even continue making such a great Office suite for Macintosh. OS X on Intel has actually obviated the need for VirtualPC's translation engine, and we may see new products on the market provide Windows support. It will be interesting to see how this plays out because now Redmond will *really* feel the squeeze, between Linux on the backend, and Mac OS X on the desktop.

With Mac OS X soon to proliferate on x86 architecture, some people speculate whether any generic PC box could become a Macintosh. Here, again, I think only good things will happen. The same reason why the original "Star Trek" project (to port "Classic" Mac OS to x86) was canned will prevail, and ensure Apple's fat hardware margins will not be cannibalized by generic hardware compatibility. Apple would likely never support an OS that runs generically. So the only Mac OS that will run wild will be a hacked, unsupported version. This hacked OS would do fine to flourish in the hacker community. All the hard-core techies that now swear by Linux (or swear at Windows) will be able to experiment with Mac OS. This will have the effect of introducing the fantastic user experience to all these people who would otherwise have no opportunity to know the Mac, and a certain portion of these folks will end up buying a Mac from Apple, to get full support and all the features with no hassles. With the Mac mini product line being so affordable, that will be an easy decision.

Corporations who decide to go Mac (probably in stages, starting with the marketing department) will have to buy legal Apple hardware. And when Apple is able to enjoy better economies of scale prices will drop, especially when Apple's channel dealers negotiate large volume purchases to fit out entire companies. Channel guys love pushing high-margin stuff.

Naysayers might opine that we're forgetting something in this utopia of expanding market share: Windows still has more device driver support than the Mac. But since when should platform vendors bend over backwards for peripheral vendors? Shouldn't it be the other way around? More likely than not, vendors with compatible device drivers for Intel-based OS X will advertise that feature like crazy and be in a position to capture market niches. The peripheral product guys are always competing in a bloody commoditized battlefield anyway, and if there's a slim chance they can differentiate then you can bet they will. Microsoft has always boasted about its enormous driver database, but general devices such as printers, keyboards, mouses, and external storage usually have industry standard interfaces, if not outright Mac compatibility, and x86-based Mac OS may not even pose a problem, depending on how deep in the architecture the various components of a driver need to go. More esoteric devices will likely make the jump to x86-based Mac support when the momentum is there.

As for the resistance to Intel that some of us feel (and I'll avoid the overused Borg mention) let us remember this is not the first time Intel has been inside our Macs. Or are we forgetting the transition from NuBus to PCI, or the gradual end-of-lifing of FireWire in favor of USB 2.0? Heck, Intel even invented D-RAM.

I have a friend who said he's not going to buy a new Mac this year and will wait for the Intel Macs in 2006. Well, that's not fundamentally different from how it's always been; otherwise we wouldn't be hitting the Mac rumor sites to check when the next iteration of stuff will hit the stores. I'm sure Apple knows the huge market risk to this transition, so we might be in for a whole host of super features in the next batch of G4 Macs, especially the laptops, to justify our continued purchases. (I know I'm looking forward to a 1.67 GHz 12" PowerBook with backlit keyboard.) I have another friend considering a Mac mini. It's so cheap that he'll just relegate it to a poor man's Xserve when he buys his next Mac in 2007. If you're in the market for a new Mac in 2005, I say go for it, and then buy your next Mac in 2007 or 2008, when whatever kinks they have in the new Intel machines have been ironed out.

This is the best possible time, ever, for Apple to be doing this transition. This extremely difficult and risky chasm must be crossed now, while iPod, iTunes, and Mac sales are hot. The short-term effects of Mac users who feel disenfranchised will be balanced out by new Mac switchers, and the old guard will come around sooner or later, even if it takes them a couple of years. We are on the verge of a great new era of Macintosh. Starting next year you may find increasing numbers of friends asking you for advice on buying their new Mac. Apple is again shaking up the industry, as it always has.

Nobody really bought a Ferrari because of the engine. Both the PowerPC and Pentium are sophisticated processing units, and it looks like the Pentium roadmap is going to give us what the PowerPC can't. So let's not hassle over what's inside. What counts is who's on top, and that would be one hot feline.

After all, it's the big cats that eat longhorns for lunch.

Love at First iBook

Background

It has taken me an unbelievably long time to write this article! So I think I should start with a thank-you to the editors of ATPM for being so patient and to all the contributors who take the time to write the articles that make ATPM such a great read. Now that that's out of the way, my story can start. . .

I travelled from England to the west coast of America with three friends about a year and a half ago. We all agree that it was, without doubt, the most enjoyable holiday that any of us has ever been on. We flew into San Francisco, travelled by car to Yosemite National Park, and then drove back to the bay. From there we then travelled by Greyhound (I wish someone had warned us about that!) up to Seattle, and then finally onto Vancouver. By now you should be wondering what on earth this has to do with Apple and Mac OS X. Let me explain. . .

The Bit Where Apple Comes In

Let's just go back a little bit further to about two and a half years ago. I for some unknown reason—and to the bewilderment of my constantly tinkering, PC-owning father (he was constantly tinkering with the PC, not anything else!)—decided to take the huge leap of faith and buy one of the beautiful new white iBooks. When I say "leap of faith," I mean that it was like that scene in *Indiana Jones and the Last Crusade* where he has to cross the chasm, and if he has faith that the bridge is there he will be OK, but if he doesn't have faith it won't appear and he will fall to his doom! Anyway, I'm getting slightly off track. . .

I had this amazing little computer, and to this day I haven't seen a PC laptop that I would swap it for. I would go out of my way to find a reason to use it. I borrowed a friend's camcorder and started filming friends' weddings for them (which I now do professionally!). So when it came time to go to America, the iBook had become such an integrated part of my life that it was only natural for me to take it along for the ride.

I knew I couldn't resist the temptation to see the then newly opened San Francisco Apple Store, and I wanted to get an AirPort card anyway (the exchange rate at the time meant I got almost $2 to the GBP) so it all made sense to take the iBook. I was a little nervous at first to take it out in public. We British are very reserved, you know! One thing I did notice, though, was that at each airport we went to, four in total, nearly every laptop I saw was either an iBook or PowerBook. One of the few PCs I saw was owned by a guy who had been asked to take it out of its case as it went through the x-ray machine. He got very worked up and protested at having to do this. Maybe he got so angry because he was ashamed at having to let everyone see his ugly little laptop.

So it was quite nice to be sitting around waiting for flights with other "Mac people" just giving the occasional nod of acknowledgment to each other.

Wow

Once I had been to the SF Apple Store and left a trail of drool from the moment I walked in till the moment I walked out, I couldn't wait to get the AirPort card installed (which was a cinch of course) and then start using it! Unfortunately, in the hostel we were staying in there was no WiFi hotspot nearby, but the next day we went and sat in the glorious sunshine in Union Square, and I was amazed to be able to surf the Net wirelessly! The beauty of that moment is incredible—you're on the Net, e-mailing, etc., but you're not actually connected to anything. I was just dumbstruck for the rest of the day! The thing was, I had my iBook, WiFi, camcorder, and my .Mac account, and now I needed to find a way to combine all this great technology. Luckily, a plan was forming in my mind.

The first thing I did when I got connected in Union Square was to take a picture of us enjoying the sunshine on my camera phone. Using a USB Bluetooth adapter (also purchased at the Apple Store) I sent it to the iBook, and then I e-mailed it to friends and family back home. Now, if you can send a picture, why not send a video, I thought. We had everything we needed. And I soon got to work shooting lots of video footage. After getting back from our couple of days in Yosemite, using the journey time to edit a very short couple of video clips together with

some suitable music, I headed back to Union Square and in a matter of minutes created a Web site using a .Mac template, uploaded the video file, and sent an e-mail to everyone back home directing them to the site.

The Result

The interesting thing to me was that I had been trying to phone home repeatedly during the holiday and never once succeeded! Every time I would put money into the phone, it would either spit it straight back out or swallow it, put me through to the operator who would tell me to put money in, and then spit it back out. I don't know what I was doing wrong, but I'm just glad that I was able to use my Mac to let people back home not only know we were OK, but also let them enjoy our holiday, let them feel like they where with us when in reality we were thousands of miles apart. All in all, I created four videos, and the folks back home were really impressed and happy to see us enjoying our trip.

Ultimately, that is what it's all about. You can see people in cafes and airport lounges tapping away on their laptops and assume that they are typing some boring business report. But you never know; they just might be making a video or sending some pictures for their spouse, children, or the whole wide world to see, and feel a little bit closer to that individual. Many people claim technology is pushing people apart, isolating us from one another. Maybe it does if you spend hours getting rid of spyware and viruses, but with a Mac I genuinely believe that it can encourage closer relations; you just have to be open to opportunities to let it happen.

This whole experience made me really love that little iBook. That's such a geeky thing to say. It also made my dad love it, too. When we finally parted ways, Dad offered to buy it. Now he loves it just as much, and he spends a lot less time tinkering and a lot more time doing useful, fun things.

Podcasts: Number One on the Hype Parade

The term podcast is a misnomer. The iPod is not a required part of the podcast equation. It is not needed to broadcast programs over the Internet, or even to listen to them, for that matter.

For the past two months, I have been downloading and listening to podcasts daily. I installed iPodderX[1] and used its directory feature to sample the widest breadth of content possible. It should come as no surprise that technology-based content outnumbers all others. All podcasts were heard through the internal speakers of my trusty PowerBook.

I will say that I learned a lot on a host of different topics, but this is after so much concerted listening. The quality level of what I was subjected to for the most part was amateurish. High school radio sounds a lot better and has higher production values. In our digital world time is compressed, and there is little room and even less tolerance for mediocrity. In essence, you are only as good as your last podcast. The signal-to-noise ratio is far too low, and it make me wonder how come so many people simply put up with it. I reckon it doesn't cost them anything in dollars…yet.

Of course there are exceptions. There are a number of well-produced podcasts, where the on-air talent has taken pains to assemble the proper audio technology and most importantly screen what they are about to unleash. I would like to think that they take pride in what they are doing. These podcasts maintain a strong following due in part to their name recognition and the amount of preparation and research that goes into each program.

Recently, Apple introduced iTunes 4.9 with its integrated podcast aggregator. I was alerted to this by my close friends via instant messenger and dutifully downloaded and installed the update on the spot. I took one look at iTunes 4.9's podcast software and was prompted to write to my friends and share my thoughts. Below are excerpts with additional comments afterwards.

> This will mark the end of the incorrectly named concept of podcasting as it is known today—much like the World Wide Web was supposed to be the great equalizer, yet as we see from history that has not been the case.

When I first saw the opening splash screen, I was struck by the presence of Adam Curry. Mind you, I was not surprised, and had I thought about beforehand, it would have been what I would have expected as he helped coin the genre.

> Podcasts will serve as the minor leagues and farm system for established radio broadcasting conglomerates and satellite radio companies: XM and Sirius.

This point was hit home as upon scrolling down the page I noticed that podcasts were being segregated into two distinct categories. The former being those that are unashamedly commercial and the latter being relegated to indie status. Much like the music industry, this nascent industry is rife with stereotypes. Make no mistake, right here and now this stops being grass roots. This is not freeform, and it's nothing like college radio. It can only aspire to be that good.

The cream of the crop will get invited to the big show, while the chaff will, like most Web sites, get to enjoy their infrequent moments of fame. Podcasting can be likened to a visit to the Wizard of Oz. The level anticipation is great, but once you get there it's all "Goodbye Yellow Brick Road."

I have begun conversations with radio executives about this phenomenon and find that they see the podcasts as a stream for future talent. The proliferation of talk radio demands that there be more unique radio personalities and esoteric subjects being discussed. Don't be shocked when XM and Sirius launch channels comprised solely of podcasts.

Podcasts as a genre is yesterday's news. It is not the equalizer that its proponents and pundits have claimed it to be. The Web should have taught us all something about the haves and the have-nots. The business of content is all about presentation and marketing. Quality comes far behind availability and ac-

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[1] http://ipodderx.com

cess. Consumers will settle for mediocrity if they can get to it easily and reliably.

So what's the next big hype? Any ideas about the next equalizer? For my money it is the blog, but not so much the content as the actual templates supplied by the leading blogging sites and software companies. I formed my own online focus group targeting the newest bloggers I could find with less than two weeks under their belts and asked them a number of questions: Why start now? Did you maintain a Web site previously? And are you getting out of it what you expected?

The responses in a nutshell: They found the provided templates an excellent tool to help express themselves and communicate their ideas in visibly organized manner. As a result, their Web sites, in their words, look more "respectable," have "structure," and are "easier to maintain" because the content and design go hand in hand. The majority chose to blog *now* because they all feel they have something to say, and they were empowered by being able to refer me to their blogs, rather than telling me directly what they were thinking and what made them tick.

I learned something special from them in reference to my last question. It is not about what the blogger gets out of it, but more importantly what the readers takes with them. Hopefully they are richer for the experience.

FileMaking

Welcome to FileMaker

FileMaker is a very popular database management application. There are a number of reasons for its popularity, but two of them that stand out are its relative ease of use and its power. I first began using FileMaker back in 1994 when I worked as an IS director for an LA advertising agency. I needed to track the purchase orders I submitted to vendors. I created a database in less than an hour that I continued to use for the two years I worked there, and it did everything I needed. On the other hand, FileMaker is powerful enough to create complete applications that can track all of the information a business or corporate department needs, and I've built quite a few of those over the years.

FileMaker has come a long way since 1994. In that time it's become more powerful, while paradoxically retaining much of its ease of use. Although I still make much of my living by creating database systems with FileMaker for corporate and small business clients, I also still use it to create very simple databases to track lists.

In this tutorial, we're going to create a simple database with FileMaker 7[1] to track serial numbers. If you don't already own FileMaker, you can download a demo version from the Web site. Our database will be relational, which means that we'll try to eliminate the duplication of any data.

What Is a Relational Database?

Relational database theory actually comes from the field of mathematics, but simply put it provides a way of thinking about data that helps ensure accuracy and helps eliminate the duplication of data by dividing a database into tables or entities. For instance, in our serial number system, I can divide the data we wish to track into three entities: Publishers, Products, and Serial Numbers. These entities will correspond to tables in FileMaker: Publishers, Products, and SerialNumbers.

Tables are made up of fields and records. Fields hold individual pieces of data, such as the publisher's Web address, the product's version number, and the

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[1] http://www.filemaker.com/products/fm/

expiration date of the serial number. Records are collections of data about one individual entity, so in our serial number database we might have a record in the Publishers table for Microsoft and another record in Products for Microsoft Office.

In a relational system, in addition to all of the fields we need to track our information, we need to include on additional field called the *primary key* field. The primary key field is special in that the data within it will never be duplicated. It allows any record within that table to be uniquely identified. To use our Microsoft Office example, we may have a separate field for the version number (v.X or 2004) so that there is no single field that uniquely identifies the record. Since no existing field can serve as the primary key field, we add a ProductID field and tell the system to automatically populate that field with a unique identifier.

We need to be able to uniquely identify any record so that we can link a record in one table to a record in another table. This will allow us to tell the system that the Microsoft Office record in the Products table is linked to the Microsoft record in the Publishers table. In the Products table we include a PublisherID field, but this one is not automatically assigned any value (as it would be in the Publishers table) and is therefore called a *foreign key*.

Given the above, each table (Publishers, Products, SerialNumbers) will include a primary key field (PublisherID, ProductID, SerialNumberID). In addition, the Products table will have a PublisherID foreign key field, and the SerialNumbers table will have a ProductID foreign key field.

While this doesn't completely cover all of the concepts of a relational database, it's enough of a beginning for us to continue with creating our database.

Creating the Database

Now that we know how our database will be structured, let's begin creating it. Open FileMaker. If you're opening it for the first time (i.e., you haven't yet turned the preference off), you'll see the New Database dialog box asking if you'd like to create a file from a template, create an empty file, or open

an existing database. Click the radio button for "Create new empty file" and click the OK button. A save dialog will appear where you can choose what to name the new file and where to save it. Choose SerialNumbers.fp7[2] as the name and pick a good place in your home folder to save the file.
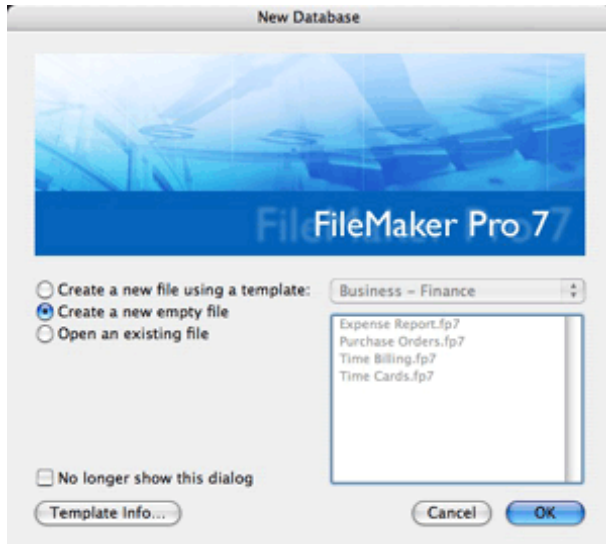

After FileMaker has finished creating the file, it will bring up the Define Database dialog box. This is where you specify how your database is structured, creating tables, fields, and relationships. FileMaker has begun by creating one table named with the same name as the file we created (SerialNumbers), which is a table we need, but we also need two additional tables: Publishers and Products.

Click the Tables tab at the top of the window. In the Table Name field type "Publishers" and click the Create button. Repeat this for the Products table. Your window should like something like this:

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[2]http://www.atpm.com/11.07/SerialNumbers.fp7
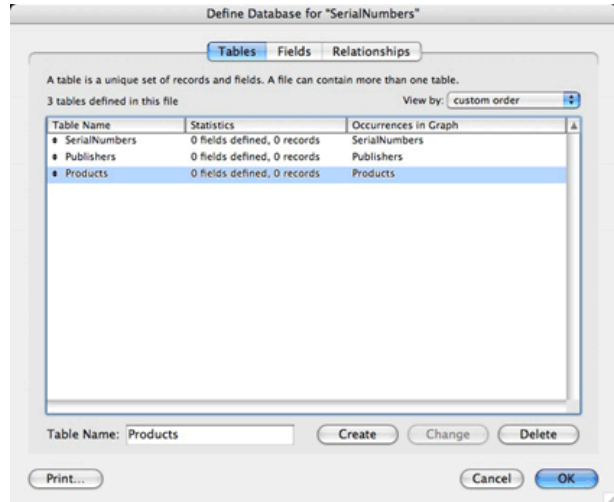
Now that we have our tables, let's create some fields. First we'll define the fields for Publishers. To do this, either double-click the Publishers row in the list of tables or select the Fields tab and choose Publishers from the Table pop-up menu in the upper-left corner of the window. Then type "PublisherID" in the "Field Name" text field and click Create. Repeat this process for the additional fields of "Publisher-Name" and "WebAddress."
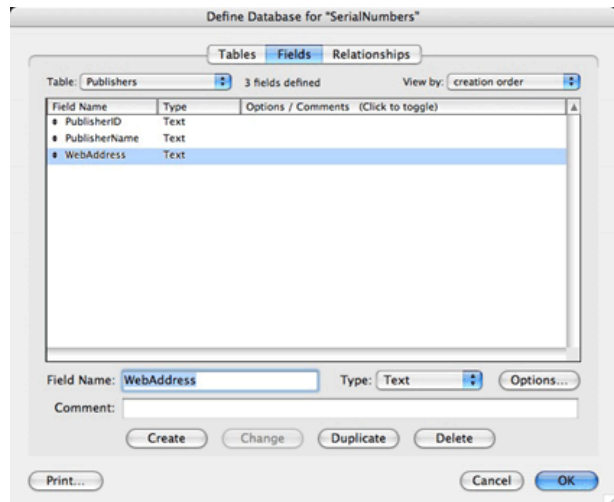
The PublisherID field is the primary key field, so we need to tell FileMaker to handle this field in a special way. Double-click the PublisherID field or select it and click Options. In the Options dialog box that appears, click the checkbox for "Serial number" leaving the options that are enabled after doing so with their default values (Generate on creation, next value 1, increment by 1). Also click the checkbox for

"Prohibit modification of value during data entry." Then click the OK button to save your changes to the field.
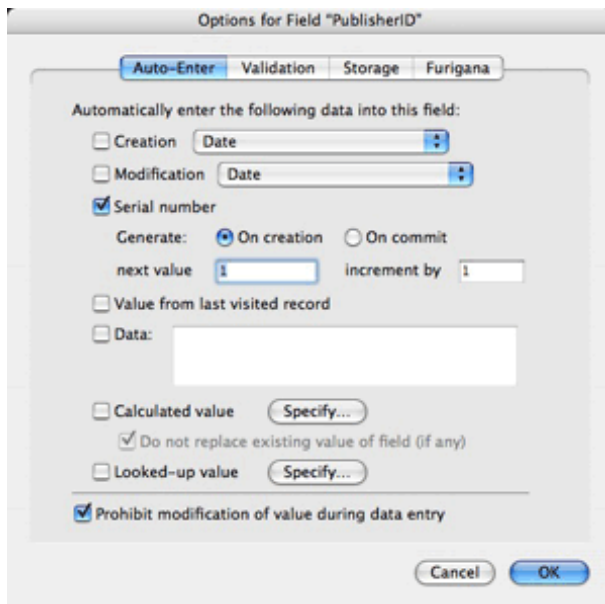

This tells FileMaker that the next time a record is created in the Publishers table to assign a value of 1 to the PublisherID field. The second time a record is created, assign a value of 2. In this way, each record will have a unique identifier that can be used to create relationships to this table.

Repeat these field creation steps for the Products and SerialNumbers tables. In addition to the ProductID field, the Products table will also need a field for ProductName and PublisherID. The ProductID field should have its options set to auto-enter a serial number just like the PublisherID field in the Publishers table, but the PublisherID field in the Products table is just a normal field with no auto-enter options set. Similary, the SerialNumbers table will need a SerialNumberID, a ProductID and a SerialNumber field with the same auto-enter options for the SerialNumberID as we applied to the other primary key fields.
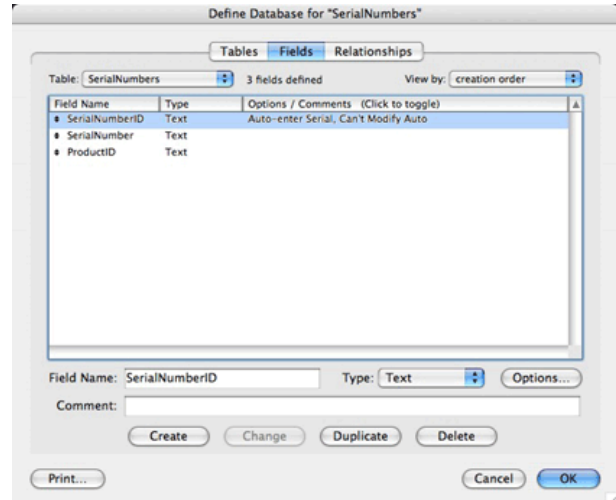
Now that we have our fields, including our primary and foreign key fields, we can create the relationships between our tables. Click the Relationships tab. You'll see that a table item has been created for each of our tables, and we can see the fields for each table listed. You may want to rearrange the table items so that they appear from left to right:
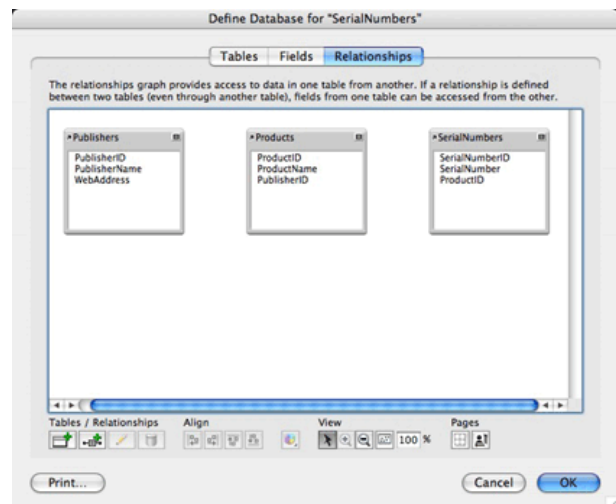
Notice that I didn't call the boxes you see in the Relationships tab tables. They are table items or table occurrences. A database in FileMaker can have multiple table items for each table. The reason for this is beyond the scope of this tutorial, but simply put, when we create relationships, the path from one table item to another table item must be unique. There can't be any circular relationships. If creating a relationship would create a circular path, a new table item is needed that points to the same table.

We can cover such complex relationships in a future tutorial.

FileMaker 7 makes it very easy to create relationships by simply dragging from one table item's field to the matching field in another table item. We are going to create two relationships, one between Publishers and Products and another between Products and SerialNumbers. We do this by specifying the match field of the relationship. Create the first relationship by dragging from the PublisherID field in the Publishers table item to the same field in the Products table item. This tells FileMaker that when a record exists in each of these tables and the values in these fields are the same, they are related. If we have a record for Apple Computer in the Publishers table and the PublisherID has a value of 1, then a record in the Products table for QuickTime Pro would be linked to that publisher by entering a value of 1 into the PublisherID field of that record.

Repeat the process of creating a relationship by dragging from the ProductID field in Products to the same field in SerialNumbers. Your Define Database dialog should look like this:
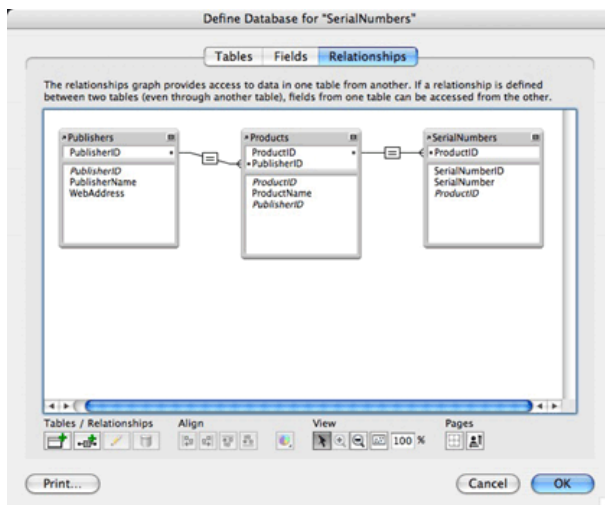
To indicate the relationships we've created, FileMaker displays a line connecting the match fields between the tables. Notice the line between Publishers and Products. There is a single line at the point it connects with the Publishers table, three lines where it connects with the Products table, and a box between the two table items with an equal sign in it. FileMaker has noticed that one of the fields we used in our relationship is a primary key (because it's set to auto-enter a serial number) while the other field is a foreign key (because it does not have any auto-

enter options set). This means that we could have many Products linked to a single Publisher record, which is what the three lines mean. The equal sign means that the relationship is established only when the fields match exactly. Other kinds of relationships, using inequalities such as greater than or less than, are also possible, but the default of "equals" is what we want for both of our relationships.

Congratulations! We've finished the design of our database and can now define how the database will look to users. Click the OK button to save your changes.

Creating the Interface

FileMaker presents data to users on layouts, each layout being assigned to a single table item. Because we created three tables, FileMaker has created three layouts, named appropriately enough after the table items they point to. FileMaker has also placed all of the fields in each table on the layout. We'll keep this default setup, but we are going to change the behavior of the fields a bit.

When we are working with Products, we will want to be able to easily assign a Publisher to a Product by selecting the Publisher from a menu. Near the top left of the window for our database is a Layout pop-up menu. Choose Products from this menu and then choose "View ▷ Layout Mode" or press Command-L. We are moving from Browse mode, in which we edit the data within the database, to Layout mode, in which we alter the look of the database.
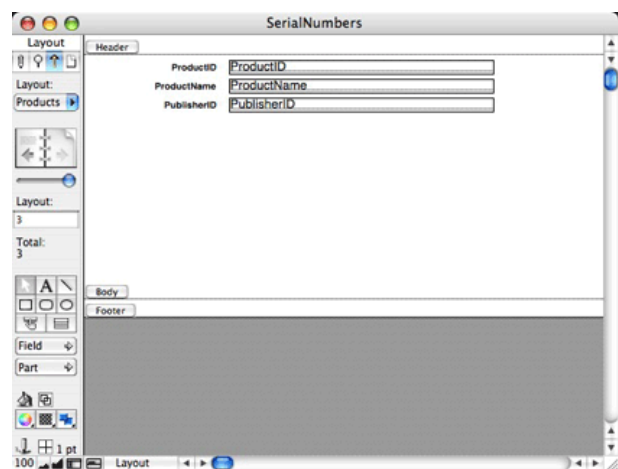
Click on the PublisherID field on the layout. The PublisherID field is to the right of the PublisherID label and will probably appear in a larger font than the label. Choose "Format ▷ Field Format" and you

should see the Field Format dialog box. (If "Format ▷ Field Format" is disabled in the menu, then you have probably selected the PublisherID label rather than the field). Change "Format field as" from "Edit Box" to "Pop-up List." For "Display values from" select "Define Value Lists" and click the "New" button. Enter Publishers for the value list name and click the radio button for "Use values from field." In the Specify Fields for Value List dialog box, choose Publishers from the "Use values from first field" pop-up menu, and select the PublisherID field.

Click the check box for "Also display values from second field," make sure Publishers appears in the menu below the checkbox, and select the Publisher-Name field. Save your changes by clicking the OK button in each of the dialog boxes until you've exited all of them and have returned the the layout.
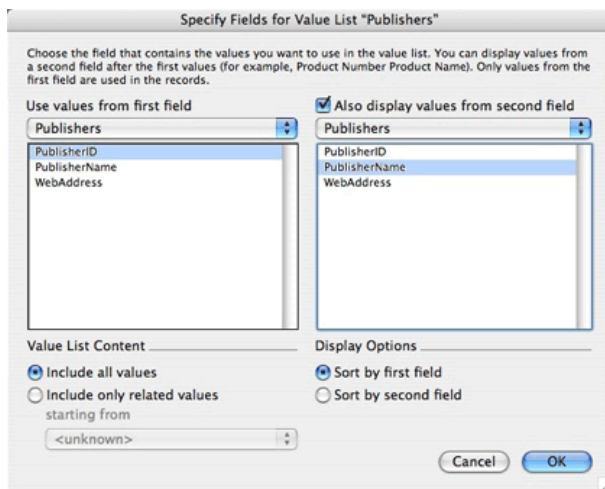
Select SerialNumbers from the Layout pop-up menu. If you haven't turned the confirmations off, you'll see a dialog asking if you wish to save your changes to the layout. Click Save and click the "Save layout changes automatically (do not ask)" checkbox if you'd like to avoid these confirmations in the future.

Entering Data

We are now ready to create records and link records in one table to those in another table. Choose "View ▷ Browse Mode" or type Command-B to return to Browse mode. Use the Layout pop-up menu in the tool bar to view the Publishers layout. Choose "Records ▷ New Record" or press Command-N to create a new Publisher record. Notice that the PublisherID has been filled in with a value of 1, just

as we defined it to do when we defined the database structure. Also notice that if you try to edit this field, you'll be informed that it is not modifiable.

Click in the PublisherName field (to the right of the PublisherName label) and enter "Apple Computer," press tab to move to the WebAddress field and enter "http://www.apple.com." Create a few more Publisher records, perhaps three or four total. Notice that each time you create a record the PublisherID is incremented by 1.

Move to the Products layout and create a record in that table. Tab to the ProductName field and enter "QuickTime Pro." Tab again, this time to the PublisherID field. Notice that a menu appears where you can select which publisher this product belongs to. Select the menu item with Apple Computer in it, and you'll see that the number 1 is entered into the PublisherID field (because Apple Computer was the first record we created). Go ahead and create a few more products before moving onto the SerialNumbers layout and creating some serial numbers for your software and using the pop-up menu in the ProductID field to assign each serial number to a product.

Viewing Related Data

I'm sure you noticed a major deficiency in our layouts. Although we can assign a publisher to a product and a product to a serial number, we can't see who the publisher is or what the product is. Let's correct this.

Return to the Products layout and enter Layout mode. In the toolbar on the left you'll see a group of buttons, one of which is labeled Field. Click and drag this button onto your layout just below the PublisherID field. As soon as you let go of the mouse button, a Specify Field dialog will appear. From the menu at the top of the dialog, select the Publishers table, then select the PublisherName field and make sure the "Create field label" checkbox is checked. Click OK.

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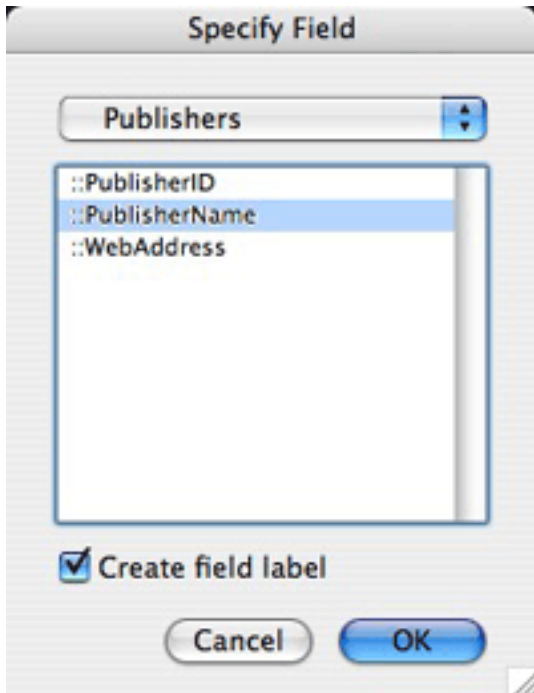
Resize the field by dragging the black handle in at one of the right side corners so that it's about the same size as the PublisherID field. Return to Browse mode and you should see the name of the publisher that corresponds to the ID you chose in the PublisherID field.
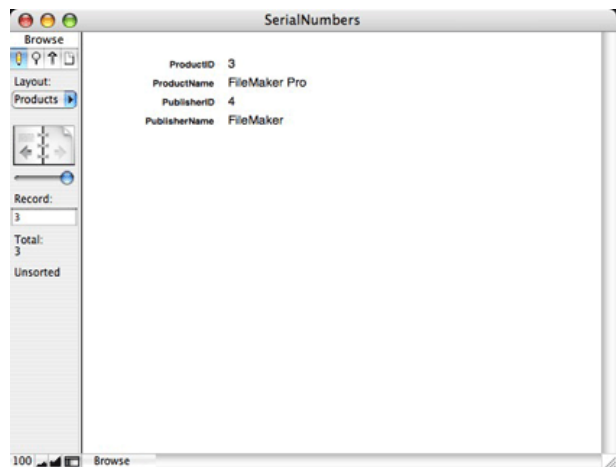
Repeat the above steps for the SerialNumbers layout, this time adding the ProductName field from the Products table item. If you recall, when we defined the relationships, we created a relationship from SerialNumbers to Products and from Products to Publishers, so we have a "grandparent" relationship from SerialNumbers to Publishers. Use the same technique outlined above to add the PublisherName field from the Publishers table item to the SerialNumbers layout. Create a few more serial number records and see how once you select the ProductID, both the ProductName and the PublisherName will be automatically displayed for you.
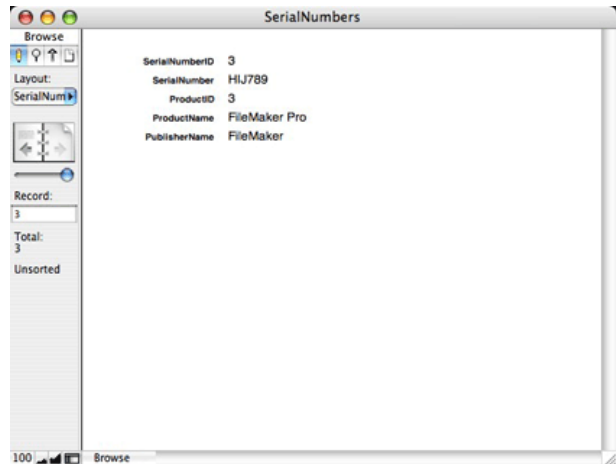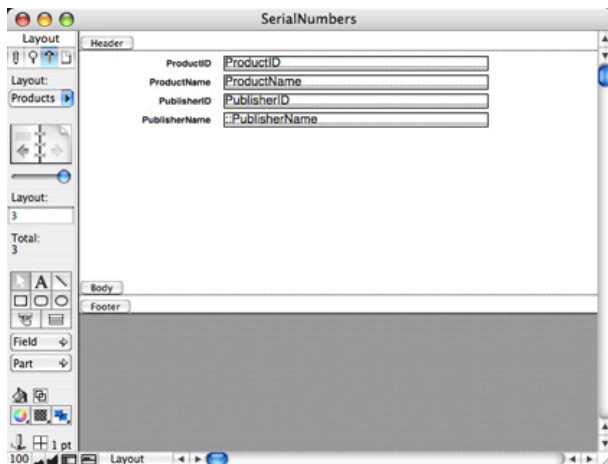

Let's move to the other end of the relationship hierarchy. Move to the Publishers layout and enter Layout mode. Just above the Field button that we used to add a field to a layout is another group of buttons. The bottom row of these buttons contains two tools, one that looks like a button with a hand

over it and the other that looks like a group of three horizontal bars. Select this second tool, which is the portal creation tool.


Remember that many products can be linked to a single publisher and many serial numbers can be linked to a single product. However, only one publisher can be linked to a product and only one product can be linked to a serial number. When viewing related publisher information from the products table, a single field is sufficient, but when viewing related product information from the publisher table, we want to be able to see multiple records. This is where a portal is used. A portal allows us to view multiple related records on a layout.

After you've selected the portal creation tool, click and drag in the layout to define the boundaries of the portal. As soon as you let go of the mouse button, the Portal Setup dialog box will appear. We are in the Publishers table and want to view information in the Products table, so choose Products from the "Show related records from" menu, click the "Show vertical scroll bar" checkbox in the Portal Setup dialog, and click OK. You'll then be presented with an "Add Fields to Portal" dialog. We only need a single field in this case, so click the ProductName field and click the Move button, followed by the OK button.
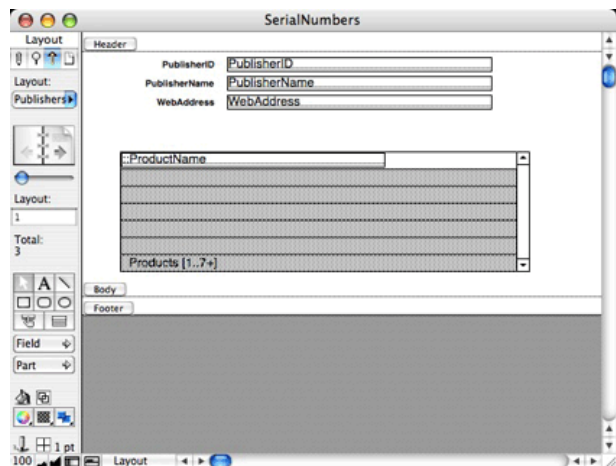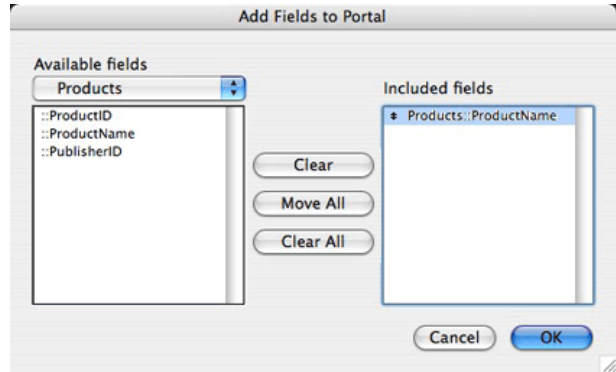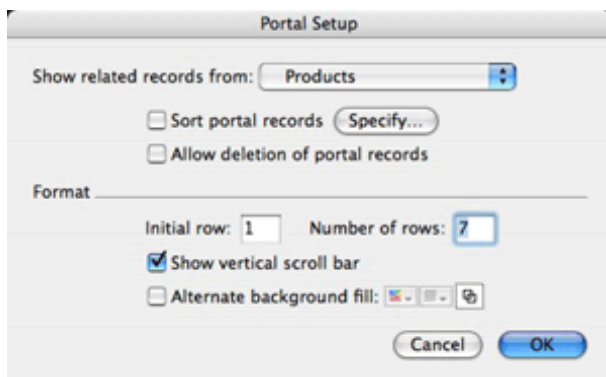
Return to browse mode and you should see all the products that have been linked to the current publisher. (You can use the book buttons in the toolbar to move from one record to another.) Perform similar steps to show the related serial number records on the Products layout.
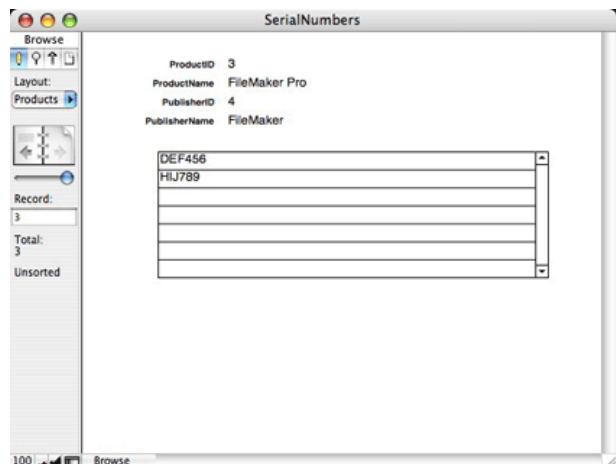
So, what's the purpose of all of these relationships, related fields, and portals? Remember, part of the reason is to eliminate duplicate data entry. If we own many products from a publisher, we don't want to enter that publisher's name many times. Also, if we need to change something about the publisher, we don't want to have to go to every product record and change it many times. For instance, I entered "FileMaker" as a publisher, but the name of the company is actually "FileMaker, Inc." Because we only entered the publisher's name once within the Publishers table, I can change the name there and the new information will flow down to the products and serial numbers tables.

Good job! You've created a useful database system for yourself to track the serial numbers of the software you purchase. Please let me know if you have found this useful and would like to continue learning the complexities (and simplicities) of FileMaker. If there's enough demand, perhaps this will be the first in a series of articles that will walk you through the topic. And, of course, feel free to e-mail me if you have any questions or problems.

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[3] http://www.chivalrysoftware.com
[4] http://www.nostarch.com/frameset.php?startat=filemaker
[5] http://www.filemakermagazine.com
[6] http://www.macworld.com
[7] http://www.atpm.com/Back/roll.shtml

How To

by Marcus J. Albers, mjalbers@mchsi.com

Marcus in Widgetland

Dashboard is no doubt one of the coolest features of the newest Mac OS X release, Tiger. It comprises little applications that do anything from reporting the weather forecast, to providing stock information, to playing games. Now that Tiger has been in the wild for some time, third-party developers have jumped on the Dashboard bandwagon and have begun to churn out widget after widget. Most are interesting, some are useful, and others leave you scratching your head wondering what the purpose was.

Dashboard has become a regular part of my life. Let me take you on a brief tour of some of the more useful and interesting widgets out there in widgetland.

US Weather Plus[1]

For those of us who spend the majority of the day in an office with no windows, the Weather widget is a great way of keeping up on what exactly is happening outside. For the true weather junkie, though, you really need to have access to weather maps to know what's going on out there. US Weather Plus provides that added information. By accessing the weather maps available from Weather.com[2], you can have any amount of information, from forecasted rainfall, to doppler radar, to visible satellite images at your disposal. You can choose any section of the US, and (contrary to the title of the widget) you can also choose other continents. Curious about the weather in Europe? How cold is it in northern Asia? All this information and more is at the click of your mouse. With this widget, you can be sure that you will never again be caught off-guard by that freak July snowstorm.

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[1]http://www.dashboardwidgets.com/showcase/details.php?wid=315
[2]http://www.weather.com

Air Traffic Control[3]

If you are a mobile user like I am, you often find yourself in need of a wireless hot spot to hop on the Internet and check e-mail, do research, etc. In large areas, sometimes the choices can be numerous. Or sometimes you just want to know if there is anything available at all, without constantly trying to connect to various networks. That is where a widget like Air Traffic Control comes in. This widget will display all of the available wireless networks that AirPort can see. It gives statistics like the signal strength, the wireless channel that it operates on, and whether the network is encrypted—an excellent and quick way to find that elusive hot spot.

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[3]http://www.dashboardwidgets.com/showcase/details.php?wid=270
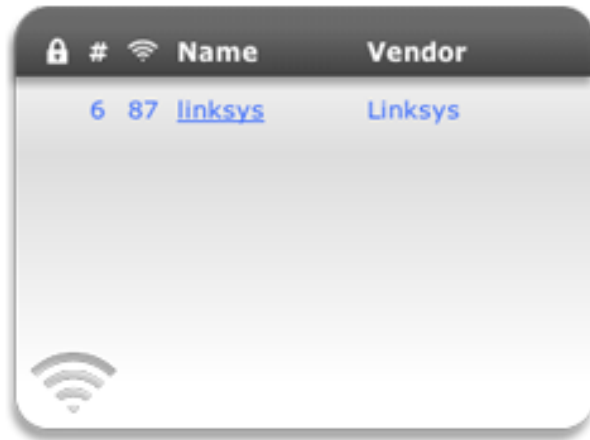
TV Tracker[4]

Ever want a quick glance at what's on the other 374 channels on your cable system but don't want to interrupt what you're doing significantly? Well, Monkey Business Labs' TV Tracker is here. This great little widget allows you to set your local cable system, then select your favorite channels to be tracked. You can also set the number of hours' worth of program information it downloads and whether it will continuously update in the background. Once the widget is loaded, it will display the familiar TV grid of programming in a scrollable listing. Clicking on a particular program will take you to the Yahoo TV listings page for the program. The widget is of average size and allows you to see programing information for multiple channels easily and quickly. It's the perfect widget for the wireless couch potato!

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[4]http://www.dashboardwidgets.com/showcase/details.php?wid=240

MacUpdate Widget[5]

One of the most important things you can do for your computer is keep your software up to date. MacUpdate makes it easy to keep track of the ever-changing face of software development. The vast majority of software, from freeware to commercial software, is listed here. Now the folks at MacUpdate have released a Dashboard widget to make it even easier to keep track of new releases. The widget lists the latest additions to MacUpdate by default. You can select a particular category to list, from games, to utilities, to Dashboard widgets. You can even initiate a search from the widget. Clicking on any of the items listed in the software list will open up the description in your browser. It's a definite must for a Mac user.

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[5]http://www.dashboardwidgets.com/showcase/details.php?wid=495
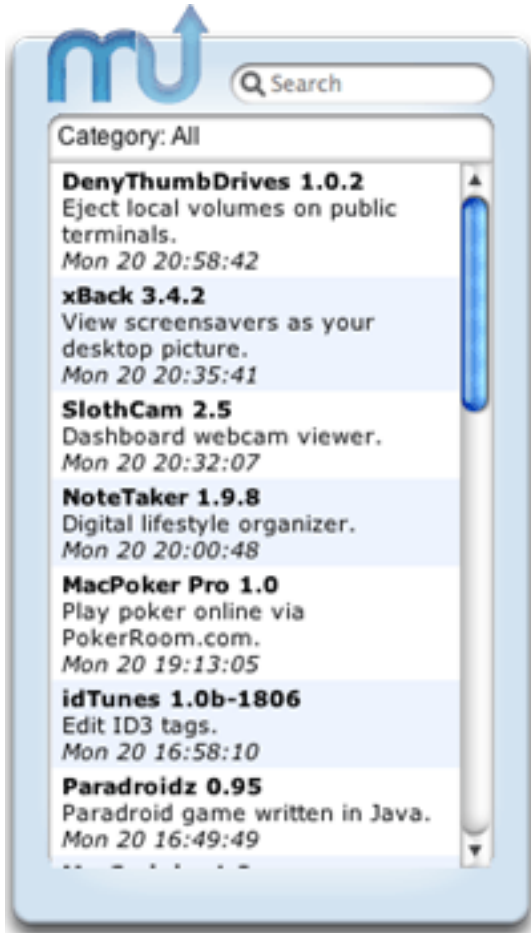
Google Maps Widget[6]

The latest craze, it seems, is all of the applications coming from the people over at Google. From video and audio search engines, to browser toolbars, to distributed computing clients, Google is definitely reaching beyond the standard Web search. One of the latest and coolest additions to the Google family is definitely Google Maps. The Google Maps widget makes it easier to explore all this application has to offer. Type in a location in the search field and the widget will display a map of the location. You can use the widget to zoom in and out of the map, change from map to satellite view, and click to view the larger maps online in your browser. You can also use your mouse to scroll around the maps, likely one of the most interesting parts of the Google Maps application. Use the Google Maps widget to explore these

United States from the comfort of your own Dashboard, without using a drop of gas.
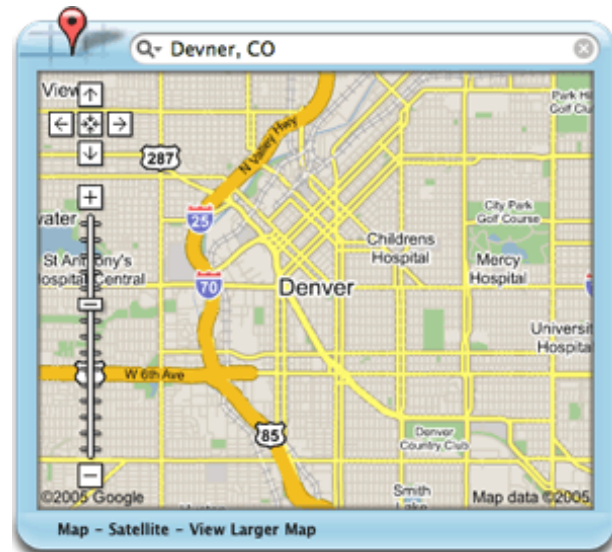
Pacman[7]

Twenty-five years ago, a small yellow character was chased all the way across the Pacific by four colorful ghosts. Thus began the craze that was Pac-Man. It has continued ever since. Pac-Man has been ported, emulated, and cloned on every system known to man. Now it's available on the Macintosh, on your Dashboard. The Pacman widget is a very faithful recreation of the arcade classic, down to the graphics and sounds. It's a great way to pass the time and very convenient in its widget form.

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[7]http://www.dashboardwidgets.com/showcase/details.php?wid=341

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[6]http://www.dashboardwidgets.com/showcase/details.php?wid=708

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The great thing about all of these widgets, and the vast majority of available widgets, is that they are completely free. It's a whole new world of application, utility, and entertainment. Use these suggestions to start delving into it.

Guitars

This month's desktop pictures[1] were contributed by ATPM reader Mark Montgomery.

Previous Months' Desktop Pictures

Pictures from previous months are listed in the desktop pictures archives[2].

Downloading All the Pictures at Once

iCab and Interarchy can download an entire set of desktop pictures at once. Use the "Web ▷ Download Entire Site" command in the File menu, giving it the URL to the pictures page above. In iCab, use the Download command to download "Get all files in same path."

Contributing Your Own Desktop Pictures

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

Placing Desktop Pictures

Mac OS X 10.3.x and 10.4.x

Choose "System Preferences..." from the Apple menu, click the "Desktop & Screen Saver" button, then choose the Desktop tab. In the left-side menu, select the desktop pictures folder you want to use.

You can also use the pictures with Mac OS X's built-in screen saver. Select the Screen Saver tab which is also in the "Desktop & Screen Saver" System Preferences pane. If you put the ATPM pictures in your Pictures folder, click on the Pictures Folder in the list of screen savers. Otherwise, click Choose Folder to tell the screen saver which pictures to use.

Mac OS X 10.1.x and 10.2.x

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

You can also use the pictures with Mac OS X's built-in screen saver. Choose "System Preferences..." from the Apple menu. Click the Screen Saver (10.1.x) or Screen Effects (10.2.x) button. Then click on Custom Slide Show in the list of screen savers. If you put the ATPM pictures in your Pictures folder, you're all set. Otherwise, click Configure to tell the screen saver which pictures to use.

Mac OS X 10.0.x

Switch to the Finder. Choose "Preferences..." from the "Finder" menu. Click on the "Select Picture..." button on the right. In the Open Panel, select the desktop picture you want to use. The panel defaults to your `~/Library/Desktop Pictures` folder. Close the "Finder Preferences" window when you are done.
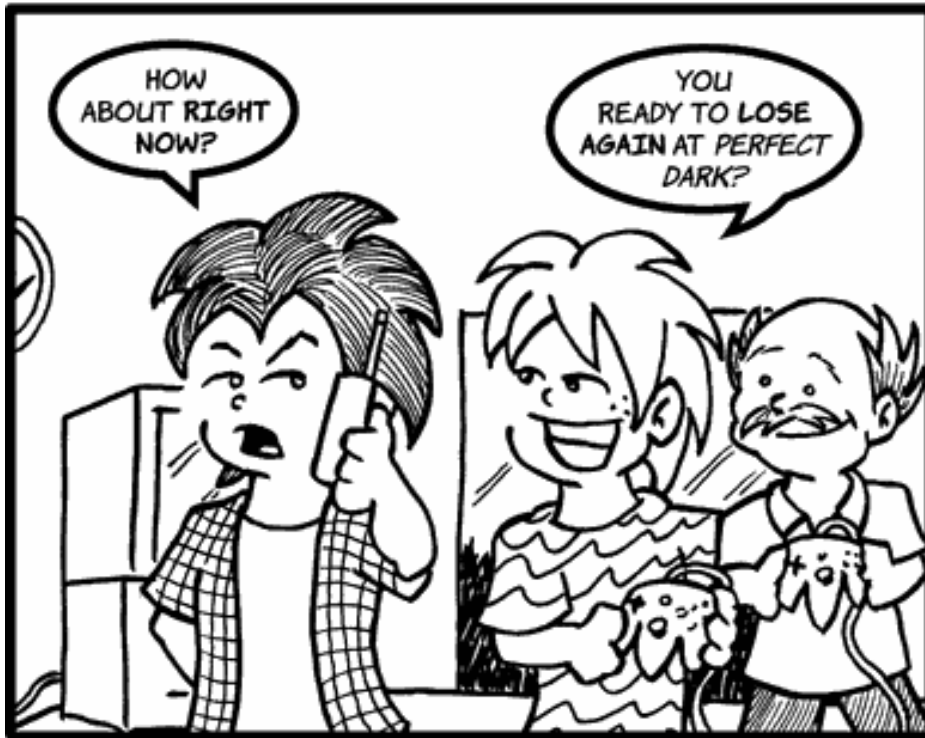
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[1]`http://www.atpm.com/11.07/guitars/`
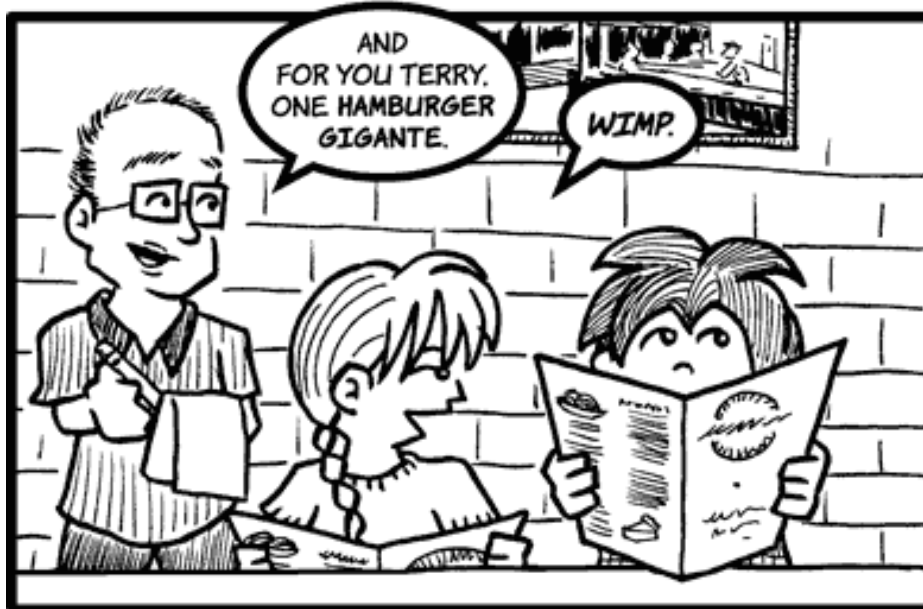[2]`http://www.atpm.com/Back/desktop-pictures.shtml`

Cortland

by Matt Johnson, mjohnson@atpm.com

42

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48
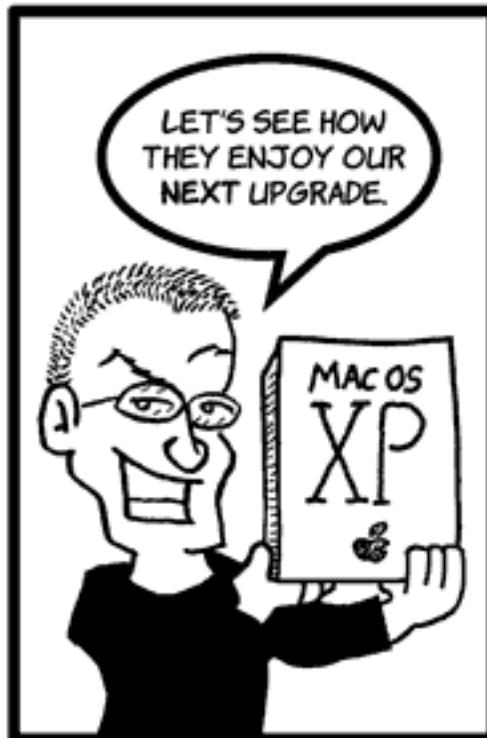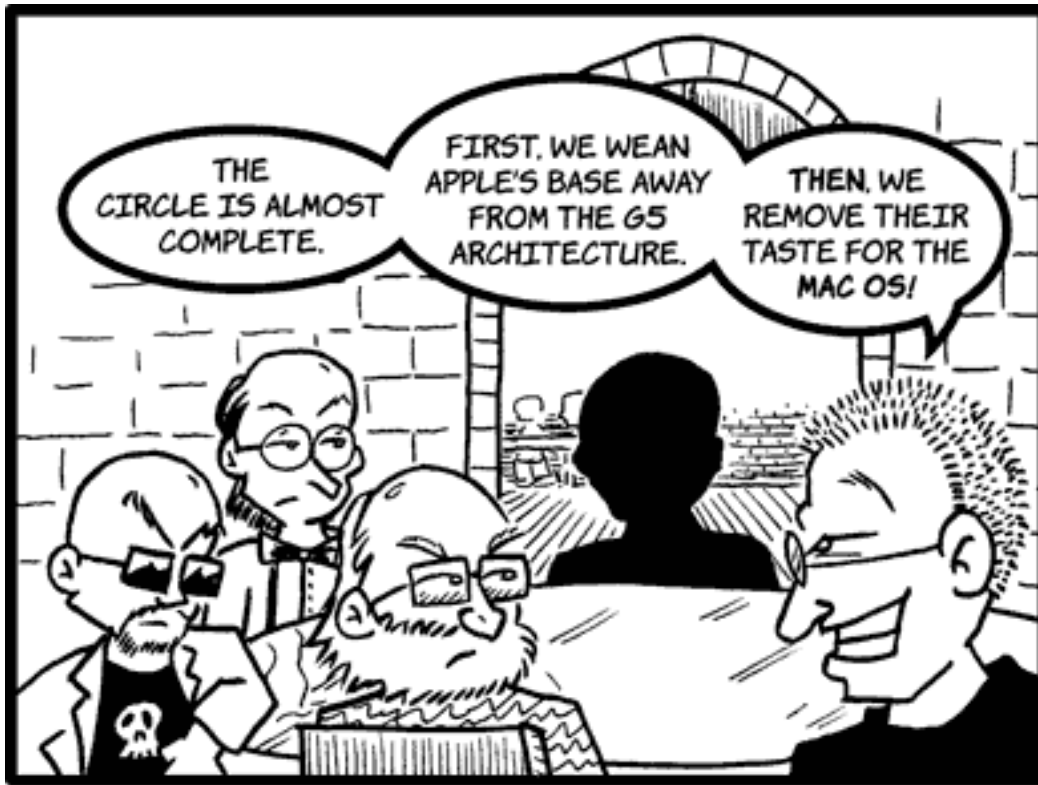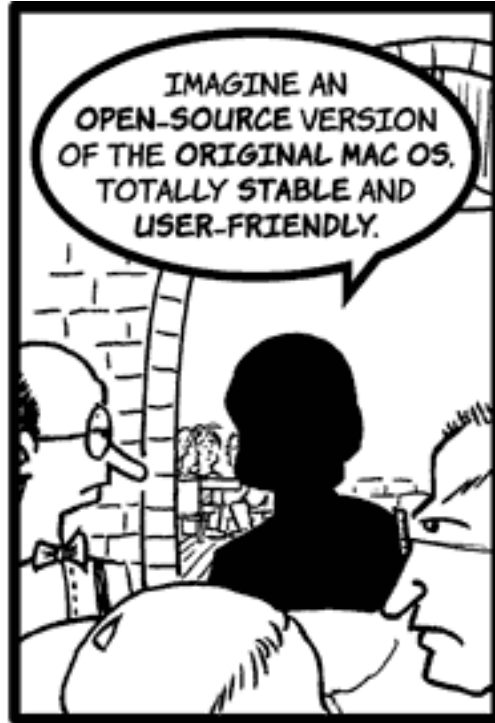
Frisky Freeware

by Matt Johnson, mjohnson@atpm.com
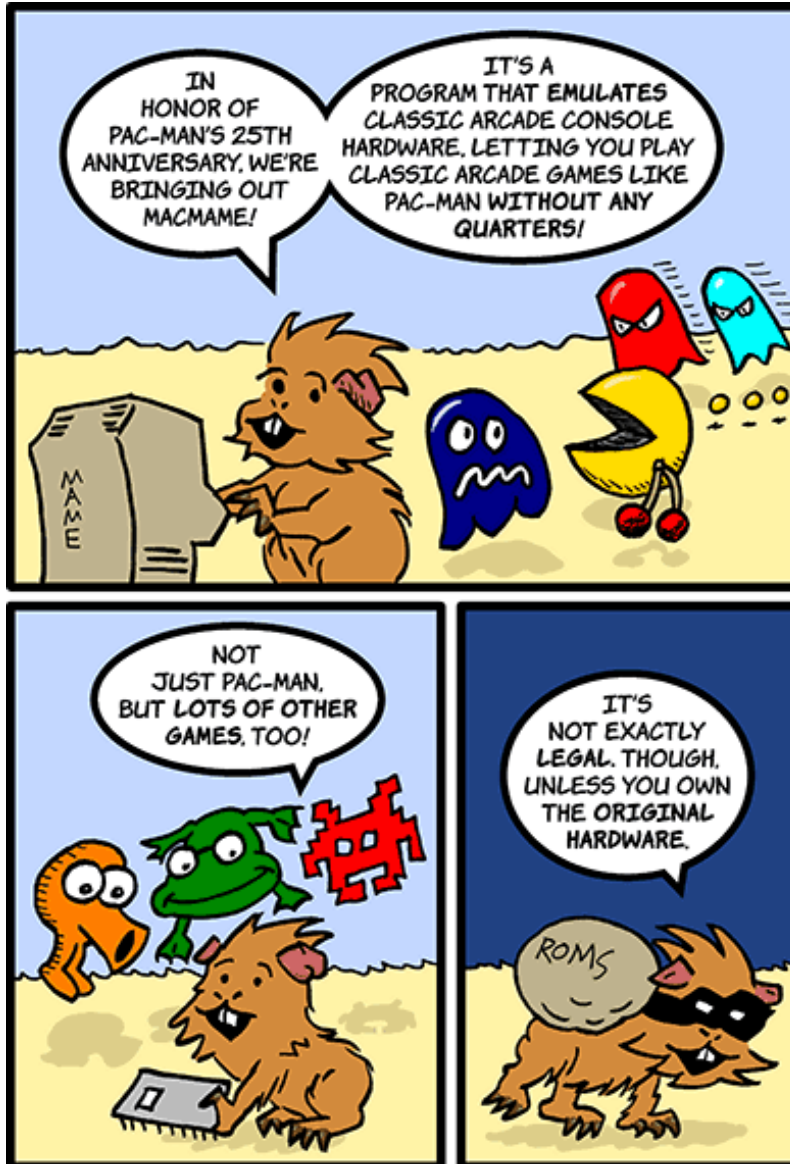
MacMAME[a]

[a]http://www.macmame.org

Altec Lansing FX6021 Speaker System

Developer: Altec Lansing[1]
Price: $300 (list); $200–$250 (street)
Requirements: Mac with mini-headphone plug sound output jack
Trial: None

VERY NICE

In a word, wow. The FX6021 speaker system from Altec Lansing is the perfect match to Apple's pro line in both appearance and features. This 2.1 setup (two stereo speakers plus a subwoofer) can rock out with the best of them and looks great doing it.

Jonathan Ive would be proud. This speaker system looks like a proverbial chip off the ol' aluminum-framed 23" Cinema Display. It makes me want to blow $2000 on a 23" Cinema Display and VESA mount so I can hang this aesthetic masterpiece on the living room wall.

The speakers come in a fairly large box (10" × 13" × 18"), most of which is taken up by the large subwoofer. Setup is simple, with color-coded connectors for sound input, right and left speakers, the control pod, and power. As with most computer speaker

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[1] http://alteclansing.com/product_details.asp?pID =FX6021

systems, the subwoofer enclosure also serves as the central point of the system, with all cables plugging into the back. Cable lengths are ample, and if your setup demands longer cables than those built into the satellite speakers, six-foot extensions are provided. Longer cable runs can be extended with standard S-video (mini DIN-4) extension cables.

The satellite speakers can be wall-mounted via holes in the back or attached to heavy aluminum-finished bases for desk use. The cables are routed through the bottom of the bases, out of sight, which greatly helps the aesthetics. A small, unobtrusive Altec Lansing logo and name is embossed into the face of each satellite speaker below the non-removable grill, and the subwoofer is similarly decorated (though its logo and text are proportionally larger).

The control pod contains controls for system volume, bass and treble, system power, a standard 3.5-mm auxiliary input jack, and a standard 3.5-mm stereo headphone jack. It also features a slot for the included infrared remote control, which can perform all the control functions of the pod from across the room. (Interestingly, a Sony universal remote programmed for an old Sears LXI television shares its volume-up command with the FX6021's standby command, and its "9" button turns up the volume on the FX6021. Altec doesn't have universal remote codes or specifications on its site, so you're on your own figuring out other possible interference modes.)

Moving the system controls from their usual position on one of the satellites or the subwoofer is a welcome change, as it makes changing settings much simpler. Kudos to the designers for thinking of that. However, those same designers deserve a huge raspberry for putting not one, but *eight* ultra-bright blue LEDs on the pod as status indicators.

This blue LED madness has to stop. Altec Lansing is only one of the manufacturers guilty of falling victim to this abominable trend, but the degree to which they've fallen for it is worse than most. The control pod's power LED *alone* lights up a room at night, and with one or two volume LEDs illuminated, the overall brightness becomes uncomfortable. If you're sending a very low-level

audio signal into the system and have to keep it turned up to maximum volume, you'll have six of these brilliant LEDs turning your ceiling into Rave Central, making it difficult to sleep if you're facing the system.

The pod desperately needs to be redesigned with either an ambient light sensor that chops the brightness at night, or duller LEDs. The blue-and-silver theme is pretty tired and overdone. I suggest white. Hardware hackers, this is a great little project. Bonus points to the first person to turn the volume indicators into a VU meter-like green/yellow/red display.

Sound from the 12 identical one-inch neodymium drivers is excellent. These are the same drivers found in Altec's inMotion iPod speaker systems and in their XT1 laptop speaker system, and they're superb in this application as well. Each pair of drivers has its own amplifier, giving the satellite speakers a lot of high-frequency punch. Altec advertises this as part of its InConcert^{TM} technology, and the speakers live up to the claims—the sound is very crisp, highly directional, and (probably because of its directionality) doesn't drop off with distance as much as computer speakers often do. The downside of all this mid- to high-frequency performance is a notable hiss in the system in the absence of an audio signal, which is a serious blow to a $300 speaker system. The hiss may also be due in part to the speakers' reliance on the audio-out port of the computer; Altec Lansing's XT1 laptop speaker system, which uses the same drivers but relies on USB for its audio signal, does not exhibit this same hiss.

The subwoofer handles bass with aplomb, moving enough air to annoy parents, impress dormitory neighbors, and rattle windows everywhere. The bass from this module is earth-shaking, which is surprising for a unit this small. Credit the dense, ported particleboard cabinet and the 50-watt amplifier driving the 6.5" woofer. As with most subwoofers, you'll want to place this one out of the way, as the bass is non-directional, and the massive magnet isn't shielded. Altec recommends at least two feet of distance between it and a CRT or other sensitive equipment.

Watching DVDs on a large-screen PowerBook isn't too bad, but the built-in speakers just aren't up to it. The FX6021s solve that problem. Whether it's a DVD, Flash animations, or TV shows via your EyeTV, these speakers will do your favorite media justice. In the music department, they're equally at home handling classical, rock, metal, rap, jazz, or

easy listening. The definition is so superior to either the built-in speakers or my old Acoustic Research system that when I heard a cough in the background of a Beethoven symphony, I thought someone in the house had coughed. I had never heard that cough before, and I've owned the CD for something like eight years.

If you don't need full 5.1-channel surround sound—and without a 5.1 source in most modern Macs, there's no need—the FX6021 is a pretty good choice. The biggest sticking points are the price and the high-frequency hiss, and the ridiculous LEDs on the control pod don't help. The price makes the hiss a problem; for $300, you expect better. Fortunately, street prices on the system are anywhere from $50 to $100 less than retail. The bottom line: the FX6021 is a quality speaker system with a few little quirks that most people can probably ignore, and at street prices it's a much better deal.

Technical Specifications

Maximum Continuous Power 75 Watts RMS

Maximum Continuous Power, Satellite Speakers 12.5 Watts/channel @ 4 ohms, 10% THD

Maximum Continuous Power, Subwoofer 50 Watts @ 4 ohms, 10% THD

Maximum Sound Pressure Level 105 dB

Frequency Response 32–18000 Hz

Frequency Response, Satellite Speakers 180–15000 Hz

Frequency Response, Subwoofer 40–180 Hz

SNR @ 1KHz > 75 dB

Altec Lansing XT1 Speaker System

Developer: Altec Lansing[1]
Price: $130 (list); $50–$100 (street)
Requirements: Mac OS X, Mac with USB
Trial: None

ATPM RATINGS
VERY NICE

It's no great secret that the built-in speakers on most laptops—even such aural *tours de force* as the Power-Book 3400 with its built-in subwoofer—are at best adequate for occasional use. If you're trying to give a multimedia presentation or use your laptop as a mobile alarm clock/jukebox, you're very familiar with just how bad those built-in speakers are. As a result, lots of folks have begun using portable (or semi-portable) speaker systems for this purpose.

Of course, portable speakers are nothing new. I can remember a pair of speakers some kid brought in to school back in about fifth grade so we could all listen to his Walkman on the bus. The problem

[1] http://alteclansing.com/product_details.asp?pID =XT1

with most portable speakers is that they're either un-powered, making them little better than the built-in speakers they're intended to supplement, or they're bulky, rendering them rather non-portable.

Altec Lansing has attempted to solve both problems with their USB-powered XT1 portable speaker system, and for the most part, they've succeeded pretty well. The XT1 is essentially a repackaged version of their various inMotion portable speaker/dock iPod accessories, but unlike the inMotion line, the XT1 is targeted at laptop users.

These attractive stereo speakers come in their own carrying case, which also holds two sets of USB cables—a nifty retractable cable and a more standard cable—and the removable speaker stands. The case is 8.5" × 7" × 2" with two internal dividers and a small pocket for easy sorting of the various cables. The only complaint about the case is that it's just a hair too small; it needs to be about half an inch wider.

As with most USB speakers, no drivers are required. Simply connect everything in accordance with the included pictoral quick-start guide and ensure that the speakers are selected as the output device in the Sound preference pane. Volume control can be achieved either via the OS or via the buttons on the side of the right-hand speaker unit, which also features a power button (to mute the speakers or turn them off when they're not needed) and a standard 3.5-mm stereo mini-jack input. The input seems to be a fairly useless feature, as you can't get any sound out of the speakers at all unless USB power is provided. The only real use for this port would be if you have a laptop old enough to support USB but not USB audio.

The speakers sound pretty darn good. As you'd expect, the midrange and treble response is excellent, making for top-notch voice quality. After all, these are the same drivers in Altec's FX6021 satellites and the various inMotion products. The downside, of course, is that there's no subwoofer, making bass response fairly weak. It's still far superior to the bass response of the built-in speakers on a 15" Al-Book, and the XT1 takes full advantage of the USB

power, delivering a much cleaner, louder signal without distortion.

Perhaps unsurprisingly, the XT1 exhibits none of the high-frequency hiss that plagues the otherwise-superb FX6021 desktop system. The USB input is a digital input, not an analog one, which prevents electrical noise in the circuitry in the absence of a signal. Altec would do well to note this advantage and apply the knowledge to the rest of their product line where practical.

Some of the other industrial design decisions are a bit questionable. The dark grey plastic border doesn't match any modern computers (Mac or PC) and it looks rather cheap, especially on a pair of $130 speakers. As mentioned above, the stereo input is nearly worthless. I would rather Altec spend that dollar on matching silver plastic or even brushed aluminum bases. Interestingly, the included stereo patch cable (for that useless input) has very high quality, machined, gold-plated metal connectors. On the plus side, Altec very sensibly put the blue LED power indicator behind the speaker grille, greatly muting its brightness, which is a serious problem on the FX6021 system's control pod.

The $130 MSRP on these speakers is, to be blunt, ridiculous. They're great speakers, but they aren't worth $130. Fortunately, street prices (via Froogle[2]) are 25–60% lower.

There are a multitude of sub-$100 speaker systems out there, including several from Altec Lansing. The singular feature that sets apart the XT1 is its portability. Without a subwoofer, they're not a serious contender in the crowded desktop speaker market, and they're not intended to be. For the mobile professional who needs a relatively powerful but very compact pair of speakers to toss in the briefcase for presentations, these speakers do the job admirably.

Technical Specifications

Maximum Continuous Power 1.5 Watts RMS (0.75 Watts/channel @ 7.7 ohms)

Frequency Response 100–20000 Hz

SNR @ 1KHz > 65 dB

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[2] http://froogle.google.com

Curio 2.4

Developer: Zengobi, Inc.[1]
Price: $39 (basic); $79 (home edition); $129 (professional); $65 (educational)
Requirements: Mac OS X 10.3
Trial: Fully-featured (15 days)

VERY NICE

Graphic designers do a lot of their work in the fishbowl of their heads. Web pages, Photoshop images, and client requests swim around in the mental murk, waiting to be hooked and weighed. As their goal, Curio's programmers quote a graphic designer who said, "I want this": a single notebook to hold everything related to his project, laid out as he desired, while tracking sources and interconnections.

Curio provides a whiteboard metaphor (the "idea space") to assemble a project's pieces and keep it from falling apart before it gets started. Add images, text, URLs, or movies and arrange them as the mood takes you. Freehand painting tools and unlimited idea spaces help you develop each idea from nascent to fully formed. Do Web research within your documents and export your final project to a variety of formats.

Installation and Tutorial

Install Curio by opening its package (Curio240-Home.dmg) and follow the simple instructions. Your Documents folder now has a tutorial Curio document called "Feature Tour." It's a fairly thorough review of the features, though it doesn't solve the problem of what to do with a blank page. (The creative part–filling up the white space with ideas–is still up to you.)

Basic Functions

Curio reminds me of OpenDoc[2], Apple's early 90s all-in-one document format. It supports display and playback for a number of text and media formats, just by dragging them into an idea space. (Each item you add to the project is called an "asset.")
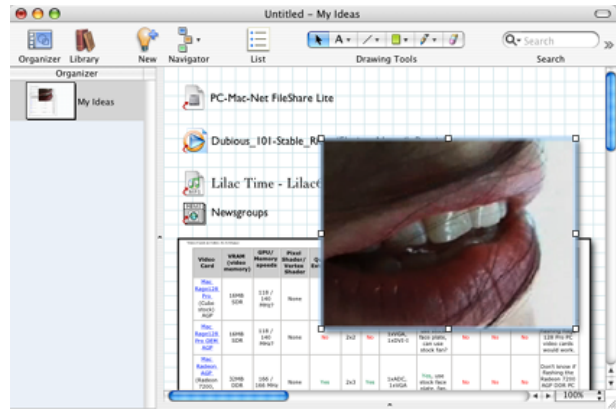

An idea space with several media files and documents.

The Library, a collection of all project assets, automatically tracks each item you add and will play back many media formats within the idea space. You can compile information for a DVD, for example, watching selected pieces of the video track to inspire layout ideas.

Professional and K-12 edition users also have the "dossier," a set of questions that helps define project bounds and goals. These questions focus your design efforts, since each project element should serve a concrete need or task.

Many functions have single-key shortcuts, like Photoshop and other complex design applications. Hold Q to zoom out to show the whole idea space–move the mouse over a specific spot and release Q to jump there.

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[1]http://www.zengobi.com/products/curio/
[2]http://en.wikipedia.org/wiki/OpenDoc
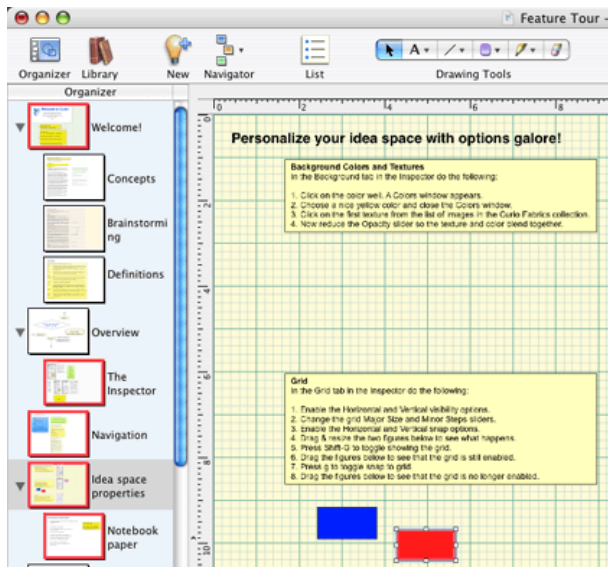
Zooming out to see the whole idea space.

The backtick key (') shows the inspector, a style window for the idea space background and any assets.
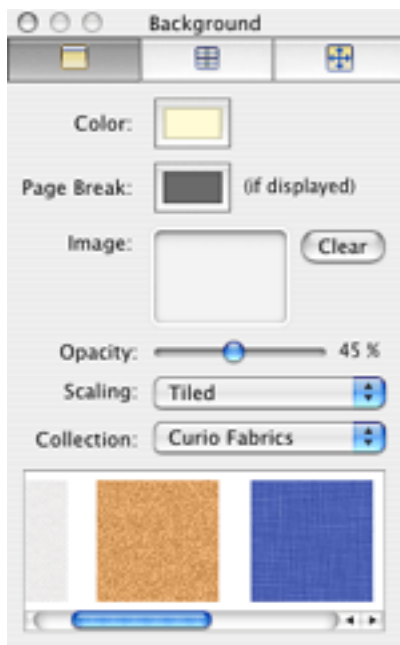
Pick colors and styles in the inspector window.

Document Templates and Graph Paper

Back in high school, design projects inevitably started with graph paper. Maps, math homework, and game designs all sprouted from neat grids of boxes. My relatives even received a thank you note or two written on my drafting pad. Hundreds of little green boxes initiated organization in a way the completely blank page didn't.

Curio includes several note pad templates that bring back the joy of graph paper, lined notebooks, and legal pads. This is a great feature, given its design focus. Set your idea space to graph paper by showing the inspector, choosing grid, and selecting a "Quadrille" or "Engineering" style. Pick "Edge Snap" from the "Arrange" menu and everything locks to the new grid. The same holds true with "notebook" style, your typical notepad.
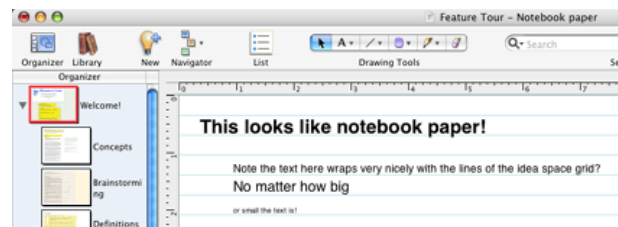
Searching With Sleuth (Pro, K-12, and Home Editions)

Curio's search engine, dubbed "Sleuth," is a convenient way of searching many online resources without leaving the application. Sleuth culls results from several search engines and reference sites like Merriam-Webster and Encyclopedia Brittanica. Just knowing how many resources it has is helpful–dragging results directly onto the idea space is an extra-big win. Dragged items remember where they came from, should you need to reference their source later.

Finding items within your idea space is even easier. Type your text into the search box and Curio automatically dims any assets or idea spaces that don't include that text. That sure beats checking your handwritten notes from the last two weeks, page by page!

Developing a Project

To the "why Curio?" question, they answer "because no other product can do all the things that Curio can do to encourage your creativity." Practically speaking, this means keeping track of your ideas and resources without being overwhelmed by clutter. You can break concepts into as many idea spaces as you need without losing their overall integrity.

Since their demo is full-featured for two weeks, it's easy to run through the examples for yourself, but the basic ideas are straighforward. Identify a few questions you need answered in a dossier (or on a blank

page if you're using the Basic or Home editions). Do some Sleuth searching to find related pictures and Web pages. Create a flow chart or outline to connect the answers to your questions and then work each idea into a specific design. Use jump points (similar to Web hyperlinks) to connect related ideas within your idea spaces.

Ultimately, you'll still spend time staring off into space and listening to your mental gears churn, but hopefully less often, or at least more productively.

Best Features

I found searching for information with Sleuth Curio's most distinctive feature. While the same information is available through a Web browser, its integration feels more natural to the design process. Even saving those few keystrokes keeps your mind closer to the project, where distraction can remove you from a promising line of thought.

Each function of Curio is possible with other design and media programs, but the common interface creates value not seen in basic software collections like Microsoft Office and AppleWorks. It also handles files from design tools like Photoshop pretty easily, managing them within an idea space rather than in an external folder. Curio also exports to TIFF, PDF, and even .Mac accounts.

Potential Improvements

While Curio is powerful, some basic elements of paper-and-pen design remain elusive. You'll need a tablet for quality freehand design–mouse users will be better served with the object pallette. The tactile response of handwork remains hard to duplicate, if through no fault of Curio, since it includes pressure-sensitive drawing tools.

Originally, Microsoft targeted Excel to a particular kind of professional user, but eventually everyone found a use for its database-like listing and worksheet features. Curio seeks to satisfy graphic designers, but I suspect the combined toolset could serve a much larger audience if it was more accessible. Ironically, it might achieve this by "hiding" some layers of its functionality or including project templates on a more basic level than dossiers and the exhaustive tutorial. Parent-friendly DVD projects and blog-style publishing options both come to mind as potential enhancements.

Summary

Curio packages the most pressing needs of designers attractively in one application. Organization, research, and visual layout tools are all easy to work with and don't require switching to outside editors except for specialized work. Notepad-style templates keep you in a paper-and-pen frame of mind while letting your ideas interact with each other. Expanding their market beyond graphic designers is possible, but certainly not necessary. What Curio does, it does well.

Graphire Bluetooth

Developer: Wacom Technology[1]
Price: $250
Requirements: Mac OS X 10.2.8, Mac with Bluetooth
Trial: None

ATPM RATINGS

EXCELLENT

Ten years and several jobs ago, I found an enormous graphics tablet in the back of a coworker's desk drawer. She didn't know if it worked, but I plugged it in and gave it a try and loved it. I was doing data processing and desktop publishing, so to me the graphics tablet was little more than a new kind of mouse. Still, I liked it so much that I bought a 6 × 8 Intuos tablet to use at home. We were friends for a long time before Apple made it a serial relic in a USB world.

When I moved up to a PowerBook G4, I was tempted by wireless technology. Hating traditional mice, I bought the wireless version of Kensington's Expert Mouse Pro. Wireless my foot: it came with an ugly oddly-shaped transmitting device with a *six-foot long cord* to plug in to my computer. Though Kensington's products are usually top-notch, the trackball's response was abysmal: it would frequently scroll the wrong direction, and sometimes the pointer would just drift off to the side of the screen for no apparent reason.

When Wacom announced a bluetooth version of its 6 × 8 Graphire tablet, I was excited. I checked the specs carefully, and yes it really was wireless. The latest version of my favorite input device, minus cables. I had to check it out.

Basics

If you don't know what a graphics tablet is, picture a mousepad that you can write on with a special pen. Like a pencil, the stylus is pressure-sensitive and has an eraser on the back. It's light-weight and comfortable to use: there's no battery inside to make it heavy or throw off the balance from what you're used to with a traditional pen. The Graphire Bluetooth also includes a traditional-shaped mouse (two-button with scroll wheel). It's not optical and it doesn't

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[1]http://www.wacom.com/graphire/bluetooth.cfm

have a mouse ball; it works only on the surface of the tablet.

An tablet of tranquility adrift on a desk of clutter.

The tablet itself is actually quite a bit larger than the 6 × 8 area on which you can "write": you'll need a space on your desk about the size of a piece of paper (held sideways). For people with cluttered desks (see the edges of my product photo) that can be a bit of a minus, or perhaps an incentive to clear some junk from your work area. The tablet senses the position and movement and pressure of the stylus and transmits that information to the computer.

The stylus has a long skinny button on it; you can press either end of it for a different user-definable action. The tablet also has two buttons on it, positioned at top and center. The buttons on the stylus and mouse can be configured to behave differently depending on the application being used, but unfortunately the buttons on the tablet are not so versatile. I'd love to see that shortcoming fixed in a future version of the tablet's software: the wireless nature of the Graphire Bluetooth means I'm not always within easy reach of the keyboard when I'm using it, so button functionality is very important.

Setup

The Graphire Bluetooth isn't quite plug-and-play, since after all there's nothing to plug in. The installation instructions come in four different languages

but they don't offer separate sections for Mac and Windows. As a result they can sometimes seem vague: something might happen and if it does then do this. So it took me a while to figure out that the tablet is a "mouse" rather than an "other device" in the Bluetooth Setup Assistant, even though it did say which to select in the instructions. Wacom: paper is cheap, the Graphire Bluetooth costs $250. Add an extra page to your manual and provide OS-specific step-by-step setup instructions.

I was eager to try Ink once I got the tablet working. (Ink is an Apple technology that lets those with graphics tablets write with a stylus and have their natural handwriting converted to text and typed into any application.) But the Ink control panel didn't immediately show up in my system preferences; eventually I tried restarting and when the computer came back up, Ink was available.

A Pen Tablet control panel allows you to specify which functions are performed by the various buttons available, and lets you choose between Pen Mode and Mouse Mode. Mouse mode works like a normal mouse on a mousepad, with the usual benefits and pitfalls. In Pen mode, every point on the graphics tablet corresponds to a specific point on your screen, so the edge of the tablet's writing area is always the edge of the screen. That's the mode I prefer: one of the things I dislike about traditional mice is having to pick up the mouse and re-center it whenever I reach the edge of the mousepad. The tablet software lets you select one mode for the stylus and a different mode for the mouse if you so choose.
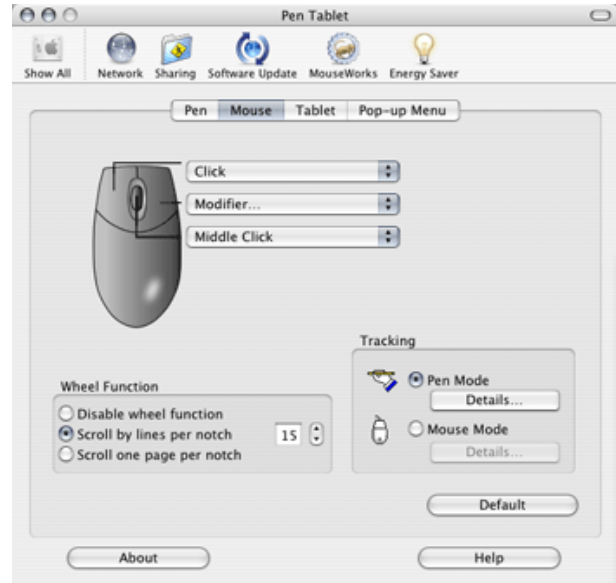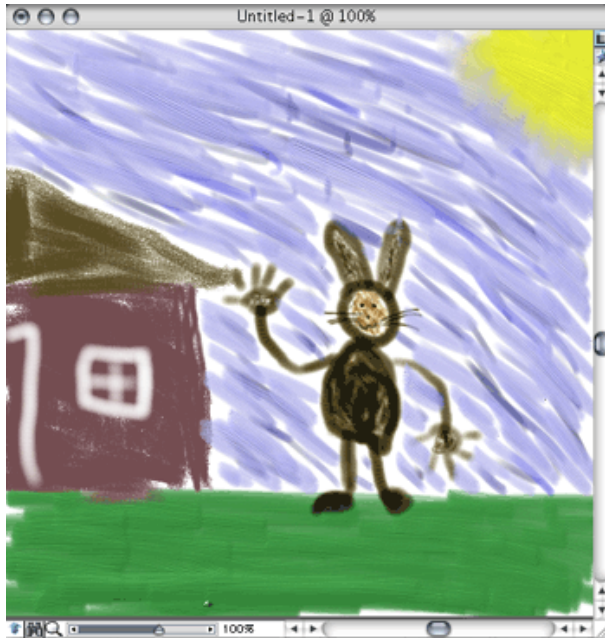
I have to give special mention to the scroll wheel: preferences let you set the scrolling speed not in vague relative terms but in "lines per notch," a clear and precise measure. Better yet, programs which give me lethargic scrolling even with my Kensington trackball set to "very fast" actually do scroll faster when I increase the lines per notch on the Graphire Bluetooth mouse.

In Action

To move the mouse pointer, hover the stylus just over the surface of the graphics tablet. When you tap the stylus on the tablet, that's a click; you can drag or draw (in graphics applications) by holding the stylus to the tablet and moving it around, just like drawing on a piece of paper. Most major graphics applications (including Adobe Photoshop Elements 2 and Corel Painter Essentials 2, which come with the tablet) support the Graphire's pressure-sensitive and eraser functionality.

I have no means to test for exactly 512 levels of pressure-sensitivity in the stylus, but I can tell you that in programs that support it, pressing down harder on the stylus gives me a thicker, darker line. The variations in tone that this allows, even slight accidental variations, make my childish and unskilled Painter paintings look a little bit better and more natural. When I pick a watercolor brush, I get something that looks and acts like watercolor instead of a single continuous unchanging line. And if I screw up, I can flip the stylus over and erase, saving myself a trip to the palette for the eraser tool.

Self Portrait as a Rabbit on a Sunny Day.

Sidebar: Ink

Just in case anyone else is curious about Apple's handwriting-recognizing technology, here's a rundown of my experience with Ink. This sentence is writtenbyhand.

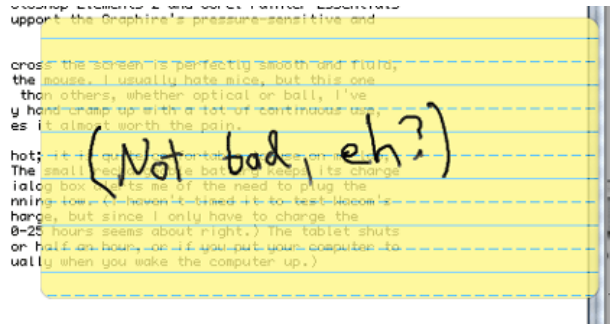Ink can read my handwriting: "(Not bad, eh?)"

Movement across the tablet and across the screen is perfectly smooth and fluid, whether with the stylus or with the mouse. I usually hate mice, but this one feels far more precise and exact than others I've tried, whether optical or ball. The stylus is almost too precise: I can't use it to draw a straight line without the help of a ruler, and double-clicking takes practice. If your second tap is too far from your first tap, it won't register as a double-click. But lest I leave you with the wrong impression: the high precision is a very good thing. It's great to use such a responsive piece of hardware.

Like all mice, the Graphire's mouse makes my hand cramp up with a lot of continuous use, but its high accuracy and quick scroll wheel makes it almost worth the pain. When I switch to the stylus, I can mouse for hours with little to no pain, making the Graphire Wireless a good solution for those with ergonomic concerns.

The tablet is neither heavy nor hot; unlike a laptop, it is quite comfortable to use on my lap. The small rechargeable battery keeps its charge for many hours of usage, and a dialog box alerts me of the need to plug the tablet in when the battery is running low. (I haven't timed it to test Wacom's claim of 25 hours of usage per charge, but since I only have to charge the tablet every few days, I'd say 20–25 hours seems about right.)

A press of a button on my stylus puts me into Ink mode, and from there I can just start writing anywhere on the screen. A piece of translucent yellow lined paper appears under my words and expands to fit the size of what I'm writing. When I stop writing, my scrawl is converted to text, which is typed into the active window. Of course, I have to write more slowly and carefully than my usual barely-legible chicken-scratch, but my handwriting need not be perfect or even stay on the line for Ink to be able to decipher it. I wouldn't want to write anything long with Ink, but it's handy for a few words here or there when I don't want to reach for my keyboard.

Bug

I'd had the Graphire Bluetooth for a week or two when one morning I hit the power button and the tablet didn't turn on. I'd charged it recently, but figured maybe power was low so I plugged the tablet in. It still wouldn't turn on. Wacom's tech support hadn't heard of the problem before, but thought it might be the battery. They had me disconnect the battery and then plug in the tablet; that worked fine. But the battery wasn't at fault: when I reconnected it, the tablet continued working as expected.

The problem has come up two more times over about a month of use. Disconnecting and reconnecting the battery is all it takes to make the tablet power-on properly in these instances. I'm not sure if there's a flaw in my review unit or if this is a problem that all users will experience. If Wacom really hasn't had any other reports of it, I'd guess the former. It's really only a minor annoyance once you

know the workaround; it'd be nice if Wacom would add it to their FAQ[2] in case other users come across it.

Conclusion

Wacom's Graphire Bluetooth is both a practical tool (my favorite mousing device, hands down) and a silly toy (what, that picture is *great art*). It feels precise and responsive, more so than any other pointing devices I've used. Since it's wireless, I can hold it on my lap and recline back from my desk rather than have to sit hunched over the computer. Whether you're a budding graphic designer or you're just looking for a comfortable alternative to a traditional mouse, you'll find the Graphire Bluetooth an enjoyable tool to use.

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[2]http://www.wacom.com/faqs/faqs.cfm

Headphones

Noisebuster ProTech NB-FX
Developer: Pro Tech Communications[1]
Price: $69 (list)
Requirements: iPod, stereo, Walkman, etc.
Trial: None
Technical Specifications: 20Hz–20KHz frequency response, unknown THD.

ATPM RATINGS — OKAY

Sennheiser PX100
Developer: Sennheiser[2]
Price: $60 (list); $50 (street)
Requirements: iPod, stereo, Walkman, etc.
Trial: None
Technical Specifications: 15Hz–27KHz frequency response, 0.1% THD.

ATPM RATINGS — EXCELLENT

One of the more amusing aspects of most mainstream iPod reviews is the lack of concern for sound quality, even though most people buy the things to listen to music. Most reviews, indeed, can be summarized as "the iPod wins on style but other players have more features and better battery life." The anti-iPod people, most of whom are admittedly working for publications partly owned by Microsoft, downplay the style and emphasize the other features (most of which are rarely, if ever, used—why would I buy a $299 voice recorder when I can get a better one for $30?). But very rarely is the music itself put front and center.

One reason for this is the role of headphones and earbuds—without the standard headphones, the players probably all sound pretty much the same. Apple's standard buds are not the stuff legends are made of, though they are certainly decent by the standards of original-equipment earbuds. But if you try out an iPod with audiophile headphones or hook it up to a stereo, there's a clear difference between the iPod and competitors, according to most reviewers who have done this. Indeed, the little iPod shuffle actually turns out to have the most accurate sound

reproduction of just about any digital player—and, for what it's worth, similar-rate AAC nearly always beats MP3. (I tend to record at the maximum bitrate for higher quality, but it's probably not necessary.)

Most reviewers seem to focus on the excellent range of sound-deadening headphones that turn away the outside world. That makes sense for those who listen on airplanes, buses, and other noisy environments, but what if you work in an office—say, a home office—and need to be able to clearly hear the doorbell, telephone, or a spouse? Then you'd want open-air headphones, which let in the sounds around you. That's where the Sennheisers beat the Shures and Noisebusters; though on an airplane or lawnmower, you'd almost certainly leave the Sennheisers in their case.

Sennheiser PX100 (left) and Noisebuster ProTech NB-FX

The Sennheiser PX100 headphones seem to hit a sweet spot in value and convenience. As with most Sennheisers, they are relatively comfortable; they don't feel as though they are designed to mold to your ears (the contact patch is flat), but they don't hurt when you wear them for hours at a time, as my venerable Sony MDR-V6 conventional-style studio headphones (cost: $100 circa 1990) do. The two sides are clearly marked (left and right), and they have adjustments for different sized heads. They were comfortable on my big head and on my nine-year-old's little head.

The PX100 sells for between $40 and $60 at most outlets, which is well within the "reasonable" range,

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[1] http://www.protechcommunications.com/headphones.html

[2] http://www.sennheiser.com/sennheiser/icm_eng.nsf/root/products_headphones_streetwear_pxs eries_05206

and far from audiophile price tags. Despite this, the sound is quite good, with bass slightly emphasized but with good overall clarity and accuracy. If you really want booming bass, the open-air headphone style probably isn't ideal, especially coupled to the iPod shuffle, which seems to have a weak output. The PX100 is efficient enough to manage dangerously high volumes from the Shuffle without distortion. It also works well with standard stereo equipment, including full-sized receivers and little portable CD players. The frequency range is fairly generous, and clarity and balance are good enough to make listening at low volumes a pleasure—no need to crank it though, again, if you're into heavy bass, you may want to equalize the music. Though audiophiles criticize the PX100 for emphasizing bass, many rockers will find the opposite is true.

It may be nice to have balance, volume, or equalizer controls, but these are fairly rare on headphones anyway, and take away one frequent source of failure (knobs or, as the experts call 'em, pots—potentiometers).

For convenience, the PX100 folds up into a small, hard case with a wire wrap; that is, if you have the time and manual dexterity. If you don't travel with it, you'll probably prefer to leave it on a hook instead. I found it rather difficult to put back into the case, despite the instructions on the box (the best place to put them), but that's probably a skill that builds with time. For air travel, I leave the PX100 at home and take along active sound-deadening headphones instead—they're not comfortable and don't have great sound quality, but they do take away the airplane drone.

Speaking of the sound-deadening headphones, I also tested out a set of Noisebuster ProTech NB-FX noise canceling headphones that are actually not bad for sound quality. They're just not in the same league as the Sennheisers, nor are they designed for the same purpose. The goal of the Noiesbuster is to block out external droning sounds; it works fairly well at lowering the sound of the omnipresent suburban landscapers, and very well at bringing commuter jets down to reasonable levels. At the same time, unsteady sounds such as telephones make it right on through. The down-side is a lack of comfort after a half-hour's use, which is partly due to the general sealed-over-the-ear design, which was once almost omnipresent; and foggy, lackluster music quality. They fold twice for easy storage, and while the leather bag they come with doesn't provide any real protection, I've carried them back and forth on a few jets without much protection and also without any damage.

Noisebuster ProTech NB-FX Battery Compartment

The Noisebuster, incidentally, is powered by a single, long-lasting AAA cell, which installs easily into the structure, and senses ambient noise through microphones on each side; it seems to automatically set up separate left and right channel noise canceling waves. While I found them a bit tight, those with smaller heads (insert joke here) may well find them to be very comfortable. The cord is well anchored, which bodes well for longevity—the only headphone breakage I've experienced in 25 years of ownership has been to the cord—and a good quality mini-to-full-size headphone jack is included for use with full sized stereos. The Noisebuster works well with a variety of signal strengths and is efficient enough to be

Folded Sennheiser PX100 (left) and Noisebuster ProTech NB-FX

easily driven by the Shuffle. The top of the Noise-buster headset is padded, so there's no rough spot on the user's head; my main comfort issue was pressure against the ears, and there the Noisebuster is, to be fair, no worse than my venerable and once-beloved Sony MDR-V6.

In flight or other noisy situations, an open-air set like the Sennheisers is definitely not a good idea; to hear the music properly, you'd need to jack up the volume, and that's not so good for the ears. Blocking out the noise, either physically as with the highly-reviewed but expensive Shures (and many others), or electronically as with the Noisebusters (and many others), is called for instead.

But back to the PX100. While very light, the headphones seem to be tough as well, and not espe-cially prone to easy breakage. The cord appears to be well anchored, and the length is reasonable—not too long for listening to a Shuffle, not too short for listening to your computer or stereo. A high quality mini-to-full-sized adapter is provided with the unit. The hardest thing about owning these headphones is spelling "Sennheiser."

The generally favorable qualities of the Sennheis-ers should be no surprise to those who have been around audio equipment for the last few decades; they were the leading open-air headphones back in the 1980s and probably long before, as well. Be-fore the Sony Walkman made open-air headphones popular, Sennheiser was selling them for full-sized re-ceivers. The PX100 is not the most convenient set of headphones, nor the best sounding, nor the most comfortable, nor the cheapest; but it does provide a balance of these qualities, which makes it an excellent value.

vSpace Master 2.0

Developer: Kaon Interactive[1]
Price: $1550
Requirements: Mac OS X 10.3 or Windows 2000
Trial: Fully-featured (90 days)

Kaon has created a cross-platform compatible 3D/VR presentation system that improves on many other 3D Web technologies by eliminating the need for Web browser plug-ins. vSpace Master creates Java archives (Jar files) containing the model data and the 3D viewer software required to present the model. Current operating systems and Web browsers easily run Jar applications without additional installation, making vSpace Master a practical way to present interactive 3D content on Web sites, CDs, DVDs, and wherever 3D and VR are needed.

vSpace Master is a presentation system, and not used for the direct creation of 3D content. Kaon's software imports VRML 97 and Alias Studio models. Cinema 4D and Blender 3D were used to create the 3D model used in this article, but any 3D package that exports VRML 97 files will work. Native files for vSpace Master are XMM, and Kaon has opened the specs for this format to encourage future compatibility with other 3D applications.

Installing vSpace Master offered a feature we wish more software developers would include. The installer presented options for where we wanted additional application aliases, including the Dock, Desktop, User's Home, Other, or no aliases at all. This option is very welcome, especially compared to installers that automatically create several application aliases spread throughout your hard drive.

Creating a 3D Presentation

With our VRML 97 models handy, we imported into vSpace Master using the File menu in the Main window. This is where complications might arise based on the capabilities of the software used to export the VRML 97 model.

Our Cinema 4D model imported perfectly, with objects retaining hierarchy and materials.

Our Blender 3D model imported objects and the hierarchy, but there were problems with meshes containing multiple materials. Only the first material assigned to a mesh could be used. After speaking with Kaon's support, the cause was determined to be a flaw in Blender 3D's VRML 97 export scripts. This was resolved by going back into Blender 3D, separating meshes with multiple materials based on material, deleting additional materials to leave only one material per mesh, and re-exporting the model into VRML 97 format. Blender 2.36, 2.37, and the recent 2.37a update all demonstrated the same VRML export problem.
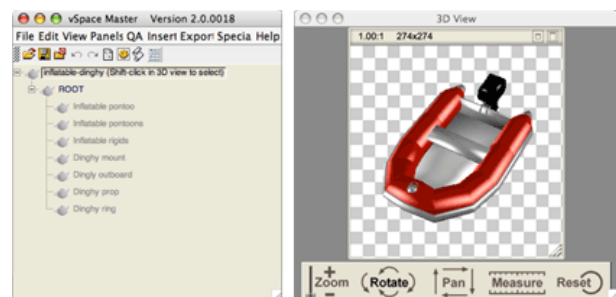
An inflatable dinghy model after VRML 97 import.

The imported model can be adjusted as necessary by changing lighting, view, mesh materials, face orientation, translation, scale, and visibility. These tools are easily accessed through different windows, all available in the Panels menu. vSpace Master also offers significant animation features using the Sequences & Views window and the Scripts window. If scripted correctly an animation can be displayed only when triggered by the user viewing the finished 3D content, an interactive feature not currently available with other 3D presentation technologies. These features and their application are best demonstrated by Kaon's tutorials[2] available in Real Player format.

The animation system with scripts and sequences requires some time and practice. It would be great if there were some basic "pre-programmed" scripts and sequences that would make some of the more com-

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[1] http://www.kaon.com/software/swmaster.html

[2] http://www.kaon.com/docs/tutorials.html

mon tasks automatic (such as simple model rotation). Having these "pre-scripted" animation functions for common presentations would greatly improve time-flow, possibly available through a wizard.

The animation system could also be improved with more interface integration instead of appearing in separate windows. The sequencer window is used to create the "keyframes," but the separate scripting window is used to tie the sequences to a time line. Having these functions more directly interfaced to one another would improve workflow. Likewise, it would be nice if the materials functions would interface within the Main window to display the materials assigned to individual meshes within the hierarchy.

vSpace Master offers several options for exporting a presentation. The presentation export ranges from simple "rotation only" models to more sophisticated options that offer exterior studies, walkthoughs, and even Flash-embedded presentations. The more complex "Web Tour" options also create any necessary HTML and Flash files to present the 3D model on the Web. The exported vSpace Master viewer will automatically adjust the quality of the presentation based on the end-user's computer abilities. Presenting our exported inflatable dinghy[3] only required copying the files created by vSpace Master onto the Web server.

An exciting planned feature is 3D PDF[4] that will export 3D presentations for inclusion in PDF files, but this feature was unavailable for testing during this review.

Comparing 3D Presentation Technologies

To fully understand Kaon's system, it is important to compare vSpace Master to the other predominant 3D presentation methods. There are currently three methodologies for presenting 3D Web content.

Pre-rendered image presentations use still images that are selectively displayed based on user feedback. The Web server hosts many sequential images that represent different views of an object or scene. When the end-user "rotates" the object or changes the "view," a different image is displayed. Which images are displayed creates an interactive representation of a 3D object or space. Advantages to this technique are that it can be created with HTML and JavaScript code, requires no specialized pre-installed Web browser plugins, and works well with CD/DVD

based presentations. Blender 3D Italy's 3D Viewer[5] and 3DNP[6] are examples of pre-rendered 3D presentation technologies. The same inflatable dinghy model used previously in the article was used to create this 3DNP example[7].

Unfortunately, there are also several disadvantages to the pre-rendered method. Because these methods are limited by the pre-rendered content, they restrict the audience from zooming, walk-throughs, and free movement through VR spaces. Creating the pre-rendered content can be very time consuming, with a full 360° representation of a 3D model requiring hundreds of images. Loading all of those images can be time-consuming for the end-user and places higher storage and bandwidth demands on the Web server, meaning the quality of the 3D presentation is entirely dependent on the user's Internet connection and the server abilities.

The second method is dynamically rendered content using browser plug-ins, in which the 3D model is loaded from the server and rendered on the user's computer. This is usually much more efficient than the pre-rendered method, because the geometry describing a 3D scene requires far less data than hundreds of rendered pictures of that same scene. Less data means faster load-times and lower server demands. A version of the same inflatable dinghy demonstrates a VRML presentation[8].

A common disadvantage to the plug-in presentations is somewhat obvious—the required browser plug-ins (for example FreeWRL[9] and Cortona VRML Client[10]) must be installed before viewing the 3D content. If the user doesn't have a compatible plug-in installed, he must download the compatible software, quit the browser application, install the plug-in, and revisit the site. Being forced to install new software to view content often loses the audience—and those that remain are often frustrated by plug-in availability and compatibility issues between different platforms.

The third method is a hybrid of the previous two. These technologies use both pre-rendered images and a browser plug-in to process and present content.

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[3]http://www.atpm.com/11.07/vspace/vSpace/
[4]http://www.kaon.com/3DPDF.html

[5]http://www.blender3d.it
[6]http://www.thoro.de/portfolio/verschiedenes/3DNP.html
[7]http://www.atpm.com/11.07/vspace/3DNP/
[8]http://www.atpm.com/11.07/vspace/VRML/
[9]http://freewrl.sourceforge.net
[10]http://www.parallelgraphics.com/products/cortona/

QuickTime [Cubic and Panoramic VRs](#)[11] are the most common examples of this method.

By dynamically rendering the 3D presentation, vSpace Master offers the speed, lower bandwidth, and lower server demand advantages of plug-in–based technologies—but without requiring plug-ins.

Results

Overall the software was straightforward to use, especially for the intended audience of those with intermediate to advanced 3D skills. The interface and time-flow could be improved, but as it exists now the software is very effective with practice.

Once the user develops the required skills, vSpace Master's 3D presentations work exactly as intended and offer a significant advantage to other 3D presentation technologies by eliminating the need for browser plugins. The 3D and VR presentations produced by vSpace Master are easy to install on a Web server—and even easier for the audience to enjoy.

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[11]http://developer.apple.com/quicktime/quicktimeintro/tools/

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**. Please [contact us][1] if you're interested.

How Can I Subscribe to ATPM?

Visit the [subscriptions page][2].

Which Format Is Best for Me?

- The **Online Webzine** edition is for people who want to view ATPM in their Web browser, while connected to the Internet. It provides sharp text, lots of navigation options, and live links to ATPM back issues and other Web pages.

- The **Offline Webzine** is an HTML version of ATPM that is formatted for viewing offline and made available in a Mac OS X disk image. 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 PDF 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 Apple's Preview or Adobe 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 PDF format. It's a one-column layout with larger text that's optimized for reading on-screen.

What Are Some Tips for Viewing PDFs?

- For Mac OS X 10.3 and 10.4 users, we recommend Apple's Preview. You can [download][3] Adobe Reader for free. If you have a Power Macintosh, Acrobat Reader 5 has better quality and performance. ATPM is also compatible with Acrobat Reader 3, for those with 680x0 Macs.

- With Adobe Reader, 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 drawer in Preview or the bookmarks pane at the left of Adobe Reader's main viewing window.

- For best results on small screens, be sure to hide the bookmarks; that way you'll be able to see the entire page width at 100%.

- Try turning Font Smoothing on and off in Acrobat Reader's preferences to see which setting you prefer.

- All blue-underlined links are clickable.

- You can hold down Option while hovering over a link to see where it will lead.

- For best results, turn off Acrobat's "Fit to Page" option before printing.

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

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[1] `mailto:editor@atpm.com`
[2] `http://www.atpm.com/subscribe`
[3] `http://www.adobe.com/prodindex/acrobat/readstep.html`

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 (although we cannot promise to answer every inquiry). E-mail our Help Department at help@atpm.com.

How Can I Contribute to ATPM?

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

Segments: Slices from the Macintosh Life

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

Hardware and Software Reviews

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

Shareware Reviews

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

Which Products Have You Reviewed?

Check our reviews index[4] for the complete list.

What is Your Rating Scale?

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

Will You Review My Product?

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

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Where Can I Find Back Issues of ATPM?

Back issues[5] 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.

What If My Question Isn't Answered Above?

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

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[4] http://www.atpm.com/reviews
[5] http://www.atpm.com/Back/