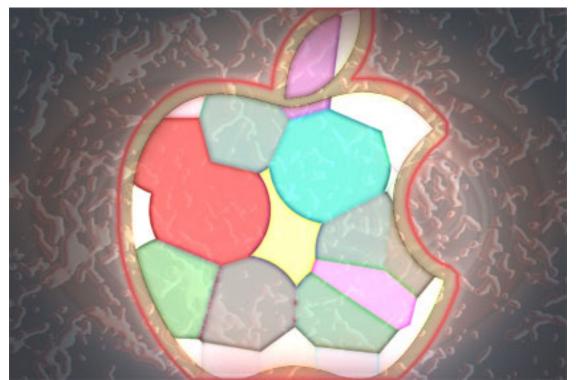
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About This Particular Macintosh: About the personal computing experience.[™]

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	<u>Evan Trent²⁴</u>
How To	Vacant
Interviews	Vacant
Opinion	Vacant
Reviews	Vacant

Artwork & Design

Graphics Director	Vacant
Layout and Design	$\underline{\text{Michael Tsai}}^{25}$
Cartoonist	<u>Matt Johnson²⁶</u>
Blue Apple Icon Designs	Mark Robinson
Other Art	RD Novo

Emeritus

RD Novo, Robert Madill, Belinda Wagner, Jamal Ghandour, Edward Goss, Tom Iovino, Daniel Chvatik, Grant Osborne, Gregory Tetrault.

Contributors

Lee Bennett, Tom Bridge, Johann Campbell, Mark Dickson, Ted Goranson, Matt Johnson, Chris Lawson, Robert Paul Leitao, Wes Meltzer, Ellyn Ritterskamp, Charles Ross, Michael Tsai, *Macintosh users like you*.

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• • •

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Welcome

by Robert Paul Leitao, rleitao@atpm.com

Welcome to the October issue of *About This Particular Macintosh!* Each month our editors meet in a virtual space to discuss our latest issue. Since it's college football season, many of the meetings occur at half time. Depending on the scores and the excitement of the games, our virtual meetings can last anywhere from several minutes to a nanosecond. It's the only place lately a nano isn't coming first. Introduced in early September, the iPod nano has quickly found its place in the iPod product line.

A Nano for the Nano

Not withstanding Apple's admission a few of the iPod nanos may need a screen repair, the newest addition to the iPod line quickly dates the iPod mini and makes the Nano the item to buy for the fastapproaching holiday season.

Competition in the music player market has become more plentiful, but nothing that attempts to rival the iTunes-iPod combination has found favor with the public. How long will the iPod phenomenon last? Only time will tell. But the diminutive iPod nano, with its color screen and all-white or all-black case, will extend Apple's product leadership well into the new calendar year.

In today's economic game, results are put to the test every ninety days. There isn't an economic half time, but there is a warning period close to the end of each calendar quarter. No news during the warning period is good news. But we do have to wait until mid-October to get the final score. We'll cover Apple's most recent results in our November *Welcome* section.

Got Group?

It's October. That means .Mac renewal time for original subscribers. This is an annual game Apple plays by offering new .Mac features, capacity increases, and functionality enhancements. Apple's subscription service recently added a "Family Pack" for up to five family members to share the full range of .Mac services, rather than one full services account and e-mail only services for the rest of the family. Now .Mac has group services for members, and between family packs and group services Apple is seeking to raise attendance at this year's .Mac renewal game.

iTunes, Part 5

Anyone with an Internet-connected Mac running OS X has been prompted at least once to upgrade to iTunes 5.0. The latest version of iTunes offers music lovers a free general admission ticket to the best digital music stadium in town. But song prices are rumored to be on the rise. Published reports indicate major music labels are pressuring Apple to increase the costs of new songs to consumers. Who will win the pricing game? If the game were baseball, higher prices wouldn't help the music industry beat the Pirates.

When Is an Upgrade Not an Upgrade?

Mac users enjoy playing the upgrade game. We all want new computers with the best possible specs at the lowest possible prices. This time Apple has surprised the crowd. Apparently, new Mac minis have been released with faster processors and better components. But Apple won't say which Mac minis have the new goods. Many Mac mini buyers may be in for a very pleasant surprise. Is an upgrade an upgrade if a Mac mini's box doesn't tell the news?

It's Time to Play the New Issue Game

Don't watch the clock. Rather, please keep an eye on the calendar. Around the first of each month a new issue of ATPM is released for your reading pleasure. No matter your favorite team, our editors work hard to make every reader a winner.

Our October issue includes:

The Candy Apple: The Silver Screen Keeps Shrinking

This could be the beginning of a beautiful friendship.

Bloggable: Rock and Roll Fantasy

Some songs are instant successes. Others take time to build. Still more flop. Apple announced two products on September 7. Which kind of song is the iPod nano? Which is the Motorola ROKR E1? Can Wes Meltzer write a column without resorting to cheap analogies or dumb gimmicks? What color underwear did you wear on Labor Day? Find out in this month's *Blogqable*!

Outliners: Tao and OmniOutliner Pro

In this month's outliner column, Ted Goranson compares Tao and OmniOutliner Pro.

FileMaking: Common Functions

Charles Ross continues looking at FileMaker's calculations and functions, focusing on some of the most popular features.

Desktop Pictures: Italy

Reader Mark Dickson shares images from a June 2005 trip to Italy.

Cortland

While Cortland enjoys his time with Angie and later admires Todd's work, the evil geniouses' plan takes shape, revealing that Cortland may no longer be the primary target.

Frisky Freeware: PsyncX

Frisky the Freeware Guinea Pig checks out PsyncX.

Review: Airfoil 1.0.6

Watch in amazement as your AirPort Express Base Station becomes a one-stop shop for all of your streaming audio needs.

Review: Disk Catalogers

Michael Tsai reviews Catalog 1.2 and CDFinder 4.5, two utilities that can help you keep track of the files you've stored on hard disks, CDs, DVDs, and other removable media.

Review: Business Card Composer 3.1.2

A better mouse trap for those in need of business cards.

Review: iPod nano 4 GB

"There it was, hiding in Steve's watch pocket the whole presentation, and none of us saw it coming. The iPod nano is a testament to good design engineering."

Review: Mercury Elite-AL Pro RAID

A Mini Me RAID hard drive for your aluminum Macintosh.



E-Mail

FileMaking¹

Another excellent tutorial! I have struggled with nested **if** statements a couple of times and had never even thought of using **case** even though years ago it was second nature. Thanks for the *examples*! They add so much to using the functions when we can see how results are varied with the structure and how various methods are used to the same result. I really appreciate the effort you are putting into this series! —*Gloria Wilson*

-Gioria Wilson

You Control: Desktops Review²

The possibility of having items deleted from the Desktop is the main reason I don't save items to the Desktop, and why I recommend no one else do so either.

-Christopher Turner

• • •

Actually, You Control: Desktops is basically a feature rip-off of the earlier (and much better) <u>DesktopManager</u>³, which is open source and free. I wouldn't go so far as to say that YCD is a code rip, but it's pretty obvious once you start using it that the functionality is very "influenced" (to be kind) by DesktopManager.

-Neil Lee

I hadn't previously known of DesktopManager. Thanks for the pointer. At a very brief glance at the Web page, I didn't immediately find mention of some features in managing windows and desktop items that YC: Desktops has. Not to say the feature aren't there, just that I didn't find mention of them right away. But there is, however, the consideration that ATPM tends to not review beta software. Only in very specific circumstances. Hopefully someone can keep tabs of DesktopManager and provide a comparison review once it goes full release.

—Lee Bennett

• • •

You didn't mention how cool this is with two monitors...which it handles with ease.

You Software's forums had comments that dual monitors wasn't supported, but it worked fine for me. Now, if only it could be made so that you could change desktops on the two monitors independently! Now that would be sweet.

-Tommy Weir

the graphics.

Sorry about the transitions—you must have one of the earlier TiBooks. My 1 GHz model with the digital video (as opposed to VGA) displays the transitions just fine.

I have do not have the problem with moving ap-

plications between desktops that you mentioned. I

do, however, not have any nice transitions...which is

probably because I have a TiBook that can't handle

You're right, I did forget to mention that, and

I even tested YC: Desktops on two monitors.

-Lee Bennett

The transitions work fine as long as I am just using my TiBook (677 MHz DVI) on it's own. It just swaps when I am using my 19" LCD (using DVI as a matter of fact) as well. Must be a limitation on the graphics memory.

I tried out Desktop Manager and it's actually good. It's not as good, not as full featured, but the same 'cake' to follow the metaphor above.

However...there's two great pieces of 'icing' in YC:Desktops. First, I prefer the menu item to show the visual representations of the desktops. When it's dropped down you can just drag windows around from desktop to desktop. It's very intuitive and simple. You can swap to the textual menu by Optionclicking it, but this is desktop management made very simple. Nice.

YC: Desktops is more customizable. You can turn on and off different desktop icons and backgrounds, and you can choose the desktops appear in the menu bar.

I think it's worth the \$10. I don't know if it's worth the ordinary \$30, but certainly \$10 is a bargain. —Tommy Weir

• • •

I've been using DesktopManager for months now. I had missed that basic feature, ever since moving from Linux, and it is nice to have it back in a somewhat limited way. Like some of the others here, I don't

¹http://www.atpm.com/11.09/filemaking.shtml

²http://www.atpm.com/11.09/you-control-desktops.sht ml

 $^{^{3}}$ http://desktopmanager.berlios.de/

see any *compelling* reason to pay money for something which is basically already granted. \$10 (let alone \$30), is just too much for things like easy ways to move windows around (which does not even seem to work as advertised.) Personally, I never do this enough to warrant a big feature set for it. Usually I am already on the desktop I want to be on when I open a window, and when I leave, I don't want to carry it with me. The only exception is sticky windows, which are pretty easy to set in DesktopManager.

 $-Amber \ Vaesca$

Mighty Mouse Review⁴

Unfortunately the occasional uncertainty about the effects of a right- or left-click is due to a fundamental design flaw. The designers did not take account of the difference in length of human fingers—especially that the middle finger is always longer than the index.

Many right-handed people use the middle for right-clicking and the index for left-. Because the two sensors in the Mighty Mouse that are used to determine the effects of a left or right click are equal in size, if users move their fingers back towards the middle there will be a band, located roughly between the two side buttons and equal in depth to the difference between the user's index and middle fingers, over which the index finger has moved off the left sensor, while the middle finger is still over the right sensor. This leads to a left-click being interpreted as a right-click—because it is the same as if a right-click had been made with the left finger lifted off the left sensor. The overall effect is as follows:

- 1. Left-clicking over mouse forwards of side buttons results in a left-click, so long as left finger is over the left sensor.
- 2. Right-clicking over front of mouse also produces a left-click if the left finger is over the left sensor.
- 3. Right-clicking over the front of the mouse produces a right-click only if the left finger is lifted, or otherwise moved off the left sensor.
- 4. Right- or left-clicking over the rear of the mouse, behind the side buttons, results in a left-click (as in the original single button design).

5. But in a band across the mouse between the buttons a left-click is interpreted as a right-. The area over which this happens will vary according to the difference in length between the index and middle fingers, but will also depend on the angle the mouse is held and the degree that the fingers are flexed in use. These variables make it very difficult to be sure the extent of the area of unexpected effects. The effect is mechanically consistent and predictable, but very unintuitive. As if, when driving, the functions of brake and accelerator pedals swapped over between 20 and 30 MPH.

In summary:

- Left-clicking over front of mouse \rightarrow left click.
- Left-clicking over middle of mouse \rightarrow right click.
- Left-clicking over rear of mouse \rightarrow left click.

An example of the nuisance this can cause is that in Safari's Address Bar there is a contextual menu for each of the buttons, whose first option is to remove the button from bar—is this feature really useful? I have lost track of how many times an intended leftclick on the Back arrow has brought up the menu with the Remove option highlighted, and the next click has caused the disappearance of the button.

A possible solution would be to make the left sensor longer than the right, or to make the sensors in two parts, the rearmost being switchable to meet the needs of right and left handers. This would compensate for the difference in finger size and reduce the depth of the band; though it would not eliminate it in all cases.

I agree that the scroll wheel is excellent and have always preferred the feel of the Apple mouse to that of better endowed rivals such as Microsoft and Logitech. Mighty Mouse has great potential but is flawed because of an oversight.

-Duncan Macdonald

ABSmini Review⁵

Nice review, but what's the point of having your backup drive with you when you're on the road? Nice in theory, but just doesn't seem very pragmatic.

—Durjoy Bhattacharjya

⁴http://www.atpm.com/11.09/mighty-mouse.shtml

⁵http://www.atpm.com/11.09/absmini.shtml

Computers die, accidents happen. Full and incremental backups are a godsend. Having them close at hand, even more so.

The ABSmini is so small and light, the question of carrying it around is moot. —David Blumenstein

Stufflt Deluxe 9 Review⁶

The free StuffIt Expander has long been a wedge to help sell the full product. Aladdin, and after that Allume, has not changed its policy on this in years. It was not such an issue before Apple decided to cut StuffIt Expander out of the Mac OS distribution.

Expander and the StuffIt Engine will still run without charge and with no expiration, although the other StuffIt components will nag relentlessly for payment if you launch them.

To their credit, Allume did make Expander 9 available alone (below most people's radar) because they recognized (duh) that abruptly dropping it was going to make trouble for large numbers of Apple customers.

I am surprised to see that the review ignored the most surprising new feature of StuffIt 9—its ability to further compress JPEG images. This actually works, and is no mean feat of software engineering, whether you think you need it or not.

-Jeff Clayton

Altec Lansing XT1 Review⁷

The review said the audio input was useless unless you need it for a non-USB audio laptop.

Not true; I standardize on USB to power everything when I am on a trip. I take a single USB main power adaptor (if I don't have my laptop with me) and a tiny hub, or a cigarette lighter to USB adaptor in the car. Then I can power my phone, MP3 player, Nintendo DS, PSP, GPS etc. In this case this was what I was looking for

-Peter Johnson

Axio Swift Backpack Review⁸

Excellent review, and it answered the two questions I had about the Swift. I ride (motorcycle) to work 3/4 of the year (I'm in the Chicago area), and want a backpack that is, or can be made, waterproof. I was also wondering about the padding for the laptop. It sounds like I need to find a rain cover that will fit the

Swift, as well as a sleeve. Or maybe I just need to get a Givi Top Case for my bike...

-Dan

Tactile Pro Review⁹

Brilliant review. We need more experts like this in the field who are prepared to sit down and conceptualize a crisp recollection of technical and emotional encounters with their tools.

 $-Loic \ Bellet$

iTalk Review¹⁰

Thanks for a helpful review. I'm a singer/guitar player and I have some comments to share. I've just purchased the iTalk (with a 20 GB color iPod). I want to use the iTalk for recording song ideas to share with my band—so it's an audio "sketch pad." I've had mixed success using it for this purpose.

- Session 1 iPod in dock placed on desk about two feet way. I'm sitting facing it, guitar on my lap. Quiet song; in this situation the iTalk picks up too much guitar.
- Session 2 As above, but the iPod sat on a tall box to bring the iTalk higher (nearer mouth level, but same distance away). Much better balance between vocal and guitar.

Session 3 Connect Rode NT3 Studio mic (via minijack connector) and placed mic on mic stand.

All three sessions were played back through studio amplifier/monitors. The quality of recording using a studio mic was better—but then I'd expect it to be. But what surprised me was that the balance of vocal and guitar was about the same in sessions 2 and 3. So the iTalk mic would certainly be good enough to share ideas with the band.

But...and here I have a problem: playback using iTalk. I cannot hear a thing—well only when I put it to my ear. I've recorded at various distances including close (inches away) and I've got the volume up to 100%—but the sound output is the same each time.

There is no way I can record using iTalk and then let others hear it without connecting it to an external amp/speaker system. Nothing is plugged in the speaker jack either. I'm new to iPods, so I may be missing something—any advice welcome.

-Ian Spratley

⁶http://www.atpm.com/10.11/stuffit.shtml

⁷http://www.atpm.com/11.07/altec-lansing-xt1.shtml

⁸http://www.atpm.com/11.04/axio.shtml

⁹http://www.atpm.com/10.09/tactile.shtml

¹⁰http://www.atpm.com/10.07/italk.shtml

Thanks for your comments, Ian. I wish I had an answer for your playback problem. Mine plays back recorded audio and songs perfectly fine. Maybe the speaker in your product is defective, and you'd need to contact Griffin for a replacement.

—Lee Bennett

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The Candy Apple

by Ellyn Ritterskamp, eritterskamp@atpm.com

The Silver Screen Keeps Shrinking

So now we have portable phones that play music. We already have phones that take pictures. How soon before they play movies?

I was all set to go on about how we might be taken over by our toys, if we let them, but now it occurs to me that I would love to have a small device to watch movies on. We'd lose a lot of the visual impressiveness that makes some movies great, but I prefer character-driven films anyway, so it's not such a loss.

I signed up with Netflix a month ago and am having a blast with just one movie a week. What if we could download a movie (legally, and paid for, of course) and watch it while we wait at the doctor's office? Wearing headphones, of course, so we wouldn't disturb the others in the waiting room. I imagine this would be lots of fun for folks with lengthy commutes. I tried riding the bus in September (to use less gas), but the trip takes me 25 minutes—it's only six if I drive. But I will keep doing it once or twice a week. Someday we will run out of oil; maybe I can help stave off that someday a little.

Let's return to the movie-phone fantasy. It looks as if movie players have been hampered by the need to hold DVDs, which are smaller than their predecessors but not as small as our phones. I'm just glad I won't be watching movies on a wristwatch-size screen. I predict that a year from now Netflix will have a deal where I can download the movie I want, and it will be good for two playbacks. It will be a snap to transfer it from the hard drive to the phone, and then I can watch it in segments over a day or two.

My friend and I were discussing *Casablanca* recently. He said it is very much about the characters, dialogue and acting; it could have been set nearly anywhere. I haven't watched it yet even though I've owned it for several years. I look forward to it, and I will watch with an eye toward how it might play on a very small screen. I have clutched my old phone for years now, on a rate plan that does not exist on paper anywhere, but for this, I would upgrade.

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Rock and Roll Fantasy

It's tricky, writing a column in the month immediately following a major Apple product announcement.

I know I complain a lot about not having anything to write about. Unfortunately, sometimes exactly the reverse hits me, and I get a veritable torrent of news all about the same thing. How do I treat it? You don't want to read what you already know—I assume that you don't, anyway—because I'm a terrible pundit, and I don't need to inform you.

In other words, I know you know about the Motorola ROKR and the iPod nano. If you don't, um, you need to stop playing World of Warcraft and get out of Mom's basement, dude. My mom knows about the iPod nano. My grandfather heard about the ROKR, in his exile from New Orleans in Beaumont, TX. (Before you ask, yes, they're fine. They're now in Jackson, MS. Thank you.)

On the other hand, I do think there are some things you may not have heard. So we're going to talk about the ROKR and the Nano. And, like broccoli, what does not kill us will make us stronger.

Rock Star

Don't you know, yeah yeah,

Don't you know that you are a shooting star?

Don't you know? Don't you know?

Don't you know that you are a shooting star,

And all the world will love you just as long,

As long as you are.

-Bad Company, "Shooting Star."

I had a remote control once for the Pioneer stereo in my car. Neither the remote nor the car are in my possession anymore, and the three of us parted ways separately—but that's not the point of this particular story.

This remote, you see, was not the most impressive little device in hindsight, but at the time it was amazing. I could Velcro a little remote control, just a few inches long and a few inches wide and only just barely thick enough for an infrared transmitter and a watch battery. By pressing its buttons, I could control which CD and which track were loaded into my CD changer, as well as at what volume, and on what equalizer setting the music was played. Heady stuff, in the days when universal remotes were still exciting. (I was 16, mind you.)

When Steve Jobs pulled out an iPod nano to show the world his newest little baby, my mind exploded. The Nano is about the size of my remote control.

In some ways, the Nano is just another classic computer story: No one ever would have guessed that my toaster would occupy more total space than my computer, and that my microwave would have a CPU faster than my first computer's. Any tech-pundit who wrote, in 1995, that someday you could buy a 30" monitor the thickness of my intro-level psychology textbook, and that you could record television programs on a computer the size of a Chicago-style deepdish pizza, would have been laughed off the stage.

But when you grow up in an era of galloping technological innovation—I was 10 the year Netscape 1.0 was released—these things don't hit you overnight in quite the same way. I couldn't see the forest for the trees, in other words.

The Nano is one of those enormous conceptual leaps forward, in the same way that the Mac Plus or the TiVo showed people familiar sizes and form factors doing incredible things. It's the size of a remote control, from the year 2000, but it's not just an IR blaster. The Nano plays music. The Nano can store 4 GB of data in it. In 2000, the idea of having 4 GB of any one thing was ridiculous; my new computer that year came with a 9 GB hard drive.

And everyone went gaga over it, at first.

Walt Mossberg at the *Wall Street Journal*, doyenne of the tech press corps, absolutely loves the Nano. You can't buy press this $good^1$:

[T]he nano has the best combination of beauty and functionality of any music

¹http://ptech.wsj.com/archive/ptech-20050908.html

player I've tested—including the iconic original white iPod. And it sounds great. I plan to buy one for myself this weekend.

He, too, is impressed with its size—"62% smaller than the iPod mini, is half as thick and weighs less than half as much...[y]et it holds as many songs as the base model mini"—and appreciates that, unlike a lot of flash RAM players (he does not say so, but I'd include the Shuffle), this one feels just like, well, an iPod.

Ars Technica went a bit wild on us, and practically beat the living daylights out of their Nano in the process. After all, its ridiculous size has amazed and astounded most reviewers (Ars writers Jacqui Cheng and Clint Ecker stuck it in a woman's jeans change pocket, and it fit just fine), Uncle Walt nods briefly at its resilience, and they wanted to know just what the Nano could take in the process. Then, they took it apart².

In order, Cheng and Ecker: sat on it on a wooden chair; dropped it while jogging (4–6 miles per hour); dropped it at slow and fast bicycle speeds (8–10 MPH and 15–20 MPH); dropped it at slow and fast car speeds (30 MPG and 50 MPH); and then dropped it from a variety of heights. They also drove over it in a Volkswagen Jetta. Our friendly Nano passed with flying colors. It showed only scratching when dropped at car speed, and continued to work, in spite of a busted screen, when dropped from 9 feet. So they ran over it twice—and discovered that *even still*, the scroll wheel and music processing worked just fine. Only launching it 40 feet into the air, and its consequent Icarian descent, brought the poor Nano to its knees once and for all.

Their post-mortem investigation turned up an impressively engineered, very internally tight device with only five separate pieces and a few cables soldered to the main board. (Interestingly, Apple is not using a Synaptics touch wheel for the Nano; they built their own wheel in-house, an unusual turn for a company used to <u>mysterious problems</u>³ with expensive home-grown components.)

Make magazine's blogger, Phillip Torrone, gives us a beautiful time line of how the Nano fits into the iPod lineup⁴: 1G/2G, 3G, mini, 4G,

Shuffle, and now Nano. He also has a great run-down of accessories that don't work with the Nano (and one that does). Torrone prefers it to the Shuffle, since, well, it has a screen.

iLounge, on the other hand, loves that the Nano feels like an <u>amalgam of all the iPods</u>⁵: the square corners and high gloss of the early iPods, the click wheel of the 4G iPods and Minis, the tiny form factor of the Shuffle, the optional black of the U2 iPod, and the color screen of the iPod photo.

There are always rumbles of trouble in paradise with any great product, and almost as soon as the Nano was available in stores, I started noticing chatter about scratches on the nano's surface. Because the evidence is anecdotal (only upset customers complain), and because of an *excessively* strong statement by the head of the product team, I'm not sure how to take this. But *The Register* has a story collecting the complaints⁶:

> "I found that my black 4 GB Nano scratched within minutes after peeling off the protective wrapper and wiping it with a cotton T-shirt. I put it in a pocket just once and it was inside the soft case that came with my third-gen iPod," comments poster number 188 in that monster Apple thread 7 Register reader Matt Baker says "the plastic on the front panel scratches insanely easily... Mine has lived either on a work surface, in a shirt pocket on its own, or (as demonstrated by Steve Jobs to be a suitable place when he launched it) in the change pocket of my jeans, again on its own."

I retain my skepticism because of unusually strong remarks from Jon Rubinstein, who runs the iPod division. He told *The Register*, "Nah, you don't really think that? It's made of the hardest polycarbonate... You keep it in a pocket with your keys?"

Take this as you will.

In spite of these potential problems, I'm calling this little baby the rock star of the lineup: the model everyone lusts after. Is it any accident much of the chatter on *Slashdot* and *Ars Technica's* for awere

²http://arstechnica.com/reviews/hardware/nano.ars
³http://www.folklore.org/StoryView.py?project=Macin

tosh&story=Wet_dreams_and_little_rubber_feet.1.txt &sortOrder=Sort%20by%20Date&detail=medium&search=f eet

⁴http://www.makezine.com/blog/archive/2005/09/ipod_ nano.html

⁵http://www.ilounge.com/index.php/articles/comments /super-first-look-apple-computer-ipod-nano/

⁶http://www.theregister.co.uk/2005/09/23/ipod_nano_ scratching/

⁷http://discussions.info.apple.com/webx?14@823.1UXD aaTXUpD.00.68b94d61

about how it just needs to have more flash memory in it?

Engadget collected more press on the iPod nano, in case you're interested. Their list is pretty comprehensive⁸. So read up!

One-hit Wonder

What a bummer of a time to be Ed Zander, CEO of Motorola.

You spend endless time working with Apple to get a version of their iTunes software running on your $E398^9$ cell phone. You spend months negotiating alongside Steve Jobs with Cingular, to get them to carry your new phone—the Motorola <u>ROKR E1¹⁰</u> and getting ready to announce it. Cingular bails out. So you try again. You *finally* get a date to announce the phone. September 7. You go up. People applaud. Buzz will abound! There will be a *retail* market for the phone!

Then, just minutes after you get up there on stage, Stevie J. steals your thunder. Yet again.

Poor guy. He picked the wrong day to get his product intro-ed, that's for sure. But that's not the only problem facing the ROKR, the very name of which may be a bit unfair to real musicians. After all, the ROKR is sort of the maligned stepchild of the family: It doesn't really look like an iPod, and it sure doesn't act like any other iPod, but it does sync with iTunes. Plus, it gets ignored, because, well, it's from a marriage that didn't work out.

I'm being generous in my assessment, compared to some of the critics. Just how bad is the press that poor Ed Zander is getting about his newest product? Well. Let me just say, the standard buyer's caveat applies: If you want one, get it; but know what you're buying.

Let's start off our litany:

• *PC Magazine* gave the ROKR a <u>2 out of 5</u>¹¹. They say:

> "It's not an iPod. It's a ROKR." That's what Motorola's tech support line told us when we started complaining that the first iTunes phone doesn't live up to the iHype... [T]he

phone is full of little limitations, quirks and glitches that make it of less than Apple-like quality.

• Jim Dalrymple at *Macworld* headlined his review, "<u>My ROKR doesn't rock</u>¹²." The review continues:

I had one of the first ROKR phones sold from the downtown San Francisco Cingular location and couldn't wait to get back to the office and see how it worked with my Mac. It wasn't long before my excitement turned to frustration and anger as I struggled to get the ROKR recognized by my Mac and iTunes.

- Julio Ojeda-Zapata, the St. Paul Pioneer Press' star tech writer, wrote on his blog, "Cingular kept calling it 'iPod-like,' but I just don't see it. White coloration alone doesn't an iPod sibling <u>maketh</u>¹³." He also wrote about it in the newspaper's print edition, but Knight-Ridder locks their papers' back content up in a subscribers' archive. Our loss, no one's gain.
- David Pogue, at *The New York Times*, asks, "What, exactly, are the positive points¹⁴ of the [ROKR] phone?" Ouch. He adds, "If you're looking for an iPod phone, in other words, the [ROKR] isn't it."
- Rui Carmo, who probably works at Vodafone Portugal (though he says only "a major GSM operator"), was not especially impressed with the ROKR: "[I]t's nothing but a <u>restyled E790¹⁵</u>." He thinks Apple working with Motorola is bound to be a disaster, too; he wrote, on September 2, in advance of the announcement:

The standard Motorola UI is horrid, and Apple couldn't have picked a worse match¹⁶ usability-wise—as far

⁸http://www.engadget.com/entry/1234000040058396/ ⁹http://www.motorola.com/motoinfo/product/details/0 ,,44,00.html

¹⁰http://direct.motorola.com/ens/Web_ProductHome.asp ?Country=USA&language=ENS&productid=29790

¹¹http://www.pcmag.com/article2/0,1895,1857265,00.as

¹²http://www.macworld.com/news/2005/09/09/rokr/index .php?lsrc=mwrss

¹³http://yourtech.typepad.com/main/2005/09/i_check_o ut_itu.html

¹⁴http://www.nytimes.com/2005/09/08/technology/circu its/08pogue.html?ex=1127793600&en=1ffd4632ed29b138 &ei=5070

¹⁵http://the.taoofmac.com/space/blog/2005-09-07 ¹⁶http://the.taoofmac.com/space/blog/2005-09-02

as I'm concerned, they could have picked any other manufacturer and gotten a better balance... [T]here is a sizable risk of people buying Motorola phones based on an Apple user experience and being sorely disappointed.

• Consumer Reports suggests the Sony Ericsson W800 instead, for consumers who want to play music on their phone. But, they say, that's not good enough¹⁷:

[The W800 is] even more expensive, and... it offers none of Apple's advantages, such as the ability to play songs you've bought from Apple's iTunes online music store.

 Engadget's Ross Rubin dishes out a big-name insult¹⁸:

The ROKR is...MEDIOKR. The biggest surprise, though, about the disappointing handset was that anyone was surprised at how disappointing it was. Those who have followed Apple since the ascent of the iPod should have seen that this ROKR was going to hit the rocks.

On the other hand, not everybody hates the ROKR. You can find positive reviews from:

- *MobileBurn*, who describe the base-model E398 as "one of my favorite handsets¹⁹ of all time."
- *The Guardian*, whose reviewer, Victor Keegan, reminds that:

For [someone who doesn't have 1,000 songs to carry] this phone is a <u>major advance</u>²⁰ because of its ease of use and because it has a camera and many other functions bundled into a nice retro-ish phone that weighs just under 100 [grams].

• Chris Fehnel, of *TheUberGeeks.net*, says that, for its price and its job, "the ROKR is the perfect phone." Why? As a phone first, and one that is capable of playing music in iTunes, it's a great "little traveling multimedia center²¹."

As I always say: You can decide. But I admit, I think the ROKR is destined to become a no-hit wonder.

Eight Tracks of Whack

- Do you remember "If it <u>sounds</u>²² too good to be true"? It's baaaaaaaack! Yes, Asahi Shimbun is once again on the case: iTMS Japan was selling whole albums last week for 50 yen^{23} , a price roughly equivalent to 45 cents. (Though by the time you read this, the dollar may be worth even less.) That's right; 45 cents. Normally, they sell for ¥1,500, or about \$13.50. Now, folks. Seriously. Obviously, Apple let these bargain-buy purchasers download the track, so they're going to be stuck with the bill, but doesn't that seem just a tad ridiculous?
- Those of you who read this column regularly know I'm a sucker for articles about OS X's UI. And unfortunately for all of us, Spotlight's UI is totally unhelpful—tiny icons be gone! Well, it just keeps getting better all the time (if you like this stuff): Rory Prior, at *ThinkMac Blog*, mocked up a Spotlight user interface that isn't confusing and isn't difficult to use. His mockup uses a standard Cocoa table with a source list like the Finder or iTunes, and, aside from sharing the same ugly window format as 10.4's Finder windows, it could work well²⁴. Note to Apple: Rip off this screen shot. Please.
- The late iPod mini bore an *uncanny* resemblance to a 1954 American-manufactured pocket transistor radio, even down to the anodized-aluminuum colors and prominent scroll wheel. Bogus, you say? The BBC has photos²⁵—and fun quotes! I was...err...floored.

¹⁷http://www.consumerreports.org/main/content/displa y.jsp?FOLDER%3C%3Efolder_id=782581&bmUID=112770520 3941

¹⁸http://features.engadget.com/entry/123400085005980
7/

¹⁹http://www.mobileburn.com/review.jsp?Id=1648

²⁰http://technology.guardian.co.uk/weekly/story/0,16 376,1575189,00.html

 $^{^{21} \}tt http://theubergeeks.net/2005/09/16/rokr-review-a-p leasant-surprise/$

 $^{^{22} \}tt http://www.atpm.com/10.06/bloggable.shtml$

²³http://www.asahi.com/english/Herald-asahi/TKY20050 8230375.html

 $^{^{24} \}rm http://www.thinkmac.co.uk/blog/2005/08/spotlight-r evisited-making-it-better.html$

²⁵http://news.bbc.co.uk/1/hi/magazine/4265374.stm

• Tim Bray, an important XML guru, etc., lashes out at Apple²⁶ over the iWork suite's document format. He says:

The whole world has been giving Microsoft a hard time over their Office XML file formats; it turns out that there are far worse sinners. Apple, for one.

This turned into a two-sided spat when Ernie Prabhakar at Apple wrote, on an OpenDarwin mailing list:

> [A]ll software involves tradeoffs, or else it will never ship. We've made the conscious decision to focus on ease-of-use and ease-of-development, even if that has the unfortunate sideeffect of fragile document formats²⁷.

- Following the announcement of the iPod nano, and Samsung's recent announcement of 16 GB flash arrays, there are those who believe the heyday of the fixed-platter hard drive is coming to a close. James Stoup at Apple Matters, for one. He expects a Mac mini with flash, and a power supply inside the case, at some point in the future; and an Intel-based flash iBook "that will be the thinest laptop ever made boasting the best battery life of any current machine." Oh, technological dreams²⁸...
- Steve Jobs and the music industry have been fighting over the fixed price of songs on iTunes, still holding at 99 cents a track. Notably, *Red Herring* reports that Edgar Bronfman, Jr., head of Warner Music Group, insisted at a Goldman Sachs investor conference that it's not fair to artists that some songs can't be priced for more than 99 cents. "We are selling our songs through iPod, but we don't have a share of iPod's revenue... We want to share in those revenue streams²⁹." I'm sure Jobs is lining up to give the music industry a cut of the cost of his devices.

- What's wrong with iTunes 5? Well. It doesn't look anything like any other application on the platform. Fun, fun! Dan Wood calls it "<u>butt-ugly³⁰</u>," but Drunken Batman hopes that the new look replaces brushed metal. After all, says DB, <u>that's³¹</u> butt-ugly. A knockout!
- Have you heard the complaint that the Finder isn't Cocoa—and the suggestion that it would be so much better if it were? I have. I've even said it. But my favorite Cocoa programmer, Brent Simmons (full disclosure: I reviewed his MarsEdit <u>in 11.01³²</u>), says a Finder written in Cocoa would be just "the Finder, only written in Cocoa. Big whoop³³." Ouch.

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³²http://www.atpm.com/11.01/marsedit.shtml

²⁶http://www.tbray.org/ongoing/When/200x/2005/09/18/ Apple-XML

²⁷http://www.opendarwin.org/pipermail/keynote-tools/ 2005-September/000213.html

 $^{^{28} \}rm http://www.applematters.com/index.php/section/comm ents/543/$

²⁹http://www.redherring.com/Article.aspx?a=13702&hed =Bronfman+Fires+Back+at+Apple

³⁰http://www.gigliwood.com/weblog/MacOSX/iTunes_5_is _Butt-Ug.html

³¹http://www.drunkenblog.com/drunkenblog-archives/00 0652.html

³³http://inessential.com/?comments=1&postid=3175

About This Particular Outliner

by Ted Goranson, tgoranson@atpm.com

TAO and OmniOutliner Pro

Your *ATPO* guy here is responding to reader requests this time. The most requested topic I have is to compare our two top traditional power outliners, so here goes.



OmniOutliner Pro and TAO Icons

We have quite a few outliners in our list of power outliners. I think I can recommend any of them depending on how your mind works. But only these two trace their lineage to what many users consider the reference application.

The first commercial, shrink-wrapped outliner of any significance was MORE. If you are unfamiliar with it, you might want to refer to an ATPM $\underline{\text{piece}}^1$ by Michael Tsai or an earlier $ATPO \text{ column}^2$ that mentions it and all the siblings it inspired on the original Mac OS.

<u>TAO</u>³ is \$30 or \$34 depending on the payment system used. Blue Beach Systems is the developer, which seems to be one man: Takashi T. Hamada. TAO updates appear every week or so, a result (the developer says) of his background in Linux development. I have gone through six minor updates since starting this column! Bugs are fixed quickly, feedback by e-mail is fast, and the development pace seems rapid.

<u>OmniOutliner Pro⁴</u> is from Omni Group, which also sells <u>OmniGraffle⁵</u> and <u>OmniWeb⁶</u>. OmniOutliner Pro is 70, though a junior version⁷ is 40.

We'll only be talking about the Pro version here, because if you are contrasting the two you are likely a serious user. The Omni Group is a long-time developer, starting with the NeXT platform in 1989. They follow more traditional, longer development cycles with public betas and such. They produce a boxed version as well.

What we'll be talking about here are TAO 1.1 and OmniOutliner 3. Each was announced as having MORE as its model. Both are Cocoa applications. Both have loyal, even militant, users.

And what we'll be assuming here is only one of the several usage patterns outliners cover. In the past, we've noted that outliners are used for information storage and management; clipboard and scrapbook utilities; and list, to-do, and task management. All of those plus the original use that has outlining as a writing tool.

In what concerns us here, a writer starts with a collection of material and adds structure, or the other way around. Over time, she adds material by writing or borrowing and at the same time adds and changes structure. For people who work this way, an outliner is the center of their creative universe, and the selection of a tool is no trivial matter. It is in essence your writing partner.

Clearly, if you are a writer, this writing mode encompasses and subsumes all the others, depending on how you choose to work and what possibilities the tools empower.

I am sure I will get all sorts of reminders that all the *ATPO* power outliners can be used for this purpose. Indeed, there are lots of other, non-outliner tools that address this space as well. In fact, I use most of them and for this purpose.

¹http://www.atpm.com/5.09/paradigm.shtml

²http://www.atpm.com/10.03/atpo.shtml

³http://blue-beach-systems.com/Products/Software/TA O/

⁴http://www.omnigroup.com/applications/omnioutliner /pro/

⁵http://www.omnigroup.com/applications/omnigraffle/ ⁶http://www.omnigroup.com/applications/omniweb/

⁷http://www.omnigroup.com/applications/omnioutliner
/

(I spread my work around among outliners in part because I want to stay familiar with them. You just cannot do this by jumping in and out. As I am open to acquiring and learning many applications, I find that certain projects and certain outliners are good fits. But these things are so hard to master that I think nearly every *ATPO* reader will settle on one main tool.)

So for the remainder of this column, I won't mention how this or that other power outliner might work better. But there will be one exception. Inspiration⁸ has been around for a very long time. It was originally Mac-only but now sells mostly on Windows. It was originally designed to address this usage as a serious writer's tool, but for the last six or seven years has been repurposed as brainstorming for school kids. It can be bought only in boxed versions from resellers at differing prices. The lowest I found was \$59.

Inspiration runs on OS X but never changed its user interface to suit. It has a serviceable built-in mind-mapper. You can find lots of mention of it in my earlier columns and in an ATPM <u>review</u>⁹ by Gregory Tetrault. Inspiration is still loved by many writers who e-mail me.

One other piece of introductory chaff before we begin looking in earnest. My <u>last column</u>¹⁰ was on styles. I said that OmniOutliner did not support named styles.

This is incorrect. It does. In fact, when version 3 came out, *ATPO* made a big deal of its support for named styles. I use that feature nearly every day! My defense is that these columns take a very long time, and I leave all the familiar stuff until the very last moment. The last moment for that column found me stranded overnight at Charles de Gaulle Airport, certainly one of the most inhospitable places in the world. France and all that.

Or maybe you will believe it was a mistake made by a new intern. We'll fix that bad information with this column.

Some Overview

I love writing ATPO, and this column is a particular joy. That's because these are really two entirely different approaches to the same problem. The more closely you compare them, the more you will understand how you feel about your needs and work philosophy. I fully expect you readers to walk away from this column preferring either one in equal proportion.

Here's the first indicator: Omni Group designs software in a way that I like to think of as the "Mac way." This designation may be controversial because so few well-trod Mac programs—and especially Apple's own applications—have this philosophy.

What I mean by this is that the user's actions come first in terms of design. An outliner is all about interaction, how a user interacts with text (usually mostly text in this use). Designing the "Mac way" means you worry about the interaction first, the space between the words and the mind that is filled with screen display and hand motions. You design outside in, appending features to the interface.

Omni's applications routinely win design awards because they start with all the user interface niceties at their disposal and create something that seems coherent. In version 3, they had to develop some new interface conventions for styles. When they issue a beta, it is primarily to see how well the interface additions work. It is impossible to envision OmniOutliner as a Windows application.

TAO comes from the other end of the development philosophy spectrum. The idea here is that real writers need power. Power and capability are king. You start with empowering users to do real work. You design your application from the inside out. User interfaces are pretty standard these days. As long as you are not targeting the kiddie or beginner market, you don't need pretty. What you need is cleanliness, and consistency. Control is primarily something for the keyboard—these users *are writers* after all.

One can easily envision TAO on other platforms.

It all springs—everything below—from this philosophical difference. It's something that has been the stuff of religious arguments for decades, and in a way is behind the dual identities of OS X: Aqua and Unix. If you haven't already frozen your position on this, at least wait until the end of the column.

Here's a quick feature comparison:

They both support the ordinary outlining functions; have user defined columns; allow toggling between displaying notes in-line and in a separate pane (TAO calls them "comments" like MORE did); OPML import and export; style templates; links to files and URLs.

TAO uniquely has clones; a split pane editor; zooming; internal links; live metadata; and encrypted save.

 $^{^{8} \}rm http://www.inspiration.com/productinfo/inspiration /index.cfm$

⁹http://www.atpm.com/9.02/inspiration.shtml

¹⁰http://www.atpm.com/11.08/atpo.shtml

OmniOutliner uniquely has named styles; very good AppleScript support; live batch find; folded editing; bookmark drawer; clipping service; folded editing; native format as XML; export to Keynote, Word, and dynamic HTML (with collapsible arrows).

Normal Outlining Navigation

Let's first take a look at the basics, how each supports the creation and movement of headers or section titles. In this area, TAO really shines.

Both outliners have commands to do the basics: enter new items as siblings or children and move them around. The screenshot shows comparative outlining command menus.

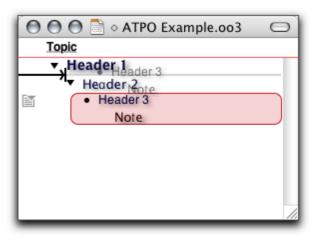


OmniOutliner Menu on the Left, TAO on the Right

The shot should tell you that TAO starts with the notion of outline manipulation. See that "split" submenu? That is handy as all getout for many writers, the kind who just sort of start with a structure and fiddle with it as they go. You can rearrange headers of course, but the ability to split and join them is magic when you need it. Just magic.

TAO and OmniOutliner both have logical keyboard commands for navigation and selection, but TAO has far more. If you don't like TAO's you can change every one in the preferences. TAO's command set really is more advantageous for the person who likes to stick to the keyboard.

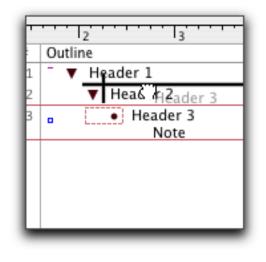
I myself relate to the structure as a graphic convention and like to grab things and noodle around with them. So the user interface for dragging and reorganizing is important to me. I have always liked OmniOutliner's drag interface. It seems to coincide with Mac conventions well. It is very clear what is selected and where it is going.



OmniOutliner Drag

If you are a mouse person rather than a keyboard one. OmniOutliner allows you to "split" much more flexibly than TAO. Just select a text block from any header or note (!) and drag it anywhere to make a new header. In TAO, you can only drag text blocks into another text block.

TAO's feedback, indeed its whole approach to screen presence, is decidedly un-Mac-like. But everything is there for what turns out to be a useful reason. In the shot below is the drag feedback.



TAO Drag

Not as colorful, is it? It is a no nonsense sort of attitude that pervades the application in all areas except one, the comically irrelevant palettes. Here's the palette that matches the Reorg menu.

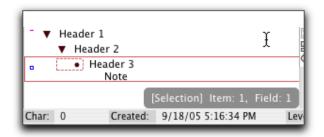


TAO's Reorganization Palette

I cannot imagine anyone resorting to this mess when direct drag, menus, and keyboard commands are available.

Both OmniOutliner and TAO have a "group" command that takes selected headers and moves them under a new header.

Something else about TAO's selection feedback. The author is obsessed with metadata. There are all sorts of fields you can display that tell you things about your outline and its components like how many letters and words it has, and when they were created and modified. When you select a header, a box appears to tell you things about what you selected. See the grey box in the lower right.



TAO's Selection Feedback

We won't mention all the metadata fields and display options in TAO. But they are numerous, and I am sure for every one of them there are users who believe that information essential. Both outliners have an ordinary hoist function. That's where a header and its children, if selected, are the only elements of the outline that are visible. Both allow notes to be displayed inline or individually below. The inline display is nearly essential if you are a writer. The outline headers become your section titles and the notes the section contents. Seeing them inline allows you to see the structure and content more like it really is. TAO allows the non-inline view to be at the bottom or the right.

A word about notes. TAO deals with notes like MORE did, even calling them comments. They are a sort of metadata added to the headers. OmniOutliner treats them as if they were part of the document, with their own collapse widget. In TAO, there is a small box to indicate that a note is attached to a header, but you cannot click on that little box to open the note. There is a menu item but no default key command. Very unhandy.

TAO has about eight more of these little indicators following the MORE convention. They tell you whether a header is cloned, marked, has a stylesheet, is linked to or from, is locked, and/or is bookmarked.

TAO is the only Mac outliner I can recall that continues to use the MORE convention of having a "root." That means that any outline can have only one level 1 header.

One more thing in the basic outlining department. OmniOutliner supports folding. This is a different type of collapsing, where multiline entries, whether headers or notes, are reduced to just their first line. ATPO really likes this. The main value of an outline to a writer is that you can step back and see the structure of a complex document, then zoom in on a section to see or add detail.

The high-level view is hard to see when you have full paragraphs of note text. Folding helps a huge a amount if this is something you need.

Clones and Hyperlinks

You can already see that there will be no clear winner between these two. It is purely a matter of what you need and how you work. But there is one area of outlining capability where TAO is supreme. For some reason, Omni Group decided not to implement clones and internal hyperlinks. Remember, this is version 3 we are talking about.

A clone is a copy of a header, very similar to aliases in the Finder. The difference is that when you make a clone, you are making an identical twin. Change one and the other changes. Delete one and the other remains.

Hyperlinks are common among *ATPO* power outliners, but OmniOutliner doesn't support them. TAO's links aren't as robust as in other power outliners. You can only link from a header to another header. But the provision for doing this with a mouse is elegant.

▼ Linking Example
Eirst Header
Second Header
 Subheader
 Th rd Header
 Fourth Header
 Figh Header

TAO's Linking

No one will champion outlining as useful structure more than I. But outlines don't lend themselves well to real life. Sometimes you need something in more than one place. Sometimes you need to relate two blocks or locations in a way other that hierarchically. Links and clones are the best way around this limit.

OmniOutliner is hugely deficient in this area, but it does have something interesting, something very like iTunes' "smart folders." You can set a "batch find" search string and find all the instances of that string in the outline. They appear in a list in the utility drawer with as much context as you want (just drag the drawer wider) and the parent header below. These results update in real time as you change the outline.

You cannot save batch finds, nor have more than one batch find active.

Scripting

If OmniOutliner is embarrassed about clones and links, TAO must be about its complete lack of AppleScriptability. It has none. Power outliners need scriptability, and that's a major lack. <u>NoteTaker¹¹</u> and Hog Bay Notebook¹² have AppleScriptability.

Beach Systems says scripting is supposed to appear in version 1.2. Until then, it is nearly as big a hole as OmniOutliner's lack of clones and links.

Columns

Columns are for metadata. Nearly every power outliner has some columns, but these two are the only ones that support user-defined columns. Columns are something that appeared in the second generation of outliners, and they can be incredibly useful.

What you need is the ability to add columns, specify their type (date, number, values from a pop-up list), show and hide them, sort by them, and add values where appropriate.

OmniOutliner's first version had columns, and its current implementation supports all of these.

You can define columns that are of type: number, styled text, date, time duration, checkbox, and popup list. Numbers and dates can have their format specified. Numbers and durations can be summed, or displayed as the maximum or average. You can sort and search on any of these. Checkboxes have their own "summing" function. Sums can be hidden (calculated but not shown).

You can readily drag columns around. Columns are among the nicest things in OmniOutliner and lend themselves to all sorts of uses. Since columns can have styled text, you can use these as notes of notes. (There's still no ability to have a column type be an outline.)

TAO's support for columns is recent. It supports the very same types and functions. Actually, it has more column types because certain computed metadata is managed and displayed as columns: date created, modified, word and character counts, line number, paragraph number, level, and something I don't understand yet: "tag."

I should note that TAO has a lot of these things that appear without documentation, and may appear in a partial implementation, and it is up to the user to figure them out. For instance, there is an "invisible" attribute that you can assign to a header. It turns the disclosure triangle grey. The help says there is a command to hide/show invisibles, but it hasn't appeared.

¹¹http://www.aquaminds.com

 $^{^{12} {\}tt http://www.hogbaysoftware.com/products/hog_bay_not ebook.php}$

TAO has no summing of columns, and its sorting is less amazing than OmniOutliner's. With OmniOutliner you can select any column, even the one with the outline, and sort on the values in it. (The main outline can have any of the types of the other columns.) In TAO, you can only sort the first column using some canned sorts (descending, date created, and so on).

Editing Tools

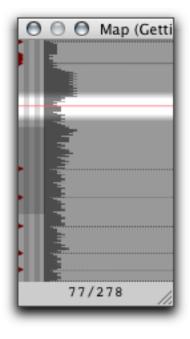
Since we are talking about writing, you have to consider how powerful the environment is for actual writing. TAO's strongest supporters tout this as well as the outlining commands as TAO's core strengths.

TAO has a splittable editor, which is extremely handy in any editor but particularly so in an outlining environment where re-organization is an assumed need. The editor can "zoom," which in TAO parlance means "full screen mode." We've already mentioned TAO's remarkable tracking of metadata. The screenshot shows the full TAO window (without those vexing palettes). You can see the split editor here, a link, lots of columns, and metadata reports in the bar at the bottom.

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TAO's Editing Environment

TAO has some other cool stuff. It has a "map" window that appeared recently with no mention. It is a little view of the entire document with a highlight where your cursor is located. You might not think this very useful, and I didn't at first. But it is more than a locator of where you are, you can navigate in a coarse way by clicking in the map. I have no clue what the bars on the left are.



TAO's Map Pane

TAO also allows saving in an encrypted form. It is weak encryption, nothing to keep the NSA busy for long. But it is strong enough to keep snoops out of the stuff you don't want exposed.

OmniOutliner has its own editing joys. One we should have mentioned already is that it just looks and feels friendly. It invites. The user interface—except for the style interface—is clean and intuitive: writer-friendly.

The very best thing is that if you are a writer you need to worry about steps further in the food chain. OmniOutliner has special facilities for exporting to Keynote, but what writers will like is how it exports to Word.

Outliner documents have a structure: header level so-and-so with possible notes under headers. Word documents—well-formed ones—have a similar structure: Heading 1 and so on with "body text" under headings. OmniOutliner documents export to well-formed Word documents so that Word's outlining view sees the same structure. You can literally start document creation in OmniOutliner and finish it in Word's outline view with the same structure and—big applause—styles. Not styles with names, the names don't convey, alas, so structure at the formatting level is lost. (This is what I meant by real named styles in my previous column.)

But all the appearance is still there.

And if you have a workflow built on XML, OmniOutliner's native file format is XML now. So you can write your own transforms however you like.

Also, if you are a writer who likes to take full advantage of your machine, OmniOutliner can speak your text and record voice recordings in the outline. OmniOutliner supports a clipping service.

Styles, Stylesheets and Templates

The comparison of support for styles will appear next month.

The Bottom Line

As you can see, it is not a matter here of features or power. There's a different philosophy behind these two great outliners. If *ATPO* does nothing else, I hope the comparison of philosophies helps readers think a bit about who they are, and how the might work to live in and expand that world.

I use them both, in fact I use essentially all the *ATPO* power outliners. But it is incredibly hard work and induces schizophrenia. I'm pretty sure the best thing is to discover who you are and settle into one of the power outliners in depth, then fly.

The ATPO Tracker

The ATPO tracker will return next column.

Copyright © 2005 Ted Goranson, tgoranson@atpm.com. Ted Goranson is an older guy living in Virginia Beach. He is a writer and consultant always open to and currently looking for opportunities.



FileMaking

by Charles Ross, chuck@chivalrysoftware.com

Common Functions

Last month, we continued our education about File-Maker <u>calculations</u>¹, introducing the flexibility that FileMaker offers: Many built-in functions can be used to perform the same job, and our example of this was extracting a letter grade from a percentage. We'll continue our look into calculations and functions this month, concentrating on a few of the most popular that FileMaker offers. You'll probably build few calculations that don't use at least one of these functions. We covered one of these, the Case() function, last month.

Note that we are never going to cover all of the functions that FileMaker offers. Some of them you'll never use, many of them you'll seldom use, and a few of them you'll always use. Regardless, I highly recommend that you take the time to learn every built-in function available in FileMaker. You needn't memorize the syntax of them all (which you'll remember as you use them more, anyway), but you will want to know exactly which functions are available so you can choose the best one for the task at hand.

I also recommend that if you're new to this series, and haven't read the <u>previous articles</u>², that you pause here and read them. Each of the articles in this series builds upon those that came before, and if you don't know FileMaker and haven't read the earlier articles, you will likely be confused by some of the things we'll cover here.

FileMaker 8

Since last month, FileMaker, Inc. released version 8 of their Pro and Developer software (although the Developer version is now called Advanced). We'll continue to use FileMaker 7 as our teaching tool for the foreseeable future, but at some time you can expect us to move to FileMaker 8. Just not yet.

The Let() Function

FileMaker 7 introduced the Let() function, which is probably the most useful of those introduced with that version of FileMaker. This function lets you define variables that can be referenced later in the

```
^{1}http://www.atpm.com/11.09/filemaking.shtml
```

```
<sup>2</sup>http://www.atpm.com/Back/filemaking.shtml
```

function. Here is the syntax template for the ${\tt Let()}$ function:

```
Let ( {[} var1=expression1
```

{; var2=expression2 ...]}; calculation)

You can define as many variables as you want with using the Let() function, but if you define more than one, you need to enclose all of the variables within square brackets. After the variable definitions comes the rest of the calculation, which can reference the variables you've defined.

An example would probably help here. First, I'll show you an example of a function that does not use the Let() function. The following is a custom function called IsPalindrome. A palindrome is a string of characters that appears the same forward and backwards, such as "bob" or "12344321". The function gets passed a string and returns True if it is a palindrome and False if it isn't.

```
Case(
 Length( String ) = 1 or Length( String ) = 0;
 True;
```

```
Left( String; 1 ) <> Right( String; 1 );
False;
```

```
IsPalindrome( Middle( String; 2;
        Length( String ) - 2) )
```

Note that we call the Length() function here three times, each time with the same parameter. That's a hint that we may want to use the Let() function. Here's IsPalindrome() using the Let() function:

```
Let(
  Len = Length( String );
```

```
____ _____, ____,
```

```
Case(
Len = 1 or Len = 0;
True;
```

```
Left( String; 1 ) <> Right( String; 1 );
```

)

False;

```
IsPalindrome( Middle( String; 2;
        Len - 2 ) )
)
```

Here we define the Len variable to be equal to Length(String). Then, within the rest of the calculation, whenever we used to use that function, we instead use the Len variable.

In this particular case, using the Let() function doesn't do much for us, although the actual expression may be a bit easier to read. There are times, however, when the Let() function is indispensable, decreasing the size of the full calculation while increasing its readability. Any time you see the same code in your calculation more than once (as we did with the Length() function call), consider whether a variable defined with the Let() function would make things easier.

IsEmpty()

A very simple but common function to use is IsEmpty(). This function accepts a field name and returns True if the field is empty and False otherwise. Here's the syntax:

IsEmpty(field)

Pretty simple, eh? This is often used when you need to combine strings, but you aren't sure that every string you're working with will have data. For instance, if you have fields for FirstName, MiddleName, and LastName in a contacts database, and need to calculate the FullName in a calculation, you might begin with this:

```
FirstName & " " & MiddleName
& " " & LastName
```

However, if the MiddleName is empty, you'll end up with two spaces between the first and last names. Using IsEmpty() with the Case() function, you can correct for this:

```
FirstName & " " & MiddleName &
Case(
   IsEmpty( MiddleName );
   "";
   " "
```

```
) & LastName
```

This corrects for the case when the MiddleName field is empty, but what if the FirstName or LastName

fields are also empty? Again, you can check for this using the Case() function and have the calculation operate appropriately:

FirstName & Case(IsEmpty(FirstName) or (IsEmpty(MiddleName) and IsEmpty(LastName)); ""; "") & MiddleName & Case(IsEmpty(MiddleName) or IsEmpty(LastName); ""; "")

Now, if the first name is missing or both the middle name and the last name are missing, we will skip the first space, since we don't want the full name to begin with a space, and if either the middle name or last name is missing, we skip the second space to avoid having two spaces if the middle name is missing and having the full name end with a space when the last name is missing. In other words, we only need the second space when both the middle name and the last name are present.

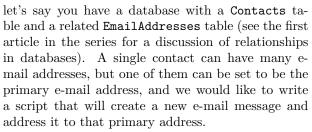
Calculation Evolution

The above example is a good exercise in the evolution of a calculation. We began with a fairly simple concatenation of strings, but noticed that if the middle name was empty, the calculation wouldn't work correctly, so we accounted for that possibility. But once we thought of that special case, we were able to think of more special cases and to then account for them. Strictly speaking, this was a debugging process. There's a bug in the first two calculations, and the third one should work correctly.

The IsValid() Function

Similar to IsEmpty() is the IsValid() function. Like IsEmpty(), IsValid() is passed a field and returns either True or False. True is returned if the field contains valid data. This means that a number field contains numeric data, or a date field contains calendar data, but the most common case I've used this function with is to see if there is a valid related record in a table related to the current table.

We haven't covered scripting yet (writing small programs within FileMaker to automate tasks), but



Well, it only makes sense to run that script if there is a valid e-mail address related to the current contact's record. If no such record exists, then we wouldn't want to attempt to send an e-mail to a nonexistent address. A calculation that would check for this would be:

IsValid(EmailAddresses::EmailAddress) and (not IsEmpty(EmailAddresses::EmailAddress))

We could place this calculation within an If script step (note, not an If() function; they're two different things), allowing us to check that everything will work correctly when we create the e-mail.

. . .

That's it for this month. Go ahead and experiment with the functions we've covered. Try them out in your own databases and make sure your calculations produce what you expect. And come back next month when we'll cover those functions most often used with parsing text. Until then, happy FileMaking!

Copyright © 2005 Charles Ross, chuck@chivalrysoftware.com. Charles Ross is a Certified FileMaker 7 Developer and the Chief Technology Officer of Chivalry Software, LLC³, a company specializing in custom database, web and automation software and publisher of Function Helper⁴, a FileMaker calculation debugging tool. He was a contributing writer and the technical editor for <u>The Book of FileMaker 6</u>⁵ and has contributed to <u>ISO FileMaker Magazine</u>⁶ and <u>Macworld</u>⁷ in addition to his series on AppleScript⁸ for ATPM.



FileMaking: Common Functions



³http://www.chivalrysoftware.com

⁴http://www.chivalrysoftware.com/home/functionhelpe r.php

 $^{^{5} \}tt http://www.nostarch.com/frameset.php?startat=filem aker$

⁶http://www.filemakermagazine.com

⁷http://www.macworld.com

⁸http://www.atpm.com/Back/roll.shtml

Desktop Pictures

Italy

Italy¹

This month's desktop pictures were submitted by ATPM reader Mark Dickson, which he took on a trip to Italy in June 2005.

Previous Months' Desktop Pictures

Pictures from previous months are listed in the desktop pictures archives².

Downloading All the Pictures at Once

iCab and Interarchy can download an entire set of desktop pictures at once. Use the "Web \triangleright 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 <u>editor@atpm.com</u> 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 popup menu, select the desktop pictures folder you want to use.

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

Mac OS X 10.0.x

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

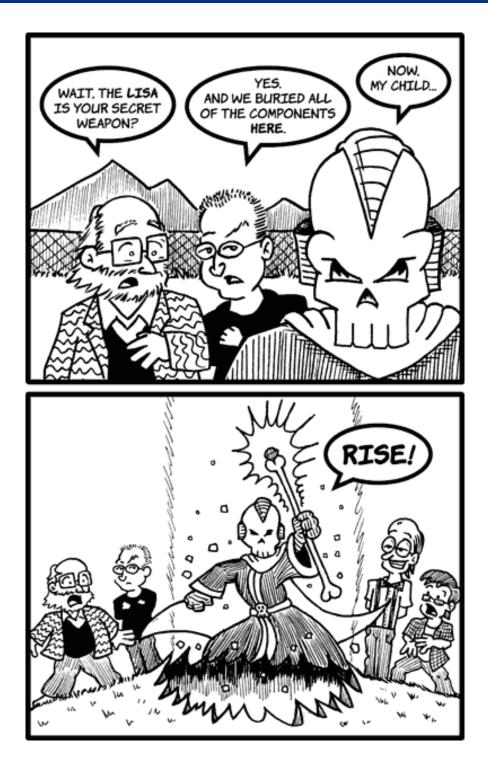


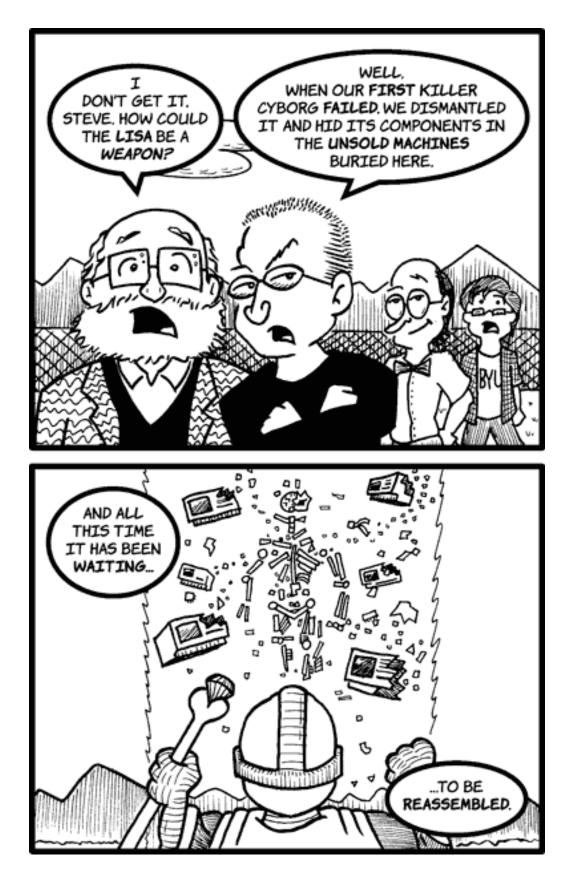
¹http://www.atpm.com/11.10/italy/

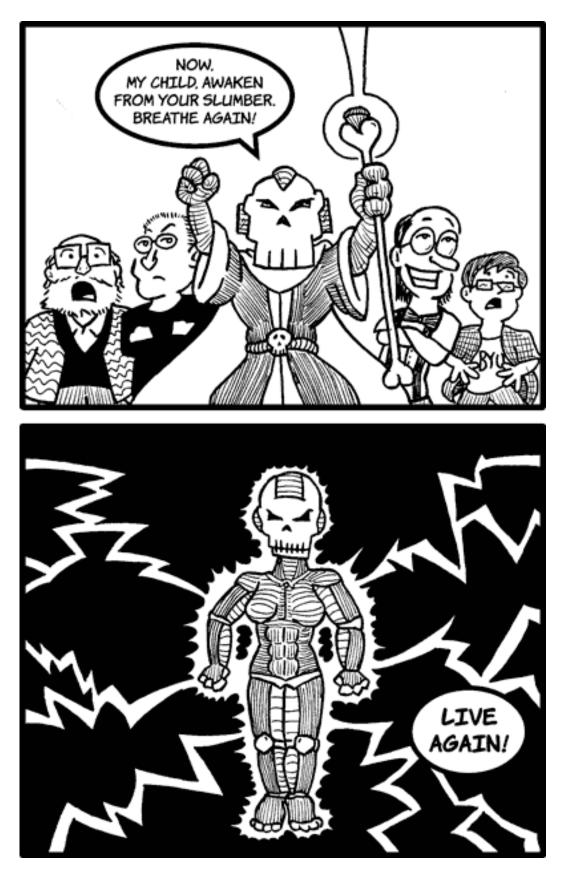
²http://www.atpm.com/Back/desktop-pictures.shtml

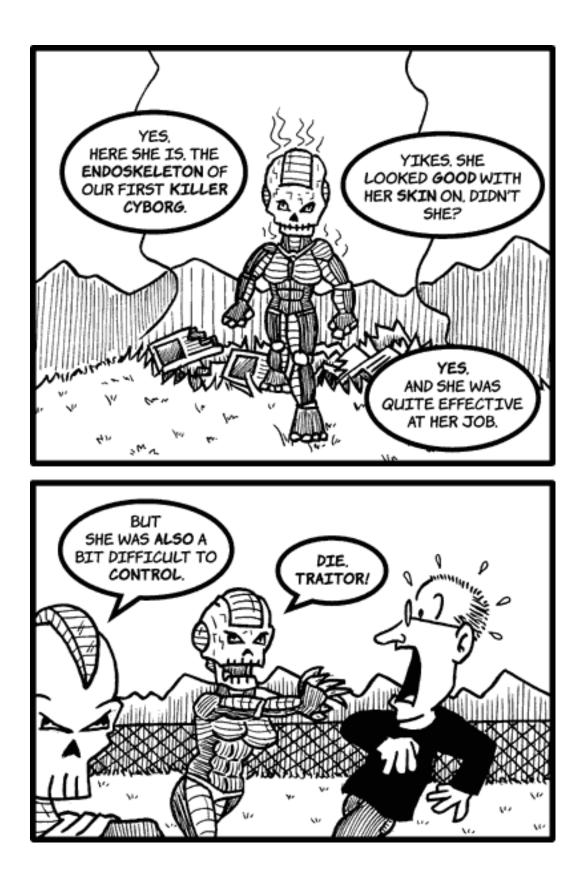
Cortland

by Matt Johnson, mjohnson@atpm.com











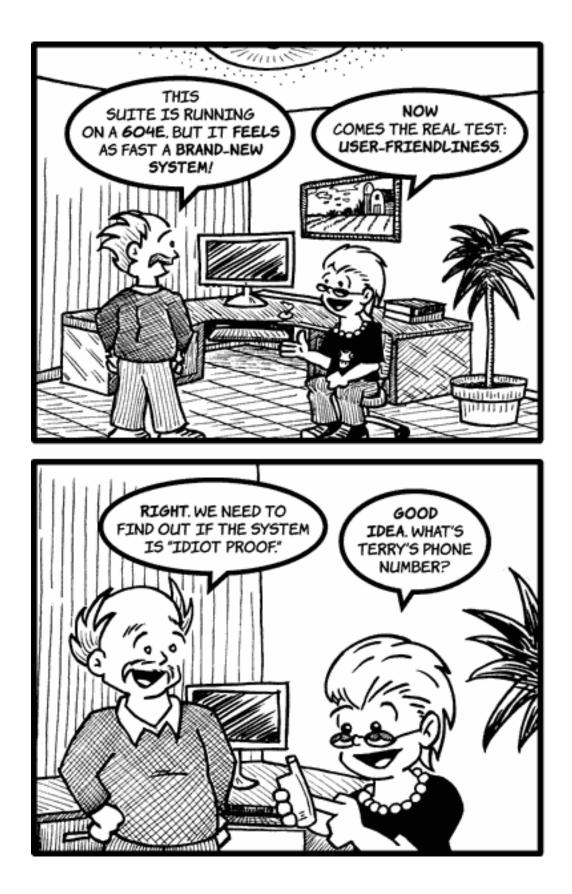


ATPM 11.10



ATPM 11.10

Cartoon: Cortland



























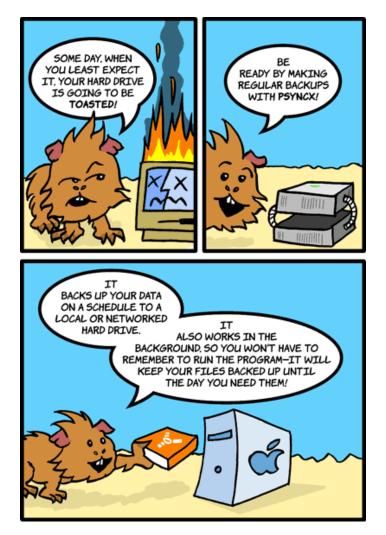


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Frisky Freeware

by Matt Johnson, mjohnson@atpm.com



PsyncX^{*a*}, an awesome backup program that has saved my butt many times.

^ahttp://sourceforge.net/projects/psyncx

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Software Review

by Johann Campbell, jcampbell@atpm.com

Airfoil 1.0.6

Developer: Rogue Amoeba¹ **Price:** \$25 Requirements: Mac OS X 10.3, AirPort Express Base Station Trial: Fully-featured (10 minutes of clear signal per launch)



Lawsuits aside, Apple's digital music revolution seems unstoppable. It now enjoys a near monopoly on the sale of digital music downloads through its iTunes Music Store, and its iPod family has entered popular culture in a very big way. Steve Jobs's long-term vision for digital music extended beyond this, however; he wants you, the consumer, to enjoy your digital music anywhere you want, using-of course—Apple products.

Among its lesser known initiatives, such as partnering with car manufacturers to offer a seamless iPod interface for your car, Apple is pushing its AirPort Express Base Station² (AEBS), a compact wireless networking access point that sports an audio minijack for connecting to your hi-fi setup. A recent feature built into iTunes, dubbed AirTunes, uses this link to let users "stream" their digital music to their stereo or hi-fi via the AEBS.

About a month after the initial release of the AEBS and AirTunes, I lost count of the number of complaints I saw over the restrictions imposed on the technology. Apple keeps the relentlessly and obnoxiously anti-piracy record industry at bay by encrypting the music streaming from iTunes to the AEBS to prevent casual interception and recording by a third party. As a side effect, this restriction meant that iTunes was the only application that could stream audio to the AEBS, at least until the audio routing maestros over at Rogue Amoeba came along and released Airfoil.

(along with its Pro^4 cousin), is best known for acting as the middleman between an application or other system audio and your computer's speakers, intercepting ("hijacking") the audio and processing it or

recording it before handing it back to Mac OS X. which passes the processed audio to the speakers. Airfoil adopts this middleman approach, but jettisons much of the audio processing features and sends all of its hijacked audio to your choice of AEBS. This makes Airfoil a seriously lean and lightweight application, requiring only 3 MB of space on your hard drive.

When launched for the first time, Airfoil displays its manual, a feature shared with other Rogue Amoeba products. This is a nice touch, as it encourages new users to learn how to use the application before they actually start using it.

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Remote Speaker	'S:		
Living Room			Analog
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Airfoil Main Window

To use Airfoil to send audio to an AEBS, you choose the application you want to use as your audio source, then choose the AEBS you want to use as your audio destination (if you have access to more than one), adjust the volume if necessary, and click the "Transmit" button. In most cases, that's all there is Rogue Amoeba's flagship application, Audio Hijack³ to it, and (with the source application already open) it took me no more than five seconds to start transmitting. You can decide to transmit audio from a source application whether or not it is already open: in the latter case, Airfoil launches the source application when you click the "Transmit" button.

> As with other Rogue Amoeba products, the beauty in Airfoil is not just its simplicity but its sheer compatibility, and this is thanks in part to

¹http://www.rogueamoeba.com/airfoil/

²http://www.atpm.com/10.10/airport-express.shtml

³http://www.rogueamoeba.com/audiohijack/

⁴http://rogueamoeba.com/audiohijackpro/

the power of Mac OS X's <u>Core Audio layer</u>⁵. Any application running on OS \overline{X} that outputs audio has to do so through this layer, which in turn allows for interference from applications such as Airfoil with hardly any latency, or delay, involved. Because Airfoil plugs into Core Audio, it supports the vast majority of Mac OS X applications out of the box, without modification.

Your mileage will however vary if you want to use a Classic (pre–OS X) application with AirFoil. I tried out a few random arcade games running within Classic and tried to have AirFoil hijack the audio: most games would not let me switch to Airfoil once they were running in full-screen mode, and those launched by Airfoil beforehand experienced varying degrees of success, from Airfoil returning a "streaming error" to a game where the background music *was* sent to the AEBS, but the sound effects still played on the computer's speakers.

Besides its main window, there isn't much else to Airfoil in the way of preferences. If, for example, you want to process incoming audio before streaming it, you'll need to do that within the source application: but you can easily pair Airfoil with its sister product, Audio Hijack, for that purpose.

I tested Airfoil with the standard suite of media players—DVD Player, QuickTime Player, Windows Media Player, and VLC—and all behaved as expected. Other applications that preview or otherwise output audio, such as Garageband, Safari and Panic Software's <u>Unison</u>⁶ also work fine. But what of those applications that output both video and audio?

If you're already a user of iTunes/AirTunes, you'll know that when iTunes is set to use your AEBS to play music and you hit the play button, there is a delay of a few seconds before the audio starts playing on your stereo or hi-fi. This is another side effect of the encryption process: any time spent encrypting or decrypting audio qualifies as latency, and because that latency affects all streamed audio and delays it for up to three seconds this seriously impacts any video you want to watch. I had hoped that Airfoil would bypass the encryption requirement, but to no avail.

I have often encountered digital movies where the video lagged behind the audio, and to fix it was simply a matter of adding a delay to the audio using Audio Hijack. In this case, however, the audio seriously lags behind the video, and adding a reliable delay to the video is no mean feat. Out of the multimedia players I mentioned above, only $\underline{\text{VLC}}^7$ offers a built-in video delay feature, measured in milliseconds: Airfoil's manual includes instructions on how to use this delay, as well as the one built into another popular media player, MPlayer⁸.

It's really tricky to set up a preset video delay in VLC's Preferences, as it requires about a dozen iterations before you find the right time delay required for your computer—about 2.75 seconds on average—and in many cases it's just not worth the trouble involved. However, as of version 0.8.2 VLC has the advantage: it offers up the F and G keys on your keyboard, for adjusting the audio delay by 50-millisecond increments either way. Between these two media players most video formats are supported, so users will only run into problems with Airfoil if they want to play certain types of Windows Media Video (WMV) or some RealVideo content.

While Airfoil does have its problems, none of them can be attributed to Airfoil itself due to its middleman nature. You can blame the ever-vigilant Recording Industry Ass. of America (RIAA) for the requisite audio delay, and you can blame Apple's software for most, if not all errors related to streaming audio, including the dreaded "Unexplained connection error" that kept me awake at night on a few occasions.

As with other Rogue Amoeba products, Airfoil has one job, and it carries out that job in the simplest and most effective way possible. If you own an AirPort Express Base Station and you want to make the most out of it, Airfoil is your middleman.

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⁵http://www.apple.com/macosx/features/coreaudio/ ⁶http://panic.com/unison/

⁷http://videolan.org/vlc/

 $^{^8 {\}tt http://mplayerosx.sourceforge.net/}$

Software Review

by Chris Lawson, clawson@atpm.com

Business Card Composer 3.1.2

Developer: BeLight Software¹ Price: \$35 (download); \$40 (boxed); \$20 (upgrade) Requirements: Mac OS X 10.2 Trial: Nagware (puts "Made with Business Card Composer" on everything)



Thanks to the rock-bottom prices on laser and photo-quality inkjet printers, more people than ever have the ability to do professional-grade print jobs at home. A lot of employers provide business cards for their employees, but if you're self-employed or prefer to do your own design, Business Card Composer (BCC) offers an economical alternative to high-priced (and over-powered, for this job) desktop publishing software.

The old cliché says that a jack of all trades is a master of none, and for making business cards, it pretty much holds true of most desktop publishing software. BeLight's approach with BCC is refreshingly simple: make an application that does only one thing and does it extremely well.



When you first launch the application, you're presented with the Business Card Assistant, a brilliant walk-through wizard. You can choose to build a card based on one of the several hundred included designs, or you can start with a blank slate and create your own. The included designs are, for the most part, very tasteful and professional, a definite cut above typical templates included with many applications.

Once you've chosen a design, the next step is to fill in the contact information. BCC thoughtfully reads the Address Book entry you've designated as your own and fills in as much as it can from that database. You can make business cards for other people, too just drop the Address Book entry onto the text fields from the list on the right.

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Prefix: First Name:	Last Name:	Suffix: Group	All	•
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Title:		David		
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Company:	Department:	Alex	Harbuck	- 11
		Kristi		- LI
Phone: Fax:	Mobile:	JP	Saldarriaga McNeill	
(269) 555-5555	555-555-5555	Steve		- 11
	Email:	Bob	Lynch	- 11
Homepage: http://chrislawson.net/		Laure	n Stevenson	- 11
	/chrislawson.net/ flightinstruction@chrislawson.net			- 11
Street Address:		Dusty		- 11
123 Any Street			Smiedendorf Lawson	Ť
City State ZIP Country:		Chris	Lawson	
Anytown, ST, 55555, USA		Profer	red Source: Work	
Note: You can always change perso	nal information by dragging and dropping	a person from Apple A	ddress Book to the card	
?) Ope	n New Blank		Prev Ne	(txt
0				

After filling in the data, you can choose a printing layout for the cards. BCC comes with print templates for nearly every card layout known to man, along with custom templates and online print templates for sending to a print shop.

Now you're ready to put the finishing touches on the card. After completing the three-step assistant, BCC presents a fairly standard page-layout window where you can select various elements, rearrange them, group them, resize them, change their color and opacity, etc.—in short, everything you'd expect a professional desktop publishing program to do.

 $^{^{1}\}mbox{http://www.belightsoft.com/products/composer/overview.php}$



If you choose to skip the Assistant, you'll be sent straight to the layout window, complete with a blank layout, where you can design your own card from the ground up.

Various clip art collections are available via the pop-up menu on the left, or you can use photos in your iPhoto database, or choose another folder of clip art or photos. BCC's downloadable version ships with a small clip art library (700 images); the boxed version, which is a great deal at \$5 more, ships with an enormous library of over 23,000 images. The boxed version also provides another 100 pre-made business card templates for a total of 500 designs.

Business Card Composer's OS X integration is excellent. Not only does it utilize the Address Book and iPhoto databases, but Tiger users can apply Core Image filters to clip art and photos. This has the potential to save you the time and trouble of switching to an application like Photoshop or iPhoto—you can do all your FX work in BCC itself. And of course, as with any good OS X application, Business Card Composer has excellent Help.

Unlike most professional page-layout apps, BCC lacks rulers and guides, probably its most serious omission. The ability to snap elements to a grid would be most useful as well. BCC has limited snap-to functionality, much like that found in Interface Builder, but Interface Builder provides guides, which BCC does not. Pixel-level layout and control are made considerably more difficult due to this omission, and it's the only thing keeping BCC from getting an Excellent rating.

The only other major quirk of the software is in the aforementioned Help. While excellent in general, BeLight's developers are Ukrainian (a lovely postcard of Odessa was included in the press kit), and there are times it's obvious English is not their first language. It's not bad enough to inhibit comprehension, but the Help could use a good native English copyediting.

The functionality offered by Business Card Composer is either partially or completely duplicated in Adobe's InDesign; Quark's XPress; Apple's Apple-Works, Pages, and FileMaker; and Omni's Omni-Graffle, so if you already have one of these apps, you might find BCC to be superfluous. However, with the exception of the two high-end DTP apps, none of these performs as well as BCC in the business card task. A jack of all trades might be nice, but for most people, a master of *one* is more useful.

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Software Review

by Michael Tsai, mtsai@atpm.com

Disk Catalogers

Catalog 1.2

Developer: <u>Neometric Software</u>¹ Price: \$20 Requirements: Mac OS X 10.3 Trial: Feature-limited (5 indexes)

CDFinder 4.5

Developer: West-Forest-Systems² Price: \$30; business licenses with <u>network support</u>³ are also available. Requirements: Mac OS X 10.2

Trial: Feature-limited (25 catalogs)





Even with today's large hard disks-the current low-end iBooks and iMacs ship with 40 and 160 GB drives, respectively—chances are that you store some of your files outside your Mac, on burned CDs or DVDs, Zip disks, or perhaps on an iPod or other external drive. And with good reason. If you take many photos, after a few years they probably won't all fit on your main drive. If you work with iMovie, you might keep your finished movies handy but archive the constituent clips to DVD-R. And then there are backups. Hopefully, you keep copies of your important data files and installers so that you'll be protected if anything happens to your Mac's internal drive. You can backup and archive your files manually, by dragging and dropping them in the Finder, or using one of a variety of applications to automate some or all of that task.

Saving your files, however, is only half the job. The other half is finding them when you need them. You've got better things to do than search the CDs in your binder one-by-one until you find the right disc. This is where disk cataloging software comes in. A cataloger will let you scan the disks when you put the files on them, and it will store the names of the files (and other information) in a catalog. When you want to access a file, it will search all the catalogs at once and tell you which CD to insert, or which drive to connect. There have been many⁴ Mac disk cataloging programs, and the most popular ones have been carbonized for Mac OS X. These include <u>CDFinder⁵</u>, <u>DiskCatalogMaker⁶</u>, <u>DiskTracker⁷</u>, and <u>File RoundUp</u>⁸.

(Another similar utility that's often mentioned along with these is <u>AutoCat</u>⁹. It actually creates folders of aliases rather than catalog files. You can then browse and search the aliases directly in the Finder. I find that this approach offers limited features and doesn't scale well to large numbers of files.)

Of these, I think the ten-year-old CDFinder is generally regarded as the best. I've been using it since I first got a SCSI CD burner, and I think it offers a good mix of features, speed, and ease of use. CDFinder has never let me down, but I was intrigued when, a few months ago, I received a press release for Catalog¹⁰ 1.0. Catalog's Web site and icon looked sharp. Its marketing material touted an interface that "feels just like browsing in the Finder," blazing speed, and a jab at the competition that's mostly on target:

> This isn't just some Mac OS 9 port or program that looks like it was designed for Windows. Everything in the app is designed to take full advantage of the beautiful interface elements of OS X.

This got me curious. How does a brand-new Cocoa application written by some <u>young developers</u>¹¹ stack up against the venerable CDFinder, which once ran on 68K Macs with System 7? Maybe CDFinder's architecture was out-dated, having been designed for another era. Certainly, its interface, though functional, doesn't look like that of a modern Mac OS X application. On the other hand, disks are disks, and

⁶http://hp.vector.co.jp/authors/VA008942/library/di skcatalogmaker/

¹http://www.neometricsoftware.com/?page=products&pr oduct=catalog

²http://cdfinder.de

³http://cdfinder.de/networking.html

⁴http://cdfinder.de/list.html

⁵http://cdfinder.de

⁷http://www.portents.com/disktracker/

 $^{^8}$ http://www.warptensoftware.com

⁹http://kebawe.com/autocat/

 $^{^{10} \}rm http://www.neometricsoftware.com/?page=products&pr oduct=catalog$

¹¹http://www.neometricsoftware.com/?page=about

CDFinder has a lot of experience with them. Surely, there must also be a few things that a brand-new program could learn from the old guy.

First Impressions

As soon as you mount their disk images, you can see just how different Catalog and CDFinder are.



Following the modern Mac OS X convention, Catalog has a single application icon that you can drag to your Applications folder to install. Everything is inside that one application package. CDFinder is organized more like an OS 9 application. There's a single *folder* that you can drag, and inside it are various documentation and auxiliary files, as well as the application itself.

This trend continues after launching the applications. Catalog uses the modern Aqua interface throughout, with anti-aliased text, a standard toolbar, and a non-modal preferences window. During normal operation, you deal with the single main window, along with a few drawers and sheets.

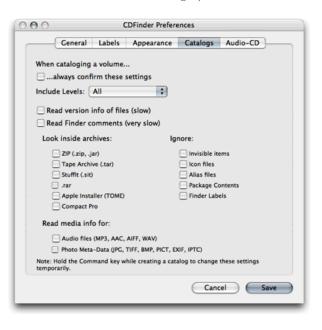
CDFinder's interface looks a bit dated. The text isn't consistently anti-aliased. The window backgrounds aren't always striped, and the disclosure triangles look like they came from OS 9. (There are various preferences to control CDFinder's appearance, but none of them make it look quite right on OS X, in my opinion.) The main window has a toolbar, but you can't re-order or re-size the buttons. The preferences window has Save and Cancel buttons, and it's opened using Command-Semicolon rather than the more modern Command-Comma. There are no drawers or sheets, and the interface isn't so rigidly designed around doing everything with a single window. (I consider this last bit a plus.)

Cataloging

Before you can browse or search the contents of a disk that's offline, you need to use the cataloging program to store a list of the files and folders on the disk. Catalog calls this creating an *index*; CDFinder calls it creating a *catalog*. You can catalog a disk or folder using a menu command, by dragging it into Catalog's drawer or CDFinder's main window, or by using CDFinder's contextual menu item in the Finder. Both programs have a batch mode, where you can insert a series of CDs or DVDs and have them automatically cataloged and then ejected.

CDFinder shows a progress bar while it's cataloging a disk so that you can see approximately how much time it will take. It can also catalog multiple disks or folders at a time. Catalog offers neither of these conveniences.

Both programs offer some control over which files are cataloged. Catalog can exclude invisible files from its indexes, as well as the contents of application and document bundles. CDFinder offers more options. It can exclude files by depth and by Finder label. It can also catalog files that are inside Zip and StuffIt archives (as well as some other archive types, though it cannot look inside disk images).



Catalog stores the name, size, and creation and modification dates for each file. In addition to these, CDFinder can keep track of file types, labels, icons, version information, and Finder comments. It also stores "media info," which includes $\underline{ID3}^{12}$ tags on audio files and \underline{EXIF} and \underline{IPTC}^{13} data for image files. It can thus be used as a rudimentary offline media database, in the spirit of iView¹⁴.

¹²http://www.id3.org

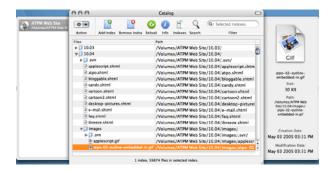
¹³http://cdfinder.de/iptc.html

¹⁴http://www.atpm.com/9.03/iview.shtml

Viewing Catalogs

Catalog

Neometric claims that "Browsing in Catalog feels just like browsing in the Finder," but really it's more like using a limited version of iTunes. There's only one main window for browsing the contents of your indexes. In the drawer at the left, you can choose an index, much like choosing a playlist in iTunes or a mailbox in Mail. Then the table in the main part of the window shows the contents of that index, and you can use the search box in the toolbar to filter the displayed files. To see more information about the selected file, you can open the info drawer.



Catalog displays the files in a very generic way. There is no Kind column, so to know the type of a file you need to look at its icon or name. Catalog determines a file's icon based on its name; for instance, a ".gif" file will look like an image file, and a ".html" file will look like a Web page. It does *not* use file type and creator codes, so a GIF image whose name doesn't end with ".gif" will appear as a generic document, and other GIF images will appear with the same GIF icon even though some are Photoshop documents and some are Preview documents. Catalog does not display custom file icons.

I found the single-window interface to be extremely limiting. Although you can select multiple indexes, you can't view the contents of more than one index at a time. In fact, you can hardly view much of a *single* index at a time. The table always shows all the top-level folders, and you can expand or collapse them, but you cannot limit the view to show just the contents of a particular folder. Nor can you open a separate window to view the contents of a folder.

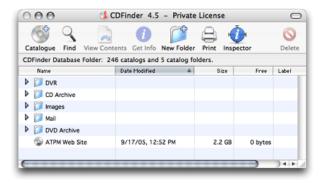
The only two columns in the table are for the file's name and its path. The path column is almost useless because the font size is so big (and unadjustable) and because the first part of it is wasted saying "/Volumes/". It would be nice to be able to see file sizes and modification dates as columns in the table, as in the Finder. This would make it easier to view this information at a glance (rather than in the info drawer for each file individually), and it would make it possible to sort by these properties.

It's not possible to sort the indexes in the drawer or to organize them in folders, although you can drag to re-order them. Thus, I don't think Catalog's interface scales up well when you've indexed many different disks.

Once you've selected a file in the table, you can double-click to open it. Catalog will report "File Doesn't Exist" and tell you which disk you need to mount to access it. You can then insert the disk and try again. Instead of opening a file, you can also *reveal* it in the Finder. This useful command does not appear in the menu bar, but is hidden in a pop-up menu on the toolbar. It does not have a keyboard shortcut and does not appear in a contextual menu (in fact, Catalog doesn't have contextual menus). Unfortunately, since you cannot select more than one file at a time, there's no easy way to open or reveal a bunch of files at once.

CDFinder

Browsing in CDF inder is much like using the Finder in list view. The main window shows all of your catalogs. You can group them into folders, sort them, and label them. It is not possible to open a new window showing the contents of a folder of catalogs. You can, however, open an individual catalog in its own window, and you can open multiple such windows at once.



A catalog window is also like a Finder list view. If you double-click a folder in the catalog, the window changes to show the contents of the folder. (Hold down Option to open the folder in a new window.) There's a Back button. You can adjust the text and icon sizes, choose which columns are shown, and change the sort order. Like the Finder (but unlike Catalog), CDFinder sorts names numerically. So, for example, "ATPM 10.01" properly appears after "ATPM 9.12". As in the Finder, you can type the first few letters of a file's name to jump to it in the list.

You can change the labels of catalogs, folders, and files, although CDFinder doesn't show the label colors, just the names. CDFinder does show the proper icons for files (based on the type and creator codes, as well as the extension). For files on mounted volumes, it also shows custom icons. The windows support drag-selection and multiple selection, but they behave as in the OS 9 Finder, not OS X.

You can double-click files to open them, and this works more smoothly than in Catalog, as CDFinder will prompt you for the proper disk and then open the files right away; you don't have to double-click them twice. You can also drag files or folders to the Finder, in which case CDFinder will prompt you for the disk and then copy the files to wherever you dragged them. You can quickly copy files from multiple disks this way, just by dragging them from a list of search results.

⊖ ⊖ ⊖ ►Get Info

Inspector

▼ Preview



Photo

File Name: 332-north-kaibab.jpg Size: 1600 x 1200 Filetype: JPEG, 24 Bit

EXIF (Photo Info)
 Camera Maker: Canon
 Camera Model: Canon PowerShot S300
 Software: QuickTime 6.1.1
 F-Stop: f8.0
 Exposure Time: 1 / 250 sec.
 Focal Length: 5 mm
 Version: 2.1.0
 Date Created: Thu, Jun 12, 2003, 10:26 PM
 Flash: No

CDFinder has an info window and also an inspector that can show more details about a file or folder. If an image file is on a mounted disk, the inspector will show a preview for it, but previews are not stored in the catalog files, so I don't find them that useful.

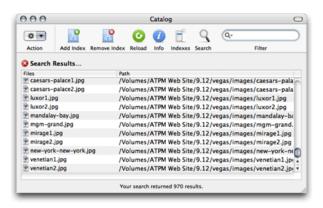
Unfortunately, neither Catalog nor CDFinder has a column view.

Searching

Catalog's best feature is its filter search. You select some indexes in the drawer, and then you can quickly search through them (by name) iTunes-style. Unlike iTunes, however, you cannot enter multiple words separated by spaces to narrow the search to the files that match all the words; if you search for "Apple iPod" it will find files with exactly that string in the name, not files that say "Apple" somewhere and "iPod" somewhere. You can also click the Search button on the toolbar (again, there's no corresponding menu command) to search for files that meet multiple criteria.

000	Catalog			
Action	Search ndexes Search in selected indexes B for files that meet the following selected er			
Files	Path			
▶ [] 10.01	:/Volumes/ATPM Web Site/10.01/	0		
▶ 📁 10.02	Name ends with jpg	۲		
▶ 📁 10.03	Path contains			
▶ 🚺 10.04	-/VOIUMES/ATPM WED SITE/10.04/			
► [] 10.05	Creation date is 01/01/05			
▶ 🚺 10.06	Modification date is 01/01/05			
► 3 10.07	- Nolumetra televisión Cierta azr			
▶ 🚺 10.08	Size is greater than 200 KB			
▶ 📁 10.09	/Volumes/ATPM Web Site/10.09/			
▶ 🚺 10.10	(Cancel) (Search)			
▶ [] 10.11	Cancel Search	Å		
► C 10 12	CONTRACTOR WAS CASED AND			

Catalog then shows just the matching files in the window.



You cannot, however, further filter the results: If you enter text in the Filter box when search results are displayed, Catalog cancels the search and does the filter instead.

CDFinder does not have a filter search. It does, however, have a very powerful find feature that works much like the one in the Finder. You can search using all the normal file criteria, as well as the ID3, EXIF, and IPTC fields. Using the pop-up menu at the top of the window, you can choose which catalogs will be searched. This is where it really pays off to group your catalogs into folders, or to label them, since you can choose to search all the catalogs in a folder or all the catalogs with a particular label. If you have Mac OS X 10.4, CDFinder can <u>search Spotlight¹⁵</u> at the same time it's searching the catalogs and display all the found items together.

000	S Find			
Find in	catalog: ATPM Web Site	AND		
Name	ends with jpg is more than 200 KB			
-	eady found items al volumes (Spotlight, 10.4 only)	Find		

CDFinder's searching is fast. If you are searching multiple large catalogs, the search isn't instantaneous, but CDFinder will show a progress bar in its Dock icon. The matching files are shown in a new window called Found Items. Unfortunately, there's only one Found Items window, so you cannot compare the results of multiple searches side-by-side.

00		Found Ite	ims				-
ATPM Web Site		📁 -	-				
5.03:yellowstoneLarge:	images:					834 ite	n
Name	Size	Path A	Date Modified	Kind	Comment	Label	1
🖹 mirage2.jpg	273 K	9.12:vegas:images:	5/3/05, 3:28 PM	JPEG Image	-	-	1
🖹 mirage1.jpg	310 K	9.12:vegas:images:	5/3/05, 3:28 PM	JPEG Image	-	-	1
🖹 bellagio.jpg	312 K	9.12:vegas:images:	5/3/05, 3:28 PM	JPEG Image	-	-	
🖹 caesars-palace1.jpg	229 K	9.12:vegas:images:	5/3/05, 3:28 PM	JPEG Image	-	-	1
🖹 mgm-grand.jpg	318 K	9.12:vegas:images:	5/3/05, 3:28 PM	JPEG Image	-	-	
🖹 mandalay-bay.jpg	339 K	9.12:vegas:images:	5/3/05, 3:28 PM	JPEG Image	-	-	1
new-york-new-york.jpg	326 K	9.12:vegas:images:	5/3/05, 3:28 PM	JPEG Image	-	-	Į
yenetian2.jpg	477 K	9.12:vegas:images:	5/3/05, 3:28 PM	JPEG Image	-	-	
🖹 caesars-palace2.jpg	319 K	9.12:vegas:images:	5/3/05, 3:28 PM	JPEG Image	-	-	
🖹 venetian1.jpg	371 K	9.12:vegas:images:	5/3/05, 3:28 PM	JPEG Image	-	-	1
🖹 luxor2.jpg	308 K	9.12:vegas:images:	5/3/05, 3:28 PM	JPEG Image	-	-	
🖹 luxor1.jpg	353 K	9.12:vegas:images:	5/3/05, 3:28 PM	JPEG Image	-	-	ł
eover.jpg	276 K	10.01:images:	5/3/05, 3:30 PM	JPEG Image	-	-	

Performance

To test the speed of Catalog and CDFinder, I used each program to catalog a DVD containing a copy of the ATPM Web site's Subversion repository. This included 54,484 files and 5390 folders, totaling about 2.2 GB.

Catalog took 2 minutes and 29 seconds to create the index, and used 219 MB of RAM to do so. It then took 18 seconds to save the index at quit, and 6 seconds to load it at launch. After re-launching Catalog, it took 70 MB of RAM to view the index. The catalog file uses 17.9 MB on disk.

CDF inder took 1 minute and 10 seconds to create the catalog, and used 17 MB of RAM to do so. This is more than twice as fast, even though CDF inder is saving more information. The catalog uses 4.2 MB on disk.

The performance difference is more pronounced when you catalog many volumes, or even a single large volume. I was not able to index my Documents

¹⁵http://cdfinder.de/spotlight.html

folder (containing about 300,000 files) using Catalog; after about 10 minutes of indexing, it had used up more than 1 GB of RAM, and I had to force-quit it because it was making the virtual memory swap like crazy. Each time you launch Catalog, it loads all of the indexes into memory. This means that you are limited to browsing and searching a group of indexes that will fit in memory simultaneously. It also means that launching Catalog takes a long time, as Catalog loads even indexes that you might not want to view. Quitting Catalog can also take a long time, as it saves all the indexes to disk, even if none of them has changed. (In the just-released version 1.2.1, Catalog is smart enough not to save the indexes if none of them has changed, but it will still re-save them all if only one has changed.)

CDFinder stores its catalogs more compactly, both on disk and in memory. It is also able to control its memory use (and improve performance) by loading a catalog only when you try to browse or search it. Thus, I can easily search hundreds of large catalogs in CDFinder, any *one* of which would bring Catalog to its knees. The Database Status window lets you tell CDFinder how much RAM it's allowed to use for its database cache. Searching 6 million cataloged files took just a few seconds, but it then took about a minute for CDFinder to create a Found Items window with the 552,045 matching files. Once the window was loaded, I could scroll through it quickly, and CDFinder needed only 113 MB of RAM to display it.

Extras

Catalog is not scriptable. CDFinder has an extensive AppleScript dictionary that lets you create, search, and inspect catalogs.

Catalog has a minimal but complete collection of integrated HTML help pages. CDFinder has a quickreference guide in the Help menu and a separate 138page (screen-formatted) PDF user guide.

Both programs support printing. Neither is very good about fitting all the information onto the page. With CDFinder, at least you can manually adjust the fonts and the displayed columns so that everything will fit. It also prints a header showing the name of the catalog, the current page, and the total number of pages.

Catalog can import and export indexes in its own format. CDFinder files are automatically "exported" in this way, since each catalog is stored as a separate file in the Finder. (I find that it's

often easier to manage folders of catalogs by moving the catalog files around in the Finder rather than using CDFinder's main window.) CDFinder can also export to a tab-delimited format (for importing into a database). It can import files from Disk Wizard, FindIt, CatFinder, Disk Recall, and DiskTracker.

Bugs

Catalog just doesn't feel very polished to me. Here are some of the bugs I encountered when using it:

- If you tell Catalog to reload an index (i.e. recreate it from the files on disk) and then cancel, it deletes the index entirely.
- Catalog doesn't save the index to disk until you quit it. If it crashes or you force-quit because it used up all your memory, you'll lose any unsaved indexes.
- The user interface appears frozen when importing and exporting large catalogs.
- Various menu commands are not enabled and disable properly. For example, all of the File menu commands are enabled during indexing, but most of them don't work. The Reload Index and Export Selected commands are enabled whether or not an index is selected.
- The Search sheet doesn't remember the text that you've entered; each time you open it, it clears all the text fields. This makes it difficult to refine your search criteria.
- Sometimes when I try to search or filter just the selected indexes, Catalog searches all of them, or it will search one of them but not the one that's selected.
- When you delete an index that's selected, the table still shows its contents, even though the index's icon has been removed and another index is now selected in the drawer. (This seems to be fixed in the just-released version 1.2.1.)
- If you change from All Indexes to Selected Indexes with text entered in the Filter field, the table doesn't update.
- The Home and End keys don't work in the table.

I did not encounter any bugs in CDFinder. I've been using it for years, and it has never crashed.

Conclusion

Catalog has the potential to be an ultra-simple cataloging iApp. Unfortunately, the code is not as polished as the Web site and icon are. Small flaws abound, and the architecture scales poorly so that it's unusable when you have many indexes, or even a single large one.

CDF inder is a solid piece of software with great features and performance. It could use an interface overhaul, but it gets the job done.

Copyright © 2005 Michael Tsai, mtsai@atpm.com. Michael uses CDFinder along with his $DropDMG^{16}$ utility to backup¹⁷ his Mac. Reviewing in ATPM is open to anyone. If you're interested, write to us at reviews@atpm.com.



 $^{^{16} \}tt{http://c-command.com/dropdmg}$

¹⁷http://mjtsai.com/blog/2005/05/24/my-new-backup-st rategy/

Hardware Review

by Tom Bridge, tbridge@atpm.com

iPod nano 4 GB

Developer: Apple Computer¹ Price: \$199 (2 GB); \$249 (4 GB) Requirements: Mac OS X 10.3.4 or Windows 2000 SP4, USB port Recommended: USB 2.0

Trial: None



There it was, hiding in Steve's watch pocket the whole presentation, and none of us saw it coming. The iPod nano is a testament to good design engineering. The best way to explain the size of the iPod nano is to ask someone to take out a business card and lay it flat on the table. It's as long as the long edge of the card, and 2/3rds of the width. It's smaller than a stack of 15 business cards. That right there is reason enough to consider shelling out for the iPod nano.

I saw the keynote and ogled at what Steve hath wrought with his incredible team of design and test engineers, and felt the technolust rising within me like the mercury on a Central Valley summer day. It was too much to behold. My old 3G iPod is approaching its end of life as the battery slowly and surely dies, and my Shuffle can't hold but a quarter as much, so it was off to Pentagon City two days after Steve had announced the Nano.



Taking it out of the box will cement with you just how small this technical marvel is. The packaging is along the same vein as the packaging for Apple's other small technical wonder, the AirPort Express, featuring a box that opens much like a book to reveal the new member of your technical stable. It sits there, wrapped in the usual plastic skin that reads "Don't Steal Music."

Now, this is not your father's iPod anymore: FireWire docking is sadly gone with this new machine, rendering all those FireWire dock cables you have lying around obsolete, fodder for Craiglist and eBay. It does, however, fit in an old 3G dock quite nicely, provided that you swap the dock connector for a USB 2.0 version. Of course, there are many who would object to such a transition, and I cannot say that I blame them. Few computers older than a year have a USB 2.0 port on them, leaving the user to suffer through transferring large files over a piddling USB 1.1 connection in its wake. This move is not lost on me, but I will say this: I do not mind seeing more companies adopt USB 2.0 as a decent serial standard. Perhaps this will encourage people like Canon and Nikon to consider adding it to their digital cameras for speedy downloading of images.

Once full of tunes, contacts, and calendars, I took my black Nano out for a spin. Sure enough, the sound quality astounds, once you drop the little white iPod earbuds in the nearest trash receptacle. Listening on my QuietComfort headphones, I was astounded by the depth of audio ranges, from thumping bass to crystal clear treble on all my recordings, from Switchfoot's new CD to the Swedischer Rundfunkchor's Brahms' Requiem. One thing that has taken some getting used to is the location of the headphone jack, now ensconced on the bottom edge of the iPod next to the dock connector, causing me to hold it upside down the first time I grab it from my pocket. The tiny hold switch that sits atop the Nano is also something of a departure, I felt. It's smaller and with less feedback than previous models, and I found myself having to stare at the iPod to search out the orange field behind the hold switch's on position to make sure it was properly set.

¹http://www.apple.com/ipodnano/



One thing to worry about as a purchaser of iPod accessories is which ones will work with the new Nano. Forget about the iTrip; there's no remote switch. Forget about the FireWire charger for your car; that's right out. Basically, there are a lot of changes, so don't necessarily expect everything to work. Thankfully, the Internet being what it is, people are trying and will <u>tell</u>² you what they find. Phil Torrone's dissection of what what works and what does not is the most exhaustive search of devices that you might have that might not work.

Something new to the iPod nano, aside from its fresh color screen, is the ability to lock the screen of your iPod to outside influence, including prying eyes. So set up the lock, and protect your contacts and calendars from the random people who might put their grubby hands all over your iPod. Of course, your own grubby hands are another problem as the back of the iPod will look like a scene from CSI after the fingerprint crowd has been through, and beware of even breathing at your iPod's screen, as that might well scratch it. (Despite what <u>Apple says³</u>, I think it's is more scratchable than other iPods' screens.) Get a nifty case, and do yourself a big favor in the process.

I will say that this is the best iPod I've ever owned. Small, long-in-the-tooth-battery, good and visible color screen, and the ability to get lost in my jeans. It's not perfect though, with an easy-toscratch screen and the problem with the accessories not all working, but overall, if you're in the market for a new iPod, give the Nano a look. You won't regret it.

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 $^{^2 \}rm http://www.makezine.com/blog/archive/2005/09/ipod_nano.html$

 $^{^{3} \}tt http://www.macworld.co.uk/news/index.cfm?home&News ID=12741$

Hardware Review

by Chris Lawson, clawson@atpm.com

Mercury Elite-AL Pro RAID

Developer: Other World Computing¹ Price: \$130–980, depending on capacity Requirements: Mac with FireWire Recommended: FireWire 800 and Mac OS X 10.2.8

Trial: None



Ask a non-techie what RAID is, and he'll probably tell you it's <u>bug spray</u>². That wouldn't be entirely inaccurate, but Other World Computing (OWC) has a different idea of what RAID means.

RAID originally stood for "redundant array of inexpensive disks," coined in an era when largecapacity hard drives were unheard of and "inexpensive" was a relative term. Bear in mind that when RAID was patented by IBM in 1978, a fivemegabyte hard disk cost several thousand dollars and was approximately the size of a Centris 650^3 . By combining several smaller hard disks into one cohesive unit, a much greater storage capacity—or speed—could be achieved, in much the same way as modern-day computing clusters such as Virginia Tech's Terascale Computing Facility⁴ (probably better known to most readers as "System X" or, more informally, "Big Mac"). Over the years, as speed became more of a concern than price, "inexpensive" was gradually replaced by "independent," which is now the accepted definition.

There are several different flavors, or "levels," of RAID, most of which were outlined in the 1988 <u>SIGMOD paper</u>⁵—"A Case for Redundant Arrays of Inexpensive Disks (RAID)" You can find a good explanation of the various levels of RAID at Wikipedia⁶.

³http://everymac.com/systems/apple/mac_centris/stat s/mac_centris_650.html

⁴http://www.tcf.vt.edu



The Elite-AL is RAID 0, or "striped" RAID, which gives good speed and efficiency at the expense of reliability by distributing the data load across both drives in the array. If one of the two mechanisms fails, the whole data set will likely be lost, effectively halving the reliability of the array relative to a single external hard disk.

¹http://eshop.macsales.com/shop/firewire/1394/USB/E liteAL/RAID/

²http://www.killsbugsdead.com/

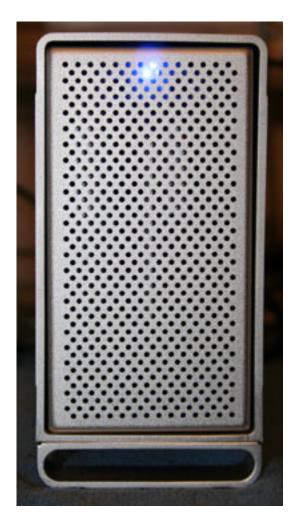
⁵http://www-2.cs.cmu.edu/~garth/RAIDpaper/Patterson 88.pdf

⁶http://en.wikipedia.org/wiki/Redundant_array_of_in dependent_disks



One caveat before we get into the meat of the review: the Elite-AL is a FireWire-only device, and folks stuck in the relative dark ages of Mac OS 10.1 or Windows 98 will find themselves with only FireWire 400 capabilities. Jaguar, Panther, and Tiger users, as well as Win 2K and XP users, will be able to utilize the entire bandwidth of FireWire 800. This is most likely to impact performance in sustained transfers of large files or other tasks where bandwidth is at a premium. If you're thinking of running the array as your boot drive or simply as a fast external storage device, the difference between the two FireWire speeds will likely be negligible in real-world use.

OWC has long had a reputation for designing attractive external hard drive cases. The dual-drive enclosure for the Mercury Elite-AL is one of the most attractive external hard drive cases I've ever seen. It looks like Rick Moranis was testing one of his crazy inventions on a Power Mac G5, except this time, the results were good. (I half-expect to see an ant-size Steve Jobs crawling out of the front of the enclosure any time now.)



My biggest visual gripe is one that regular readers will have heard before: an overly bright-blue LED makes this drive enclosure extremely inhibitive of sleep. The LED isn't as bright as that on OWC's Mercury Elite⁷ enclosure, but with the design goal clearly to match the G5 tower as closely as possible, I'm left wondering why a white LED wasn't chosen instead.

There's a fan in the enclosure, but the drives run so cool under most conditions that it's probably unnecessary (especially with the solid aluminum casing acting as a huge heat sink). Thankfully, the fan is quiet. All you hear with the enclosure powered up and running is a low-pitched whoosh that completely fades into background noise after a few minutes. Kudos to OWC's acoustic engineers for solving what has proven to be a serious problem in the past with many external devices.

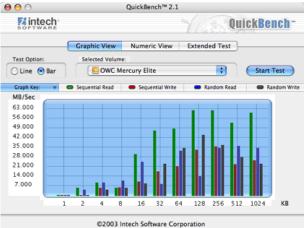
 $^{^7 \}rm http://eshop.macsales.com/item/0ther%20World%20Com puting/MEFW911PLUS/$



The heart of the array is its Oxford 912 chip set, a FireWire 800 bridge chip that provides a FireWire 800 interface (IEEE 1394b) for IDE devices in addition to hardware RAID 0 capabilities. The bare dual-drive enclosure/controller/power supply is available for \$130 for the do-it-yourselfer, but most folks will probably be well served by purchasing the preassembled units with matching 7200 RPM Seagate Barracuda drives.

The Barracudas are solid performers with a great reputation, and the capacity of the array is limited only by how much money you can budget. The midrange 400 GB (\$380) unit is what I'm reviewing here, but capacities of up to one terabyte (\$980) are available. As previously mentioned, RAID 0 effectively halves the reliability of the drives used in a two-drive array, so it's important to buy a high-quality drive mechanism if you're thinking of building your own to save money.

First impressions of the performance of the array are, well, impressive. Video playback on a 1.5 GHz PowerBook is never choppy, even with full-screen high-bandwidth content. With this RAID hooked up, it's clear that the limiting factor of the Power-Book's video playback capabilities is the internal hard disk rather than the CPU. With the compact size and fairly good portability of the Elite-AL array, mobile audio/video professionals will have another tool in their arsenals. It's easy to envision a luggable production studio with most of the heavy disk I/O handled by the FireWire 800 bus.



The Elite-AL is about 2–3 times the speed of the internal drive on the PowerBook.

At just under \$1 per gigabyte, the Elite-AL RAIDs aren't the greatest deal out there in terms of sheer storage capacity for a given price, but you'd be hard-pressed to find this speed in a standard (non-RAID) external drive, especially with a topbrand mechanism in the case. Second-tier brands are all over the place for dirt-cheap prices, but I've known lots of people who had serious problems with failing mechanisms from vendors other than IBM and Seagate. OWC looks to have another solid product on its hands with the Mercury Elite-AL.

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¹mailto:editor@atpm.com

²http://www.atpm.com/subscribe

 $^{{}^{3} \}tt{http://www.adobe.com/prodindex/acrobat/readstep.html}$

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