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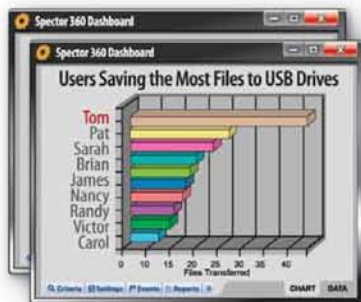
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FIRST WORD LANCE ULANOFF

# 2009: What to Expect in Tech

We head into 2009 with more uncertainty than I've ever seen in my lifetime. We have an economy teetering on the edge of collapse, energy issues that will not go away, trouble spots around the globe, an untested president who may be tested in ways we never imagined, and a tech sector reeling from months of bad news, compression, and low sales. No one, myself included, knows what's going to happen, but I'm willing to make my best guesses about what will and won't transpire in perhaps the most pivotal year of this still-new century.

## The Obvious

**WINDOWS 7 SHIPS.** Windows 7 will ship no later than October 2009. No, no one at Microsoft has told me this, but Microsoft is dead set against repeating any of the mistakes—and there were many—that it made with Windows Vista. Once the Redmond software giant sets a date, it will make sure it meets that date. This will bring cheer to OEMs and affiliates who are already saying that Microsoft is handling this rollout the right way.

## NET NEUTRALITY BECOMES LAW.

President Obama is a firm believer in Net neutrality, having stated: "We can't have a situation in which the corporate duopoly dictates the future of the Internet, and that's why I'm supporting what is called Net neutrality." And with a Democratic Congress, he should be able to make it law.

## HDTV SALES WILL SOAR THROUGH FEBRUARY.

Consumers preparing for the February 18 digital switchover will be doing two things: getting cable or satellite service for the first time and buying an HDTV. Although most people know that they don't need an HDTV for the switchover, this will be an excellent excuse to buy one. This could mean HDTV prices stay flat through the first half of 2009.

## The Possible

**THE NETBOOK PHENOMENON WILL END.** People will still be buying netbooks, but

as these devices edge up in performance and functionality, consumers will realize they're nothing more than affordable laptops. Marketers will stop struggling to shoehorn every new system into the netbook mold, and a new pricing threshold for PCs will be set. With Radio Shack selling a subsidized \$99 laptop, all bets are off when it comes to laptop pricing.

**MICROSOFT WILL DISCONTINUE THE ZUNE IN FAVOR OF ZUNE PHONES.** The Internet is buzzing with rumors that Microsoft is planning to put Zunes into a whole new generation of smartphones.

the company may want to rethink the portable PC. Is there a hybrid device in the works that sits between the iPhone and MacBook? I hope so.

**FLEXIBLE TOUCH SCREENS.** Touch screens will still be hot in 2009, especially as Microsoft's multitouch-friendly Windows 7 rolls out. However, the real buzz will be around contact-sensitive screens that can also handle a good bend, roll, and curl. The first of them will likely appear on a new generation of e-book readers, specially designed for magazine- and newspaper-style layout formats, such as Zinio (see below).

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*Social networking/Web 2.0 leaders like Facebook will likely get stronger in 2009, but will they find a more effective business model?*

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If this happens (and it will), the original Zune player will be collateral damage.

## SOCIAL NETWORKING/WEB 2.0 CONTRACTION WILL CONTINUE.

I'll admit that I no longer believe that either Facebook or Twitter is doomed. In fact, I'm so addicted to the latter that its demise would leave me bereft. Even so, the disappearance of sites like Pownce is like the distant thrumming you hear when you put your ear to a train track. It's the sound of a freight train coming, and this one is going to wipe out a whole bunch of VC-funded sites. Social networking/Web 2.0 leaders like Facebook will likely get stronger in 2009, but will they find a more effective business model?

## The Unlikely

**APPLE WILL RELEASE ANOTHER GAME-CHANGING DEVICE.** Over the past year and a half, Apple delivered updates to successful products, but no breakthroughs. That could change in 2009, as

## Welcome to the Future

Also new for 2009 is *PC Magazine Digital Edition*. We want to welcome you to this new and exciting frontier for us and you, our loyal readership. The look and feel of the digital edition is still consistent with what you've come to expect. We have not changed the deep reporting, labs-based reviews, and insightful analysis you know and rely on. But like most other technology advents, Zinio lets you do more, such as zoom in on pages, click and go right to related Web site and blog content, and jump directly to the story you want to read via our live TOC. And to make the digital edition even more portable, Zinio Labs is working on compatibility with iPhone and e-book readers. As we charge forward adding new user-friendly features, we'd love to hear your feedback.

**FOLLOW ME ON TWITTER!** Catch the chief's comments on the latest tech developments at [twitter.com/LanceUlanoff](http://twitter.com/LanceUlanoff).



# FeedBack

## Windows 7: More of the Same

In regard to Lance Ulanoff's column in the January issue ("Windows 7 Is What It Has to Be," page 8), if you people at PCMag want to publish apologies for Bill Gates, you should ask one of Gates's yes men to write for you. Despite the obvious discontent and disapproval of Vista, Ulanoff seeks to sugarcoat the Windows 7 Vista follow-up by saying "Windows 7 will work with everything Windows Vista did—and now that Vista works well with most existing hardware and software, this is especially good news." Say what?

This does little or nothing for PCMag's credibility on any computer technology issue.—Roger Anthony

## Hey Apple, Size Matters

In your December cover story, "The Best and Worst of 2008" (page 65), you praise the Apple iPod Touch 2G. I recently purchased a new 16GB model, which also happens to be my first iPod. It's a very capable device except for one glaring issue: I didn't know before I bought the device that iTunes resizes photos to around 640-by-480. This means that if you want to zoom in even slightly, the picture quality diminishes quickly. If you zoom in all the way, prepare to be disappointed—I was. Apple has yet to offer the option to turn off this automatic resizing feature or to change the sync size. Even giving us the option of 1,024-by-768 would be a massive improvement. It's a shame to let such a gorgeous screen go to waste.—Justin Broniszewski

## Wondering About WiMAX

Thank you for your review of Sprint's XOHM Mobile WiMAX service. Overall, it seems WiMAX represents a latecomer to broadband service behind the fixed carriers (DSL and cable modems) and the 3G wireless providers (EV-DO and HSPA). Wi-Fi could even be included in the mix, depending on the location. So, the big question is, what market share is left for WiMAX?—Robert G. Doucette

## Microsoft's Retread

A while back Lance Ulanoff stated that Windows Vista would eventually be a good operating system. He was wrong. Soon thereafter, he argued that music companies must use DRM to remain profitable. Wrong again. Now he says Microsoft can-

*If BMW followed the Microsoft business model, each new car off the line would have parts from the past ten years hanging somewhere on the chassis.*

not do a complete overhaul of Windows without alienating its customers. Wrong, wrong, wrong! BMW re-engineers its cars every few years to produce improved products that the company's customers appreciate and purchase. But if BMW followed the Microsoft business model, each new BMW would have every BMW part from the last ten years hanging somewhere on the chassis.—B. Rowett

## Take a Tip from TV, PC

Regarding John C. Dvorak's column "It's the TV Killing the Computer, Not Vice Versa," people are using PCs more and viewing TV less. But people get more bang for the buck with their TVs because TVs last a lot longer than a typical PC. To reverse this trend, monitors and PCs must last for a time period commensurate with the longevity of TVs.—Cornell J. Tramontana, Jr.

## One Techie Toddler

Most 2-year olds love to read *Goodnight Moon* or Dr. Seuss, right? Not my kid. Cole asks me if we can read *PC Magazine* before bed. He then points out all of the computers and electronics he wants me to buy him. I guess, given that his first words were "Apple iPhone" and "BlackBerry," it fits.

When I came home from work one night and found him on the couch reading his favorite magazine, I was hardly surprised. He didn't even bother to look up to say hello. I thought you guys would appreciate this. Keep up the good work.—Bruce S. Goodman

## Where are the Bargain PCs?

In the November issue, you state in the Table of Contents description of the cover story, "The Hottest New PCs," that you've got me covered. Not quite. What happened to systems in the \$500-to-\$800 range? None are listed in this story. You list the Velocity Micro Raptor Signature Edition as your Editors' Choice for gaming, then, on page 114 (Best Stuff) you state the

same system has "blazing performance at a reasonable price." Since when is \$7,000 for a computer reasonable? For someone earning \$52,500 a year (a good income for many), that equals 15 percent of his or her salary for the whole year! I think your entire staff needs to be reminded of the average income in this country.

I realize that \$500-to-\$800 PCs are hard to find these days, but there should be some company out there interested in selling to my category of user—a casual gamer. I need more than a basic system but less than the latest and greatest (or even what you might consider midrange). I don't need most of the other peripherals and gadgets or even a monitor, keyboard, mouse, or speakers (I already have those components). Maybe you should work on an article discussing why systems in this price range are hard to find (even without monitor, keyboard, and mouse).—Robert James

## Spell-Check Gaffe

I recently composed an e-mail to Senator Clinton regarding her appointment as Secretary of State. I wrote the e-mail using Microsoft Word with the latest updates so that I could use the spell-checker to avoid errors. I was shocked to find that President Obama's name was selected as misspelled; instead, Word wanted to use "Osama." Can this be a casual error?—J.W. Bechtel

*There have been a number of stories and blog posts on this, and basically, it's a silly quirk that Microsoft has fixed in the updated version of Word 2007. The fact is that Osama (which means lion in Arabic) is a much more common name than Obama.—Erik Rhey*

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## CES at the Crossroads

How has a crippled economy affected the world's largest tech showcase?

Just as the Great Depression of the 1930s led to the decline of the traveling circus, 2009, many worry, could signify the fizzle of technology's biggest circus, the Consumer Electronics Show. As usual, the show garnered mass attention from media and early adopters eager to see what flashy new products would grace store shelves in 2009. But many covering the show noticed a decrease in exhibitors and attendees. According to the Consumer Electronics Association (CEA), the organizer of CES,

about 110,000 people attended the show, a drop of just more than 22 percent over the previous year's total of 141,000.

While some measured the decline in raw numbers, other signs in reduced participation were more tangible. Some noted the shorter taxi cab lines and more elbow room at after-show soirees. PC Mag blogs editor Brian Heater even theorized in a Gearlog post that this could be the beginning of the end for CES and shows like it. Citing the demise of E3 and Apple's depart-

ture from MacWorld, Heater wrote, "Considering these dire economic times, there's a growing consensus that, for better or worse, the age of the convention is drawing to an end."

Many vendors, however, are still heavily invested in CES. The major companies had their large booths with flashing lights and shiny display cases. One notable exception was Philips, which is reportedly bowing out of consumer electronics to focus on health-care and enterprise products.

Another sign of the times for CES was the change in focus and marquee products. Instead of flashy, big-ticket items like gaming desktops and monster plasma screens, the show was dominated by low-cost mobile devices that extend Web connectivity and stretch consumers' dollar farther. Many companies used the show as an opportunity to convince people to spend some money on devices that offer more value than their current gear. The trouble is, according to Jonathan Blum, founder of tech media company BlumsDay, that consumers with strained budgets just aren't excited about these products.

"It's the opposite of the Net bubble in 1999," he says. "Then it was all hype and no reality. This time at CES it's all reality and no hype. We're finally seeing the products we've been chasing for years, and nobody seems to care."

However, one sector that drew some enthusiasm is the HDTV/home-theater market. Thin and Web-connected LCDs were a big hit, as were low-cost and por-



**BUCKING THE TREND** Despite CES's lower attendance and bearish consumers, thin and Web-enabled LCDs were a big hit at the show.

table Blu-ray players. One explanation for their success is that LCDs are considerably cheaper and more energy efficient than the plasmas that were showpieces at last year's CES. Shawn DuBravac, chief economist of the CEA, told the BBC that the boost in LCD sales is also due to "cocooning," a phenomenon in which people stay home more during recessions instead of going out, and thus spend money to improve their living space and the devices contained therein. DuBravac added that people are also scaling back on screen size, choosing 30- to

40-inch sets instead of the 40-inch-plus HDTVs popular a few years ago.

Small businesses and startups were given a more visible presence this year. On the show floor, a special "alley" was designated for small businesses, and an "innovation area" was dedicated to new products, curated like a museum exhibit. One new company, Powermat, made headlines with a wireless charging station. It is companies such as Powermat that could be the lifeblood of CES in the future. Without big ad budgets, small companies depend on tradeshow to get the word out about their products.

Despite lower numbers and consumer apprehension, not everyone at CES lingered on the gloom of a sagging economy. John Chambers, CEO of Cisco Systems, is well known for his sunny, enthusiastic CES keynotes—and this year was no different. Chambers outlined the positive force technology will play in education and government programs. After his speech, he commented, "I'm more optimistic than most people in this room."—Erik Rhey

## 40 Years of the Mouse

Here's a look back at the little device that changed computing.



The Royal Canadian Navy creates the first precursor to the mouse, the trackball.

**1952**

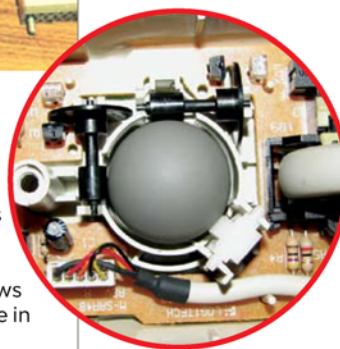


Inventor Douglas Engelbart debuts the first mouse, consisting of a wooden block and two metal wheels, in a live demo at a San Francisco conference.

**1968**

Bill English invents the "ball mouse," which has a single roller ball that allows the mouse to move in any direction.

**1972**



Richard Lyon and Steve Kirsch each develop early versions of the optical mouse, which uses light to navigate a computer screen.

**1981**



Microsoft introduces its first mouse, nicknamed the "green-eyed" mouse.

**1983**

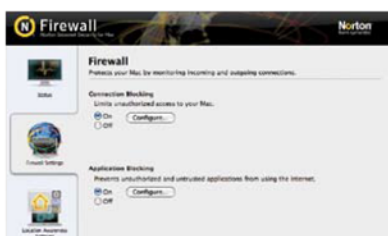




#### GEARLOG

**The New E-Book Reader on the Block**  
Foxit Software, the developer of the lightweight substitute for Adobe's PDF format, has introduced the eSlick, a hardware e-book reader. At \$229, it is cheaper than its rivals from Sony and Amazon, while offering similar features, such as an E Ink 600-by-800 display, 128MB of RAM, an SD card slot, and MP3 playback. It is thinner and lighter than the Kindle, but takes longer to recharge and lacks wireless capability.  
—Mark Hachman

## BEST OF OUR BLOGS



#### SECURITY WATCH

##### Norton Arrives on Macs

To respond to the increase in Mac-based malware, Symantec has released Norton Internet Security 4.0 for the Mac (\$79.99 direct). Some of the features here include a firewall, blacklisting, phishing protection, data encryption, and location-based network rules.—Larry Seltzer



#### @WORK

##### Freebyte.com Offers Directory of Free Business Software

The Web site Freebyte.com has posted an online directory of free business software. The offerings include office suites, desktop publishing, database management, accounting, and programming tools.—Kathy Yakal



#### GOODCLEANTECH

##### Solar Market Expected to Slow

After almost eight years of steady growth, the global photovoltaic (PV) market is expected to take a 20 percent dive. This is the conclusion of a report conducted by iSuppli, a market watch company. The report projects that worldwide revenue will fall to \$12.9 billion in 2009, primarily due to an over-supply of solar panels. On the bright side, iSuppli also states that this surplus will lead to lower prices for solar panels, which may put them within reach for many home and small-business owners.  
—Steve Volynets

## THE TOP 10 TOP GOOGLE SEARCHES OF 2008

1. Obama
2. Facebook
3. ATT
4. iPhone
5. YouTube
6. Fox News
7. Palin
8. Beijing 2008
9. David Cook
10. Surf the channel

Source: Google Zeitgeist, 2008

 <p>Logitech unveils the MouseMan, the first wireless RF mouse.</p> <p><b>1991</b></p>	 <p>Apple breaks with 22 years of tradition by selling the multibutton Mighty Mouse, complete with innovative scroll ball.</p> <p><b>1995</b></p>	 <p>Logitech and Gyraton release designs for the gyroscopic or "air" mouse.</p> <p><b>2006</b></p>	 <p>Microsoft introduces BlueTrack technology, letting the mouse work on a variety of surfaces.</p> <p>Sources: Logitech, Microsoft, Gearlog, Wikipedia, Computer History Museum.</p> <p><b>2008</b></p>
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## BEST of the Internet



### HOSTELBOOKERS [www.hostelbookers.com](http://www.hostelbookers.com)

HostelBookers is a site for frugal-minded travelers that lists over 2,500 hostels and B&Bs around the globe. One strength here is that backpackers and travelers frequently review the accommodations. —Alan Henry



### MIX TURTLE [www.mixturtle.com](http://www.mixturtle.com)

This fast, easy-to-use Web service provides streaming music on demand and lets you build playlists, post them on the site, and see what other Mix Turtle users are listening to. —AH



### FOODISTA [www.foodista.com](http://www.foodista.com)

At the site, you can learn about food, find recipes, share your knowledge of food with others, upload photos of different dishes, and interact with other foodies. Notably, Foodista is a wiki and can be edited by anyone. —AH

For more cool Web sites and handy utilities and apps, visit PC Magazine's blog AppScout ([www.appscout.com](http://www.appscout.com)).

## CONNECTED TRAVELER

# Leave Your Laptop at Home

These supercool and inexpensive mobile apps let your phone do double duty on the road.



**FAMILIAR FACE** Facebook for the iPhone lets you find friends in the place you're headed to.



Lugging a laptop and searching endlessly for a Wi-Fi hot spot (not to mention paying an arm and a leg for Internet connectivity) could be a thing of the past for the savvy traveler. As cell phones become more powerful, so does the software that allows them to be more complex and useful. Whether you have an iPhone, a BlackBerry, or just a basic smartphone, there are tons of apps (many for free) that can turn your cell into indispensable, multitasking travel companion.

### iPhone

Those who own an iPhone already know how handy it is when you're on the go. But you can also use it let friends know when you're coming to town with **Facebook for the iPhone** (free, [go.pcmag.com/facebookiphone](http://go.pcmag.com/facebookiphone)). And check your flight before you get to the airport with **FlightTrack** (\$4.99) or **FlightStatus** (\$4.99). If you want to find a good restaurant, hotel, or tavern, download **Zagat To Go '09** (\$9.99). And **Cheap Gas!** (free) will help you save money by doing just what it says (finding the lowest gas prices in the area you're traveling through).

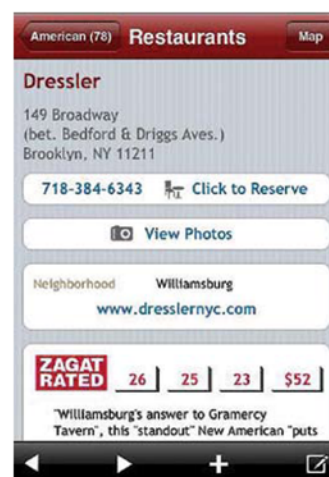
### BlackBerry

Fortunately for BlackBerry users, there's a one-stop app for travelers called **WorldMate Live**

(free). With this powerful tool, you can create itineraries, use the hotel booking service, check the weather, see if your flight is on time, and use the Connections feature to find people at your destination. **Poynt** (free) is a handy yellow pages for finding local businesses, and **Where** (free) is a great resource for exploring a city. It lists restaurants, nightlife spots, tickets, people, cheap gas, and more—and even helps you get there with turn-by-turn directions. And speaking of getting there hassle-free **TeleNav GPS Navigator** (free 30-day trial, \$9.99 a month thereafter) will make sure you never get lost with turn-by-turn on-screen and voice driving directions.

### Windows Mobile

Having trouble keeping all your paperwork organized when you travel? Use **Evernote** (free) for Windows Mobile to tag and organize important travel information online, as well as write notes to yourself. **Méto** (free) is a must-have for traveling to urban areas, because it gives you public transportation schedules for bus, train, subway, and more for most of the world's major cities. If you're stuck in the airport on a long layover, try **Pocket Live TV 1.0** (\$19.99), which lets you watch TV from the U.S., Canada, Europe, and more. —Erik Rhey





# First Looks

OUR RATINGS KEY: ●●●●● EXCELLENT | ●●●●○ VERY GOOD | ●●●○○ GOOD | ●●○○○ FAIR | ●○○○○ POOR



## HP TouchSmart IQ816

\$2,099.99 list

●●●●○

**PROS** Large widescreen. Touch-sensitive interface. Blu-ray. 1080p-compatible display. Wireless everything. Speedier than the IQ506. ATSC HDTV tuner. Pocket Media Drive bay.

**CONS** Short (60-day) subscription to Norton Internet Security. Screen doesn't quite fill the bezel. Blu-ray drive is player only. Some crapware.

[Click here for more.](#)

HP TOUCHSMART IQ816

## HP's Snazzy Kitchen PC

The TouchSmart IQ816 PC is the big brother of the TouchSmart IQ506, and like its sibling, this model is an all-in-one PC with a touch screen that can work as its primary interface—perfect for the kitchen. The 25.5-inch widescreen is primed for HDTV content, with its built-in ATSC/HDTV tuner. It's a decent performer but loses a couple of points for being loaded with crapware. The IQ816's real strength is that it's more touch-centric than its all-in-one rivals.

This system has nearly the same build as its predecessor, with all of the internals placed behind the screen. The IQ816 is noticeably more responsive, working much like an iPod touch or iPhone. Also, HP enabled the input panel for handwriting recognition and on-screen keyboard functions by default. But loading all these extra features has downsides, such as a longer boot time and a taskbar littered with icons. Even so, once everything is loaded, the touch interface is snappy. Of course, you can still use the included wireless keyboard and mouse if you prefer.

With the IQ816, you can surf the Web wirelessly, leave handwritten notes to family members on the screen, play a Blu-ray movie, video-chat via the webcam, and more. You also get five USB ports, a

FireWire port, 5-in-1 media-card reader, and a Pocket Media Drive bay.

In testing, the IQ816 showed passable scores on Photoshop CS3 and Windows Media Encoder test. The system's Nvidia GeForce 9600M GS graphics are competent for just about every standard task except gaming. If you're looking for a kitchen PC, the IQ816 is a good choice. But for the bedroom or den, the Sony VAIO VGC-LV190Y is a better, if more expensive, option.—*Joel Santo Domingo*

*Specs: 2.1-GHz Intel Core 2 Duo T8100 processor; 4GB 667-MHz DDR2 SDRAM; 750GB, 7,200-rpm SATA hard drive; 512MB Nvidia GeForce 9600M GS graphics card; Blu-ray drive; integrated 25.5-inch widescreen LCD monitor; five USB 2.0 ports; one FireWire port; integrated stereo speakers; Windows Vista Home Premium.*

### INSIDE

- 9 Hardware
- 13 Business
- 17 Consumer Electronics
- 21 Software

### PERFORMANCE TESTS

▲ High scores are best.  
▼ Low scores are best.  
Bold type denotes first place.

**HP TouchSmart IQ816**

**Sony VAIO VGC-LV190Y\***

RED denotes Editors' Choice. \* Anti-aliasing/anisotropic filtering was set to 4X.

3D BENCHMARK TESTS		MULTIMEDIA TESTS		
3DMARK06 ▲ 1,920 x 1,200*		CINEBENCH R10 ▲	WINDOWS MEDIA ENCODER ▼ min:sec	PHOTOSHOP CS3 ACTION SET ▼ min:sec
<b>1,849</b>		3,505	1:23	0:41
912		<b>6,508</b>	0:52	0:24

## FALCON NORTHWEST MACH V (CORE I7)

## Falcon System Soars with a New Intel Core

Falcon Northwest has again delivered a stunning, speedy system in the Mach V (Core i7). It's a real beauty, and another benchmark-smoker for Falcon Northwest. Thanks to a next-generation Intel quad-core processor, it has the chops to compete with the older Core 2 Extreme-equipped systems around.

Like other Mach V models, this latest one comes with lots of space for upgrades. Falcon installed an Intel 80GB solid-state drive (SSD), which loads very quickly, and a 1-terabyte hard drive. You also get an astonishing 12GB of memory, at least two expansion cards, and two ATI Radeon graphics cards.

Such advanced components paid dividends in the Mach V's benchmark scores. For example, its score on Windows Media Encoding, 23 seconds, sets a new record for PC Labs, and its 16 seconds on the Photoshop CS3 test is only 2 seconds behind our current Editors' Choice in this category, the Velocity Micro Raptor Signature Edition. The system also returned the fastest scores so far on CineBench R10 (18,787), 3DMark06 (26,044), and 3DMark Vantage (44,685).

When playing 3D games, the Mach V is fast, but Raptor is still faster. The Raptor wins the bang-for-the-buck test and retains our Editors' Choice, but if



### Falcon Northwest Mach V (Core i7)

\$7,995 direct



**PROS** Staggering multimedia performance. Speedy 3D performance. Solid-state drive. Sexy paint job. 1,200W power supply. No crapware. Quiet.

**CONS** Not quite the fastest at 3D games. Pricy.

[Click here for more.](#)

you're willing to spend a little more, the Mach V is a justifiable purchase. It has a lot of forward-looking technology and will propel you full force into the world of 64-bit computing.—Joel Santo Domingo

*Specs: 3.2-GHz Intel Core i7 965 Extreme processor (overclocked to 3.99 GHz); 12GB, 1,066-MHz DDR3 SDRAM; 80GB SSD; 1TB, 7,200-rpm SATA hard drive; two ATI Radeon HD 4870 X2 graphics cards; dual-layer DVD±RW drive; HD DVD-ROM/Blu-ray combo drive; 12 USB 2.0 ports, 1 FireWire port, Windows Vista Ultimate (64-bit version).*

## CANON PIXMA iP4600

## Canon's Latest Pixma Retreats on Speed

Single-function, basic inkjet printers suitable for the home or home office haven't quite gone the way of the dinosaur, but they're becoming an endangered species. As time goes on, these printers are being replaced with all-in-ones (AIOs) and photocentric models. The Pixma iP4600 is one of the few new low-cost inkjets coming out, and it does have some photo-friendly touches, such as a PictBridge connector. The iP4600's price has come down from that of the iP4500, but its speed has also dropped, leaving it just short of earning an Editors' Choice.

Like earlier models, the 6-by-11.7-by-17-inch (HWD) iP4600 offers excellent paper handling, with two paper trays and an automatic duplexer. As mentioned, this printer fell behind its predecessor in speed, producing 26 pages per minute for monochrome and 21 ppm for color, compared with the iP4500's 31 ppm and 24 ppm, respectively. The iP4600's output quality was a touch below par for text, a bit above par for photos, and typical for graphics. More than half of the fonts on our text tests were easily readable and well formed at 8 points. Graphics



### Canon Pixma iP4600

\$99.99 direct



**PROS** High-quality photos. Prints directly from cameras. Two paper trays. Automatic duplexing.

**CONS** Slower than the last-generation printer it replaces. Full-page graphics tend to make plain paper curl.

[Click here for more.](#)

were good enough for any internal business use, and all photo prints easily qualified as true photo quality (better than you would expect from a typical drug-store, but not as good as a pro photo lab). The iP4600 even did a reasonable job on monochrome photos, which are a problem for many printers.

Although the step down in speed is a bit of a disappointment, the iP4600 offers a more-than-adequate balance of output quality, paper handling, and price.—M. David Stone



HANNSPREE HANNS SOCCER

## This Monitor's Got Game

Already counting down the days until the next World Cup? If so, Hannspree has a monitor for you. The Hanns Soccer (one of four 19-inch sports-themed displays) is designed for users who want to express their love of the game. This display's 19-inch (4:3 aspect ratio) panel is housed in a round cabinet covered with black and white leather, giving it the look and feel of a real soccer ball. The company also offers baseball and basketball models, as well as a 19-inch widescreen with a basketball-hoop stand.

The 1,280-by-1,024 display sits atop a sturdy black-and-silver stand with tilt and swivel capabilities. You can also pivot the display 90 degrees to view the screen in portrait mode. Two 1-watt speakers embedded below the screen are typical monitor speakers; they're adequate but can't handle loud volume without distorting. At the rear of the cabinet are audio, HDMI, and analog (15-pin VGA) inputs, but the monitor does not have a DVI connection.

In testing, the 2-millisecond (gray-to-gray) pixel response panel had no trouble handling fast-motion sequences. However, this monitor's viewing angles weren't quite as claimed, and it had trouble



### Hannspree Hanns Soccer

\$279.99 list



**PROS** Cool leather-clad exterior. Good motion performance. Pivots between landscape and portrait modes.

**CONS** So-so grayscale performance. Narrow viewing angles. No DVI input.

[Click here for more.](#)

reproducing dark and light shades of gray. Fortunately, the flaw did not affect color quality, but if you'll be retouching photos or doing anything that requires grayscale accuracy, this monitor will likely disappoint. Even with its flaws, this display is more than capable of fulfilling your basic viewing needs, as well as impressing your soccer buddies.  
—John R. Delaney

HP MINI 1000

## HP's Gorgeous Netbook

HP was one of the first companies to sign on to the netbook revolution, wasting little time in launching the HP 2133 Mini-Note PC in answer to the original ASUS Eee PC 4G. HP's new netbook, the Mini 1000, seems modeled on HP's Pavilion line, with a polished design and an Intel Atom platform. This means it more closely resembles other netbooks but avoids some of the quirks of its competitors.

The Mini 1000's design, like that of its Pavilion siblings, uses the In-Mold Decoration technique, in which a pattern is embedded underneath a laminate layer. The system measures 10.3 by 6.6 by 0.9 inches (HWD), about the same as the Acer Aspire One. The 92 percent keyboard is as comfortable as the best netbook screens out there. The feature set, however, has its ups and downs. Although the Mini 1000 offers multiple storage options, such as 8GB and 16GB SSDs and spinning drives that go up to 60GB, the 60GB drive's speed is only 4,200 rpm, compared with 5,400-rpm drives of many others. One game-changing feature is the WWAN slot, which means that the Mini 1000 is mobile-broadband ready.

This configuration comes with Windows XP Home Edition, and later this year HP will introduce Mini 1000s running Mie (pronounced Me), a custom Ubuntu version it developed. Unfortunately, the Mini 1000 was incompatible with most of our bench-



### HP Mini 1000

\$550 direct



**PROS** Runs on the Intel Atom platform. Gorgeous, big (10-inch) glass screen. Best-looking design. Lighter than its rivals. WWAN, bigger battery, and excellent Ubuntu distro options later this year. Superior keyboard.

**CONS** Mouse buttons are awkwardly placed. Slow-spinning hard drives. VGA-out requires a dongle.

[Click here for more.](#)










mark tests, so the jury is still out on performance, but it will probably match its competition. Its MobileMark score was impressive for a unit with a three-cell battery: 2 hours 58 minutes. Design is a big win for the Mini 1000, and despite some feature annoyances, it's worth a look.—Cisco Cheng

*Specs: 1.6-GHz Intel Atom N270; 1GB DDR2 SDRAM; 60GB, 4,200-rpm hard drive; Intel Graphics Media Accelerator 950, 128MB; 10.2-inch, 1,024-by-600 display; Broadcom 802.11g; 2.5 pounds (3.1 pounds travel); two USB ports; 26-Wh, 2.3-Ah lithium ion battery; Windows XP Home Edition.*



# Quick Looks

Visit [pcmag.com](http://pcmag.com) for the full reviews of these and scores of other hardware products.

RED indicates Editors' Choice		PROS	CONS	BOTTOM LINE	SPECS
DESKTOPS					
	<b>HP Pavilion a6610t</b> \$572.87 list; with 19-inch widescreen LCD monitor, \$812.87 ●●●●○	<ul style="list-style-type: none"> <li>• Relatively inexpensive</li> <li>• TV tuner with MCE remote</li> <li>• Expandability</li> <li>• FireWire port</li> <li>• Discrete graphics card</li> <li>• Large 500GB hard drive</li> </ul>	<ul style="list-style-type: none"> <li>• Crapware</li> <li>• External IR receiver</li> </ul>	If you're looking for a budget PC that's a step up from a bargain-basement system (usually \$400 to \$500), the a6610t has decent power, good features, and the ability to go the extra mile.	2.6-GHz Intel Core 2 Duo E4700 processor; 3GB 800-MHz DDR2 SDRAM; 500GB, 7,200-rpm SATA hard drive; 256MB nVidia GeForce 9300+ GE graphics; dual-layer DVD±RW; 19-inch widescreen LCD; Vista Home Premium 64-bit.
	<b>Sony VAIO VGC-JS190J/B</b> \$1,449.99 direct ●●●●○	<ul style="list-style-type: none"> <li>• Compact all-in-one PC</li> <li>• Faster processor, larger hard drive than all-in-one rivals</li> <li>• Blu-ray reader</li> <li>• 4GB of memory</li> </ul>	<ul style="list-style-type: none"> <li>• Wired keyboard and mouse spoil sleek lines</li> <li>• Not true 1080p</li> <li>• Some crapware</li> <li>• Weak integrated graphics</li> <li>• Blu-ray drive is tray-loading</li> </ul>	The VGC-JS190J/B is a nice Blu-ray-equipped all-in-one PC for the multimedia maven. It's a little more powerful than its rivals on 2D tasks like video encoding and photo editing, but it makes concessions in the 3D realm.	3.0-GHz Intel Core 2 Duo E8400 processor; 4GB 800-MHz DDR2 SDRAM; 500GB, 7,200-rpm SATA hard drive; 128MB integrated Intel GMA X4500HD graphics; BD-ROM/dual-layer DVD±RW; Vista Home Premium 64-bit.
	<b>ZT Affinity 7225Xi Desktop PC</b> \$749.99 list ●●●●○	<ul style="list-style-type: none"> <li>• Moderately priced quad-core power</li> <li>• Some room for expansion</li> <li>• Good multimedia benchmark test numbers</li> </ul>	<ul style="list-style-type: none"> <li>• Is light on features</li> <li>• Boring design</li> <li>• 90-day trial subscription to Norton Internet Security</li> <li>• Some crapware</li> </ul>	The ZT Affinity comes from a company you may not be familiar with, but it's available near you and worth considering. It provides solid performance for not a lot of money.	2.4-GHz Intel Core 2 Quad Q6600 processor; 4GB 800-MHz DDR2 SDRAM; 500GB, 7,200-rpm SATA hard drive; 512MB ATI Radeon HD 3450 graphics; dual-layer DVD±RW; stereo speakers; Vista Home Premium.
LAPTOPS					
	<b>Fujitsu LifeBook U820</b> \$1,199 direct ●●●●○	<ul style="list-style-type: none"> <li>• Integrated WWAN</li> <li>• Convertible tablet</li> <li>• CF slot</li> <li>• SD slot</li> <li>• Weighs 1.5 pounds</li> </ul>	<ul style="list-style-type: none"> <li>• New resolution makes text even harder to read</li> <li>• 1GB of memory is the max</li> <li>• Runs Vista too slowly</li> <li>• Spinning hard drive is slow</li> <li>• Extended battery makes it look awkward</li> </ul>	The U820's improvements—new keyboard layout, GPS, and a higher screen resolution—aren't enough to kick-start the handheld PC category.	1.6-GHz Intel Atom Z530; 1GB DDR2 SDRAM; 60GB, 4,200-rpm hard drive; 250MB Intel Graphics Media Accelerator 500; 5.6-inch, 1,280-by-800 widescreen LED; 802.11g; 1.5 pounds; 42-Wh, 5.8-Ah battery; Vista Home Premium.
PRINTERS					
	<b>OKI Printing Solutions C8800n</b> \$2,400 street ●●●●○	<ul style="list-style-type: none"> <li>• Prints on tabloid (11 by 17 inches) and banner-size paper (up to 11.6 by 47.2 inches)</li> <li>• Low price for a tabloid-size color laser</li> </ul>	<ul style="list-style-type: none"> <li>• Slow</li> <li>• Relatively low text quality for a laser</li> </ul>	The C8800n is a highly affordable option for printing in color on up to tabloid-size paper or even larger, with banner printing up to 11.6 by 47.2 inches.	Color laser; one-pass color; rated speed: 32 ppm (mono), 26 ppm (color); cost per page: 1.7 cents (mono), 10.2 cents (color); 400-sheet input capacity; 13.4 by 19.1 by 23.3 inches (HWD); 76.5 pounds.
	<b>Xerox Phaser 3100MFP/X</b> \$349 direct ●●●●○	<ul style="list-style-type: none"> <li>• Small</li> <li>• Lightweight</li> <li>• Prints and scans</li> <li>• Standalone copier and fax</li> <li>• Prints from and scans to USB key</li> </ul>	<ul style="list-style-type: none"> <li>• Relatively slow</li> <li>• Subpar text quality</li> <li>• Confusing front panel</li> <li>• Software includes commands that aren't supported</li> <li>• Paper jams with 24-pound paper</li> </ul>	The 3100MFP/X prints, scans, and works as a standalone copier and fax machine, but it simply offers far too little value for the price.	AIO laser; monochrome; flatbed scanner; copier; 251-sheet input capacity; cost per page: 3.3 cents (mono); 16.2 by 17.6 by 15.2 inches (HWD); 28.7 pounds.
	<b>Lexmark X4650</b> \$129.99 direct ●●●●○	<ul style="list-style-type: none"> <li>• Built-in Wi-Fi</li> <li>• Prints, scans, copies</li> <li>• Scans to e-mail, using PC's e-mail program</li> </ul>	<ul style="list-style-type: none"> <li>• Slow</li> <li>• Text and photos are somewhat subpar for an inkjet</li> </ul>	Built-in Wi-Fi makes printing from multiple computers easy, but the X4650 is limited by slow speed and slightly subpar text and photo quality.	Home inkjet AIO; one-pass color; 11-in-1 flash memory card reader; copier; 100-sheet input capacity; cost per page: 5 cents (mono), 11 cents (color); 11.3 by 18.0 by 22.1 inches (HWD); 15 pounds.
DISPLAYS					
	<b>Samsung SyncMaster T220HD</b> \$400 street ●●●●○	<ul style="list-style-type: none"> <li>• Great color reproduction</li> <li>• Lots of A/V connections</li> <li>• Stylish design</li> </ul>	<ul style="list-style-type: none"> <li>• Weak grayscale performance</li> <li>• Lacks USB ports</li> <li>• No VESA mount capabilities</li> </ul>	Part HDTV and part LCD monitor, the T220HD is ideal for use in tight spaces such as dorm rooms and cramped workspaces. Its sleek lines and colorful bezel will dress up even the drabest of desktops.	22-inch LCD; 1,680-by-1,050 native resolution; component, composite, DVI, HDMI, analog VGA, and DVI-D inputs; aspect ratios: 4:3 (normal mode), 16:9 (auto-wide mode).
STORAGE					
	<b>Seagate FreeAgent Go (500GB)</b> \$239.99 list ●●●●○	<ul style="list-style-type: none"> <li>• 500GB capacity</li> <li>• Five-year warranty</li> <li>• Hot swappable</li> <li>• Convenient optional docking station</li> </ul>	<ul style="list-style-type: none"> <li>• Windows-only software (in this model)</li> <li>• Dock is optional</li> <li>• Software is oriented toward document storage</li> </ul>	The FreeAgent Go is a great portable hard drive with its 500GB capacity, innovative dock, simple design, generous five-year warranty and included software.	External hard drive; 500GB capacity; 5,400 rpm.





SONY VAIO VGN-Z590

## Sony's Winning Ultraportable

No other ultraportable line captures the essence of thinking outside the box like Sony's. Sony was the first to introduce an ultraportable weighing less than 4 pounds with an optical drive and discrete graphics. The company's latest ultraportable, the VAIO VGN-Z590, breaks new ground once again. The dual SSDs, a Blu-ray drive, and switchable graphics are features commonly found on an 8-pound media center, not a 3.2-pound ultraportable. It's amazing that Sony was able to fit this amount of technology into a small frame. For this accomplishment, Sony retains the Editors' Choice in the ultraportable category.

The Z590 measures 8.3 by 12.4 by 1.2 inches and weighs 3.2 pounds—more compact and at least a half a pound lighter than its predecessor, the VGN-SZ791N. It's slightly heavier than the MacBook Air (3 pounds) but lighter than the Lenovo ThinkPad X301 (3.3 pounds). Clad in carbon fiber, this VAIO's 1,600-by-900 LED widescreen is very thin and bright. Also, you get a built-in Blu-ray burner, HDMI port, dual 128GB SSD drives (or the less expensive 160GB, 5,400-rpm standard hard drive), Bluetooth, and mobile broadband through Sprint's EV-DO Rev A.

Unlike the Lenovo X301 and the Apple Air, this VAIO doesn't sacrifice fast processors and discrete graphics cards to preserve battery life. With its 2.53-GHz Core 2 Duo P9500 processor and 4GB of mem-

ory, this laptop's score on SYSmark 2007 Preview Overall was more than twice that of the MacBook Air. And its switchable graphics means that you can choose between higher performance and longer battery life. With the nVidia chipset enabled, the Z590 tallied a score of 4 hours 5 minutes on the MobileMark 2007 battery rundown test. The integrated chipset boosted the system to 5 hours 6 minutes.

Although our tested configuration is overpriced, this VAIO is nonetheless the lightest ultraportable out there to offer so many features.—Cisco Cheng

**Specs:** 2.53-GHz Intel Core 2 Duo P9500; 4GB DDR3 SDRAM; 256GB SSD; switchable graphics: 256MB Intel GMA 4500MHD/Nvidia GeForce 9300M GS; 13.1-inch 1,600-by-900 LED widescreen; Intel Wireless WiFi Link 5100; 3.2 pounds (4.1 pounds travel); two USB ports; one FireWire port; 58-Wh, 5.4-Ah, lithium ion battery; Windows Vista Home Premium.

### PERFORMANCE TESTS

▲ High scores are best.  
▼ Low scores are best.  
Bold type denotes first place.

	MOBILE-MARK 2007 ▲ hr:min	SYSMARK 2007 OVERALL ▲	MULTIMEDIA TESTS		
			WINDOWS MEDIA ENCODER ▼ min:sec	PHOTO-SHOP CS3 ▼ min:sec	CINE-BENCH R10 ▲
<b>Sony VAIO VGN-Z590</b>	4:05	<b>155</b>	<b>1:00</b>	<b>0:32</b>	<b>5,251</b>
Apple MacBook Air (running Boot Camp)	3:05	67	2:11	0:51	2,483
Lenovo ThinkPad X301	<b>5:37</b>	89	1:47	0:53	2,857

RED denotes Editors' Choice.

### Sony VAIO VGN-Z590

\$4,199 direct



**PROS** Sub 3.5-pound ultraportable. Switchable graphics. Great battery life.

Blu-ray option. Sleek carbon-fiber chassis. HDMI-out. Mobile broadband standard. Excellent resolution. Extended battery option. Great performance. Very good battery life. Low base configuration price.

**CONS** SSD drives are pricey. System can get outrageously expensive.

[Click here for more.](#)

### QuickBooks Accounting Pro Edition 2009

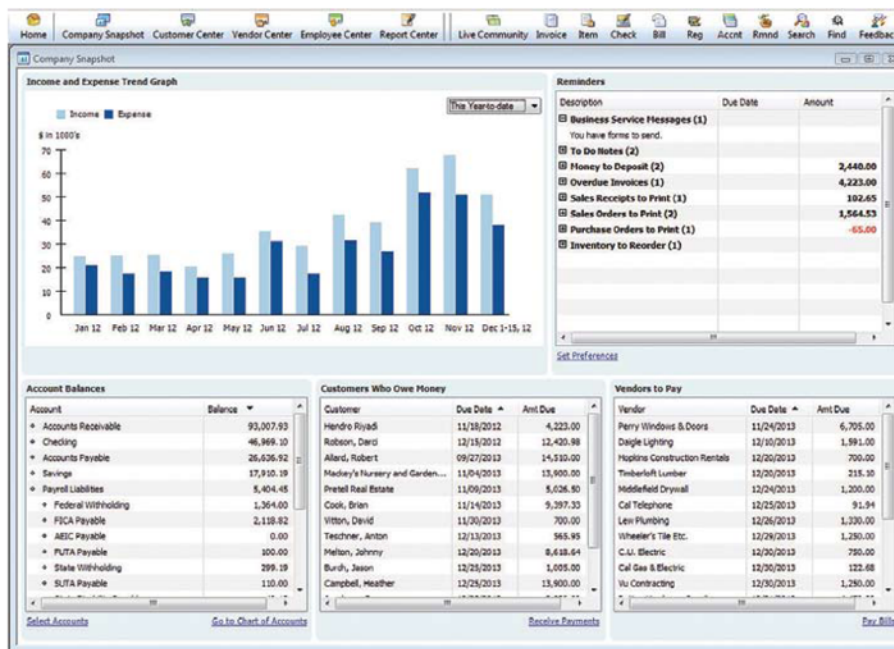
Single user, \$199.95;  
three users, \$549.95



**PROS** Excellent stable of features for small businesses. Good management overviews. Expansive payroll options. Clean, slick interface. Marketing tools.

**CONS** Limited inventory tracking. Database records and setup could be deeper.

[Click here for more.](#)



**PARING IT DOWN** With QuickBooks, you can see exactly where you are financially with your company's key numbers.

# Managing Money in Troubled Times

These four accounting packages can help you keep a closer eye on your bottom line. *By Gary Berline and Kathy Yakal*

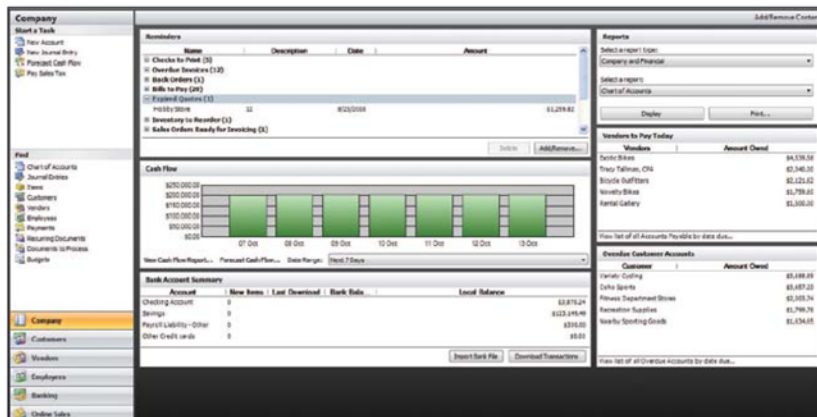
Anyone running a small business knows that new money is hard to come by these days. Chances are, your revenue stream is not going to see much growth, so you'll have to make do with what you've got for a while. That means keeping a very close eye on your accounts and cash flow. Whether your staff consists of just you or an entire crew, you can't afford

to keep doing your bookkeeping on Post-it notes. Powerful, inexpensive, and easy-to-use accounting packages abound, and we've reviewed four of the best to help you pick the right one.

### Microsoft Office Accounting Professional 2008

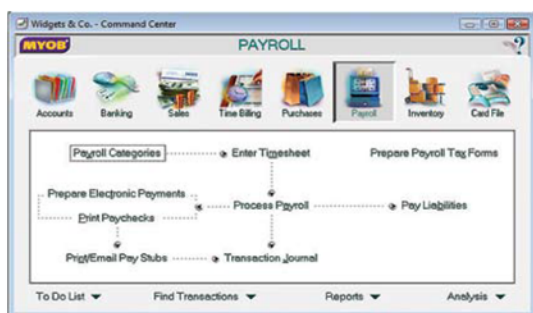
When Microsoft first stepped into the small-business accounting ring a few years ago, it took a beating at the hands of nimbler competitors. But since then it has developed a product with a fluid Microsoft Outlook style and integration with eBay, PayPal, Equifax, and Outlook with Business Contact Manager. The 2008 version doesn't have as many updates as Peachtree's and QuickBooks' new offerings, but you do get pluses like scheduled documents, the ability to convert sales orders into purchase orders, and additional reports, making Microsoft a respectable contender in this category.

This suite's setup is quick and easy, though you should take the time to fill in the Set Company Preferences area, where you establish defaults, such as interest rates, system accounts, and using jobs for multistep projects, which will be useful



**COMPANY CLEARINGHOUSE** Take a look at Microsoft Office Accounting's Company Center first thing in the morning to see exactly where you stand.





**EASY NAVIGATION** MYOB pioneered the graphical flow chart that other programs now use. Click on a program module, then on the action you want to take.

later. Although setup isn't painful, QuickBooks and Peachtree both offer an approach to setup that's more thorough and automated. The overall interface is easy to use, including a dashboard with reminders, cash-flow graph, accounts payable, and overdue-customer tools. This suite's strongest suit is its sturdy integration with Word, Excel, Outlook, and eBay/PayPal. Ultimately, Office Accounting is not as good across the board as QuickBooks, but it's nonetheless a solid, creative small-business accounting program that's worth considering.

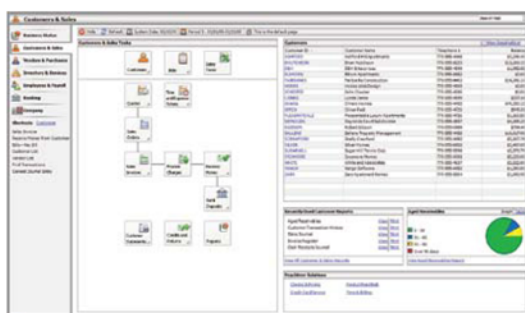
### MYOB Premier Accounting 2008

MYOB may not be the name that comes to mind when you think of small-business accounting software, but it was one of the first for Windows. MYOB offers a very capable set of tools, and the application's Mac-based beginnings give it one of the cleanest, most easily navigable interfaces. The current version doesn't add an enormous amount, but the core capabilities are strong. Unfortunately, MYOB hasn't kept up with the online capabilities of its rivals.

The setup of MYOB is about as straightforward as those of the others here. The Command Center navigation is simple and clean, and only Microsoft's Office Accounting offers an interface with a lower barrier to entry. The lack of comprehensive online banking, however, is a huge drawback. You can send payments directly into vendors' accounts electronically, but you can't have the program mail out checks. MYOB is flexible but somewhat out-of-date. It's a good product, and existing users should be happy continuing with it. Still, QuickBooks Pro will serve you better overall at roughly the same price.

### Peachtree by Sage Complete Accounting 2009

Peachtree's accounting roots in the small-business market reach back to the early nineties, and the company's experience shows in the 2009 version. The software competes well against the others here, though it can't beat QuickBooks at simplicity and usability. New features include real-time error reporting, multiyear reporting within general ledger reports and financial statements, and improvements to time and expense tracking.



**DIGITAL DASHBOARD** Each of Peachtree's program modules has a dashboard that contains a flow-chart-type navigation tool with related data.

Peachtree Complete has always had a good setup procedure, and this latest edition is no exception. The app has you select a matching business type from a list of dozens, then it builds a set of accounts that will work best with your choice. The Company Center contains an eclectic mix of tools that give you access to key reports and financial statements, links to data maintenance tools, and a list of miscellaneous company information. I like this dual approach; it's similar to the tack QuickBooks takes with its company snapshot and company home page. You also get good online banking features. Further, Peachtree's payroll solutions are impressive, trailing QuickBooks only in the sheer number of options. Aside from one gripe with Peachtree—its excessive use of new windows—it is a good package that will continue to serve its existing users well.

### QuickBooks Accounting Pro Edition 2009

QuickBooks has been a crowd-pleaser since it was introduced in the early nineties, and it will continue to be so with the 2009 edition. QuickBooks has made more enhancements and added more features than rivals Microsoft Accounting Professional, MYOB, and Peachtree. Simply put, it's just a better overall package.

Improvements include the ability to run reports even while others are working in QuickBooks, and a new Company Snapshot feature that gives you an overview of key financial data. This version also supports over 100 foreign currencies. And to promote your business, you can even build a professional-looking Web site. Intuit will host three-page sites free for 12 months, and \$4.99 monthly after that.

The setup process for QuickBooks is somewhat involved, but that's so it can tailor itself to your needs. During the interview, the setup routine makes many program configuration settings for you, but not all of them. For payroll, you can opt for one of the two DIY solutions or the QuickBooks Assisted Payroll—all involve an extra fee.

QuickBooks is a perennial favorite, and we don't hesitate to recommend it for the lion's share of small businesses. It's flexible, friendly, and the best this year, earning our Editors' Choice for small-business accounting. □

### Microsoft Office Accounting Professional 2008

Single user,  
\$199.95 direct;  
three users, \$499.95

●●●●○

**PROS** Familiar Outlook-like interface. Robust integration with other apps. Good help system. Clear, understandable navigation. Good online sales tools.

**CONS** Fewer payroll options than competitors have. Weak inventory tracking.

[Click here for more.](#)

### MYOB Premier Accounting 2008

New users, \$299 direct; upgraders, \$159; multiuser, \$249; \$100 rebate for switching from QuickBooks.

●●●●○

**PROS** Clean, well-designed interface. Solid set of accounting tools. Card File centralizes databases. Very capable inventory tracking. Do-it-yourself and hands-off payroll available.

**CONS** Incomplete online banking. No links to Web services or extensive outside integration.

[Click here for more.](#)

### Peachtree by Sage Complete Accounting 2009

Single user,  
\$269.99 direct;  
five users, \$699.99

●●●●○

**PROS** Exceptionally thorough modules, especially inventory. Three payroll levels. Understandable, task-based interface. Good overview tools for managers.

**CONS** New windows open too often. Outdated interface.

[Click here for more.](#)


**Iomega eGo Desktop Hard Drive (1TB)**

\$269.99 list

●●●○○

**PROS** Large capacity. Unique style. Good GB-per-dollar value.

**CONS** Software must be downloaded. Backup software is PC-only. Short one-year warranty.

[Click here for more.](#)

IOMEGA EGO DESKTOP HARD DRIVE (1TB)

## Roomy, No-Frills Storage

The Iomega eGo Desktop is a 1-terabyte desktop-class hard drive that offers a lot of storage for not a lot of money. Its styling and features share similarities with the smaller, pocket-size Iomega eGo hard drives.

The hip-flask-shaped, painted metal chassis measures 1.8 by 4.8 by 8 inches (HWD) and comes in blue, red, and black. The drive doesn't come with any loaded software (leaving the entire 1TB at your dis-

posal) but you can download the Retrospect Express HD simple backup software from Iomega's Web site. The software is Windows only, but Mac users can always fall back on Time Machine if they're running Mac OS 10.5. Also, to use this drive with a Mac, you must reformat the drive to HFS+.

In terms of performance, this drive is fairly speedy: It took only 49 seconds to copy our 1.2GB test folder via Windows drag-and-drop. The Retrospect software took quite a bit longer, 2:02, because it does a post-copy verification and stores files in its own format. The eGo's score of 3,477 on PCMark05's HDD test showed it to be much faster than other pocket drives, which usually score less than 3,000.

Compared with a 500GB pocket drive like the Seagate FreeAgent Go, the eGo is a lot cheaper on a per-gigabyte basis. And all things considered, it's a decent drive in an attractive case, at a good price. But businesses and those who want more robust backup software should look elsewhere for a more complete package.—*Joel Santo Domingo*


**Mitsubishi XD500U-ST**

\$1,300 street

●●●○○

**PROS** Short throw. Reasonably light and portable. Comes with a soft carrying case.

**CONS** Obscure on-screen menu options and labels on the remote. Contrast ratio is unusually low.

[Click here for more.](#)

MITSUBISHI XD500U-ST

## Big Pictures for Small Rooms

Mitsubishi calls the XD500U-ST an ultra-short-throw projector. I'd call it a short-throw projector instead, but the truth is there's no hard-and-fast definition for either term. Whatever you call it, it's a more than reasonable choice for anyone who needs an XGA (1,024-by-768) projector that can project a fairly large image in a tight space.

This projector displayed our 2-meter-wide (98-inch diagonal) test image from just 4 feet 6 inches

away. That's a lot closer than the 9 to 13 feet that most projectors need, but it's still more than the 15 inches needed by our current Editors' Choice in this category, the Hitachi CP-A100.

Yet one clear advantage the XD500U-ST has over the Hitachi unit is portability. At 4.0 by 13.1 by 9.8 inches (HWD) and 7.3 pounds, you might not want to lug it with you on regular basis, but it's small and light enough to bring along at least occasionally. There are also plenty of connection options, including two VGA, one pass-through VGA, S-Video, composite video, RCA phono, USB, and a stereo mini jack.

On my tests, setup was easy, with the projector automatically syncing perfectly with the incoming signal. And you can unplug the projector and pack it up as soon as you power off, a nice feature. Although the menus and controls are somewhat obscure and the image quality suffers from a few (relatively minor) shortcomings, this is a more than reasonable choice for those who need a projector for cramped spaces.—*M. David Stone*





### RIM BlackBerry Storm 9530

Price: \$399.99; as low as \$199.99 with contract and rebate

●●●○○

**PROS** Big touch screen actually clicks. Fast Internet in the U.S. and abroad. Solid GPS and media players.

**CONS** Buggy. Interface may be frustrating at first. QWERTY keyboard is difficult to use. Touchy accelerometer. Roxio desktop software is very slow.

[Click here for more.](#)

### RIM BLACKBERRY STORM 9530

## A Troubled Storm

Verizon's BlackBerry Storm 9530 is a radical new direction for BlackBerry, but it's imperiled by a difficult-to-use QWERTY keyboard and widespread reports of serious bugs.

The decidedly sexy 5.5-ounce Storm is a 4.4-by-2.4-by-0.5-inch (HWD) slab dominated by a 3.3-inch, 360-by-480-pixel touch screen. The screen is *capacitive*, meaning it detects the electricity from your fingers, thus requiring less effort to press. It is also *transflective*, so it's easy to view outdoors in bright light. Below the display are Pick Up and End call buttons, a Back button, and the familiar BlackBerry menu key. On the sides of the handset, you'll find Camera, Volume, and a programmable multi-function button. RIM has again transformed keyboard design with the Storm's click screen, which you click by pressing down. Although this method



gives you actual feedback, the learning process for the new interface is challenging. Furthermore, the keyboard had some serious accuracy problems.

The Storm showed zippy performance when it wasn't overcome by software bugs. It is a world phone, running on Verizon's EV-DO Rev A network here in the U.S. and on dual-band CDMA, quad-band EDGE, and 2,100-MHz HSDPA networks abroad. On our tests, the Storm registered fine reception, and earpiece and speakerphone volume are both very loud. In a straight-up talk time test, I got an excellent 7 hours 25 minutes.

Overall, the Storm is an exciting device. Nonetheless, I can't recommend it strongly until the software bugs are fixed.—*Sascha Segan*



### Motorola MotoZINE ZN5

\$349.99; \$199.99 and up with 2-year contract

●●●○○

**PROS** 5-megapixel camera. Excellent call quality. Full Web browser. Wi-Fi.

**CONS** No 3G or Wi-Fi calling. Low-quality video recording mode. Photos are noisy in low light.

[Click here for more.](#)

### MOTOROLA MOTOZINE ZN5

## The Hi-Res Camera Phone Gets Affordable

Developed by Motorola and Kodak, MotoZINE ZN5 for T-Mobile succeeds admirably at its two primary goals: to excel as both a camera phone and a voice phone. This is the first 5-megapixel camera phone offered by a U.S. carrier, and with the contract price and mail-in rebate, it's a terrific deal. But to hit this price point, Motorola had to make some sacrifices, such as 3G capability and decent video recording. Still, if you just want to make calls, send text messages, and snap good pics, the ZN5 is the way to go.

From the front, the 4-ounce ZN5—4.65 by 2.0 by 0.6 inches (HWD)—looks like your average high-class slab-style handset. It's got a large, bright, 2.4-inch, 320-by-240-pixel screen over a flat keypad with small tactile bumps on the number keys. Various parts of the keypad light up to activate special functions, such as photo reviewing or editing, when needed. With a combination of hard- and soft-touch plastic, the ZN5 feels comfortable.



Call quality is excellent: Voices are clear even in extremely noisy locations. The speakerphone also sounds good. The phone's RF reception, on the other hand, didn't stand out from the crowd of 2G T-Mobile phones on my tests. The ZN5's Wi-Fi connected without a problem. As stated, the phone's camera is responsive and produces good shots, even in low light. You can store your photos in the 350MB of memory or on a microSD and download them via the included micro USB cable or over Bluetooth.

Overall, the Motorola MotoZINE ZN5 is a solid device, and its super-low price makes it an amazing value—the most affordable camera phone you'll find in the U.S., in fact. It fell just short of winning our Editors' Choice award; that prize still belongs to the Sony Ericsson TM506, which uses T-Mobile's new 3G network.—*Sascha Segan*

## SONY CYBER-SHOT DSC-T77

## Sony's Sexy Cyber-Shot

In simple terms, the DSC-T77 is a beauty. Its compact design, metallic features, and touch screen make it feel like a luxury item. Aside from color fringing in the corners of images, most users will find this camera's shots dazzling. The DSC-T77's 3-inch LCD touch screen is very responsive, and the user interface is more intuitive than those of competing touch-screen models, such as the Nikon Coolpix S60 and the Kodak EasyShare v1073. But as with any camera that employs a touch screen, battery life suffers.

The T77 has a very slim build, measuring just 2.4 by 3.8 by 1.3 inches (HWD), but feels rock solid. The lens has a focal range of 6.18mm to 24.7mm, with corresponding maximum f-stops of f/3.1 and f/5.9, and a 4X optical zoom. Sony has jam-packed this shooter with features, including face and smile detection, an assortment of in-camera editing options, and fun effects like soft focus, fish-eye lens, radial blur, and retro.

The T77 is also a reasonably quick camera, with good boot and recycle times (and little shutter lag).



Sony's touch-screen interface works well, displaying a lot of information without overcrowding. Sony also includes physical buttons for the most commonly used operations: on/off, shutter release, playback/shoot, and zoom in/out. As with most point-and-shooters, you'll find distortion at both ends of the lens, but no more than is tolerable. In the wide-angle position, barrel distortion is evident. At the full telephoto position, there's a bit of pincushion distortion. Video shot with the T77 looked and sounded good, but I wish it could record widescreen SD video. Also, battery life was much shorter than expected.

Overall, the T77 offers good speed, solid imagery, and exciting in-camera editing tools. Just don't forget to bring along an extra battery. —PJ Jacobowitz



## Sony Cyber-shot DSC-T77

\$299 direct

●●●●●○

**PROS** Great image quality. Fast operation. Luxurious, thin build. Touch-screen menus are quick and responsive. Tons of in-camera editing options.

**CONS** Strong color fringing. Poor battery performance.

[Click here for more.](#)

## NIKON D90

## This D-SLR Does HD Video

Budding shutterbugs looking into buying their first D-SLR are often surprised by one missing feature most cheaper point-and-shooters have: video. That's no longer the case, thanks to the 12.3-megapixel D90, which shoots 720p HD.

The same size as its predecessor—the Nikon D80—the solid D90 measures 4.1 by 5.2 by 3 inches (HWD) and weighs 1 pound 6 ounces. It's noticeably larger and heavier than the slightly more basic Canon EOS Digital Rebel XSi, our Editors' Choice for entry-level D-SLRs, which sells for \$300 less.

Controls abound on the D90. There are two command dials to change ISO and shutter speed. In addition, a mode dial lets you select among settings such as automatic, automatic without flash, program, and aperture or shutter priority. You also get typical scene modes such as macro, portrait, and landscape. There is also the multi-selector, an iPod-style scroll wheel, 19 more buttons, and two toggle switches. As you can imagine, navigating all these controls is tricky, so don't lose the manual.

The D90's 3-inch display is four times as sharp (920,000 pixels) as the D80's. There's also a small black-and-white secondary display on top to change settings. Nikon switched to a DX-format CMOS



sensor, which does wonders for reducing noise and helps eliminate blue fringing in nearly all photos with high-contrast areas. Another upgrade from its predecessor is Live View, which lets you use the camera's LCD as a viewfinder. In testing, daylight still shots tended to be bright, with pleasing, natural color, and low-light shots produced only moderate noise.

Now to its video capability. The quality was decent for both handheld and tripod shooting. Unfortunately, there's no stereo audio recording, autofocus, power zoom, or articulated LCD, and there are minimal choices in settings. The D90 shows some good improvements over the D80, but if you don't need video, the Rebel XSi is still the better choice. —Tony Hoffman



## Nikon D90

Body only, \$999.95 list

●●●●●○

**PROS** Solid image quality. Excellent color fidelity. Low noise, even at high ISOs. Shoots HD video.

**CONS** Controls aren't very intuitive. Relatively low still-image resolution. Video features are limited.

[Click here for more.](#)





SHARP LC-52SB55U

## Sharp's Big-Screen LCD Deal

As more LCD manufacturers aim to improve picture clarity with 120-Hz frame refresh rates, the larger 60-Hz panels are bargain priced. The 52-inch Sharp LC-52SB55U is a prime example of one such big-screen value HDTV, delivering a superb, detailed HD picture. But given the falling prices of HDTVs, the competition is growing.

This LCD features a thin-and-glossy black bezel (about 1.8 inches wide) surrounding its dark, anti-reflective screen and a 2-by-10-inch stereo speaker bar that provides anemic bass response.

This model has the best selection of video inputs of the sets in Sharp's SB series (see the port chart on this page). In terms of picture quality, the LC-52SB55U's average contrast ratio of 1,105:1 indicates that its ability to produce video black isn't as good as that of the Samsung LN52A550 (2,782:1), so it will be less impressive in dimly lit environments. For most movies and TV shows, this LCD's default picture preset needs a quick tweak. Selecting the TV's "movie" preset enables film detection and activates

the LCD's integrated room-light sensor. This setting adjusts the panel's backlight system in response to ambient light conditions—the darker the room, the lower the backlight output—and provides a substantial reduction in energy consumption.

With the LC-52SB55U's film-detection feature enabled, the set's ability to process 1080i video (prime-time TV) into a progressive picture (1080p) was superb, producing as detailed a picture as any LCD HDTV on the market. As energy consumption goes, this LCD is on a par with most 52-inch LCD TVs: good out of the box, but even better with a few adjustments. The set's estimated monthly operating cost at default picture settings is \$4.27 (5 hours a day at \$0.13/kWh).

This HDTV is a good value for a big-screen 1080p LCD. Although its picture sharpness and number of HDMI ports is superior to the Samsung LN52A550's, the Samsung HDTV can play digital music and display pictures via USB—for about the same price. —Robert Heron

**Sharp LC-52SB55U**  
\$2,299.99 list



**PROS** Excellent HD picture detail. Solid value.

**CONS** Film-detection mode is not enabled by default. Picture contrast lags behind some competitors' models. Some SB-series models have fewer HDMI ports and fewer picture-control options.

[Click here for more.](#)

### PORTS INCLUDED

CableCARD	0
Component	2
Composite	2
DVI	0
Ethernet	0
FireWire	0
HDMI	4
RF	1
RS-232C	1
S-Video	1
USB	1
VGA	1



# Quick Looks

Visit [pcmag.com](http://pcmag.com) for the full reviews of these and other consumer electronics products.

RED indicates Editors' Choice.

	PROS	CONS	BOTTOM LINE	SPECS
<b>SMARTPHONES</b>				
 <b>HTC Fuze</b> \$499; \$299 (with two-year AT&T contract and after mail-in rebate) ●●●○○	<ul style="list-style-type: none"> <li>• Attractive design</li> <li>• Bright, high-res screen</li> <li>• QWERTY keyboard</li> <li>• Solid Web browser</li> </ul>	<ul style="list-style-type: none"> <li>• Expensive</li> <li>• Sluggish at times</li> <li>• Poor speakerphone and camera</li> <li>• No dedicated camera button</li> </ul>	A full QWERTY keyboard turns HTC's slick touch-enabled phone into a true messaging powerhouse, but it exhibits many of the same problems that have plagued earlier TouchFLO devices.	Windows Mobile Pocket PC; GPRS, EDGE, UMTS, HSDPA data networks; 2.8-inch, 480-by-640 TFT LCD; 3.2MP camera; 4.0 by 2.0 by 0.7 (HWD), 5.8 ounces.
 <b>Samsung Epix SGH-i907</b> \$199 (with two-year AT&T contract and after mail-in rebate) ●●●○○	<ul style="list-style-type: none"> <li>• Powerful hardware</li> <li>• Bluetooth, GPS, and Wi-Fi</li> <li>• Comprehensive media support</li> <li>• Stellar endurance</li> </ul>	<ul style="list-style-type: none"> <li>• Larger and bulkier than competitors</li> <li>• Buggy UI</li> <li>• Middling camera</li> <li>• Riddled with crapware</li> </ul>	The Epix is a powerful touch-screen business phone with awesome battery life, but pesky interface issues and crapware make it a subpar replacement for a BlackBerry or iPhone.	Windows Mobile Pocket PC; GPRS, EDGE, UMTS, HSDPA data networks; 2.5-inch, 320-by-240 LCD; 2MP camera.
<b>BLUETOOTH HEADSETS</b>				
 <b>Motorola MotoPURE H15</b> \$129.99 direct ●●●●○	<ul style="list-style-type: none"> <li>• Sharp, diminutive design</li> <li>• Top-notch noise cancellation and wind suppression</li> <li>• RapidConnect pairing</li> </ul>	<ul style="list-style-type: none"> <li>• Voice quality and comfort fall just short of class leaders</li> <li>• Middling battery life</li> </ul>	The solid-performing H15 is a marked improvement over its failed predecessor, the H12. Motorola's noise-canceling circuitry actually works this time around.	Supra-aural; Bluetooth; 1.75 by 0.75 by 0.5 (HWD); 0.4 ounces.
<b>DIGITAL CAMERAS</b>				
 <b>Canon PowerShot SD990 IS</b> \$399.99 list ●●●●○	<ul style="list-style-type: none"> <li>• Excellent image quality</li> <li>• Full manual control</li> <li>• Speedy boot and recycle times</li> <li>• Little shutter lag</li> </ul>	<ul style="list-style-type: none"> <li>• Expensive</li> <li>• Somewhat bulky</li> <li>• Can't record high-def video</li> <li>• Average noise scores</li> </ul>	What Canon's SD990 IS lacks in glamorous features it makes up for in speed and brilliant images.	14.7MP resolution; 3.7X optical zoom; 2.5-inch LCD; accepts SD and SDHC flash memory; 2.45 by 3.81 by 1.10 inches (HWD); 6.6 ounces.
 <b>Nikon Coolpix S610c</b> \$329.95 list ●●●●○	<ul style="list-style-type: none"> <li>• Excellent image quality</li> <li>• Very little noise at high ISO settings</li> <li>• Fast</li> <li>• Built-in Wi-Fi works well</li> </ul>	<ul style="list-style-type: none"> <li>• Controls feel flimsy</li> <li>• Images transferred via Wi-Fi are downsized</li> <li>• Considerable barrel distortion in wide-angle shots</li> </ul>	The 10-megapixel Coolpix S610c takes amazing shots and features built-in Wi-Fi, which lets you jump onto any wireless network to send pics via e-mail—but only at 2MP resolution.	10MP resolution; 4X optical zoom; 3-inch LCD; accepts SDHC flash memory; 2.2 by 3.8 by 0.9 inches (HWD); 4.6 ounces.
<b>GPS</b>				
 <b>Microsoft Streets &amp; Trips 2009 with GPS Locator</b> \$74.95 list; software only, \$39.95 ●●●●○	<ul style="list-style-type: none"> <li>• Text-to-speech conversion</li> <li>• Multisegment routing</li> <li>• Integrates MS Live Search</li> <li>• Coupon search</li> </ul>	<ul style="list-style-type: none"> <li>• Small POI database</li> <li>• Sluggish on route recalculation times</li> </ul>	The addition of text-to-speech functionality makes Streets & Trips 2009 a worthwhile upgrade. For laptop GPS navigation, it remains an unbeatable value.	1.6 million POI database; text-to-speech.
<b>SPEAKER DOCKS</b>				
 <b>Sony Air-SA20PK S-Airplay</b> \$399.95 direct ●●●○○	<ul style="list-style-type: none"> <li>• Clean wireless audio transmission</li> <li>• Expandable to up to ten rooms</li> <li>• Full iPod navigation with remote control</li> </ul>	<ul style="list-style-type: none"> <li>• Wireless signal can be interrupted by Wi-Fi and cellular radios</li> <li>• Can't handle deep bass at high volumes</li> </ul>	Despite a relatively affordable price and clean audio transmission, the Sony S-Airplay wireless audio system suffers from design flaws and range issues.	2.5-inch LCD; AM/FM radio; RCA audio and composite video outputs; remote control; main unit, 1.7 by 11.6 by 4.3 inches (HWD), subunits, 5.3 by 11.8 by 4.5 inches.
<b>HEADPHONES</b>				
 <b>Shure SE102MPA</b> \$119.99 direct ●●●●○	<ul style="list-style-type: none"> <li>• Crisp, well-defined sound</li> <li>• Great in-ear fit</li> <li>• Removable in-line mic and button combo</li> </ul>	<ul style="list-style-type: none"> <li>• Less bass than in competing models</li> <li>• Considerable cable thump—not a great choice for exercise</li> </ul>	Shure's signature bright response shines through on this affordable, dedicated music-phone headset.	In-ear; passive noise canceling.
<b>HDTVs</b>				
 <b>Sony XEL-1 OLED Digital TV</b> \$2,499.99 direct ●●●●○	<ul style="list-style-type: none"> <li>• Excellent picture contrast</li> <li>• Superb motion resolution (minimal blurring)</li> <li>• Low power consumption</li> </ul>	<ul style="list-style-type: none"> <li>• Expensive</li> <li>• Very small screen</li> </ul>	Sony's 11-inch OLED wonder costs as much as our favorite 50-inch plasma, but given its sublime picture and stellar contrast, we're not complaining one bit.	11-inch screen; 1080i support; 23,132:1 contrast ratio; HDMI, Memory Stick, RF, and USB inputs; 9.9 by 11.8 by 5.5 inches (HWD); 4.3 pounds.





**TARGETED EDITING** Photoshop CS4's Camera Raw feature has a new Adjustment Brush to create targeted areas for adjustment.



**DEPTH OF FIELD** In Photoshop CS4, you can combine multiple photos shot with different focal points into one perfectly focused image.

#### ADOBE PHOTOSHOP CS4

## Photoshop CS4 Astounds

The tent pole of Adobe's massive Creative Suite 4 is Photoshop, the legendary image-editing application known for its power and scope. Adobe could probably get away with resting on the heaps of laurels the app has earned over the years, but as Photoshop CS4 shows, that's not what it's doing. In both the Standard and Extended versions, everyone will enjoy the new modern, animated interface. But in addition, some major improvements targeted at photographers, designers, and animators make this a highly compelling upgrade, although these features augur an even more challenging learning experience. But that's why there's Photoshop Elements, right?

Navigating your way around images has gotten infinitely cooler. Clicking and holding the Zoom tool (or clicking on an image while holding the Z key) causes an animated, almost cinematic zoom-in. I also like the new tabbed document interface, which lets you easily switch between multiple open documents. Other new features include an Adjustments palette, a Vibrance adjustment layer (which successfully manipulates saturation without disturbing skin tones), a new Masks palette, a revamped Brightness/Contrast tool, and an enhanced Auto-Blend Layers (which extends the depth of field so that all areas of the subject are in focus).

Among these significant improvements, unquestionably the most jaw-dropping is content-aware scaling, a feature that lets you change the proportions of an image—for example, morph an 8-by-12 photo to 8-by-10—without squashing or stretching the important image elements. The program makes a good guess at what those important elements are, but you can also add manual guidance to the feature if necessary.

Photoshop CS4 is definitely a must-have upgrade for any graphics professional. The revamped interface brings this venerable program into the 21st century, but there are plenty of guts lurking behind the glamour. The application may be a vast, sometimes unruly beast, but its powers grow more awesome every year.—Galen Fott

#### Adobe Photoshop CS4

Standard, \$699 direct;  
Extended, \$999



**PROS** Image navigation has a new, modern feel. 64-bit support on Vista. Strong interface improvements. Amazing content-aware scaling, depth-of-focus tools. Many other enhancements.

**CONS** No 64-bit Mac version.

[Click here for more.](#)

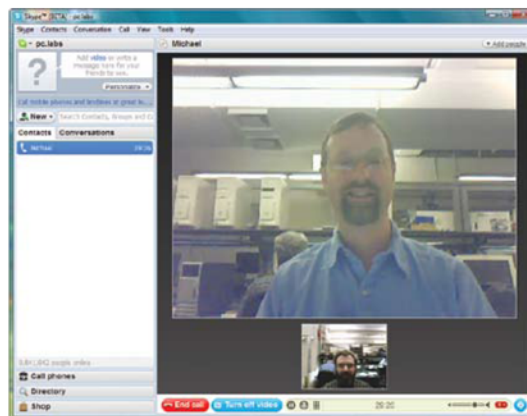


## SKYPE 4.0 BETA 2

## Cheap Voice, Video Chat Gets Better

In response to feedback from 50,000 testers of Skype 4.0 beta 1, the company has made interface changes and fixed some bugs in this Beta 2 version. When Beta 1 launched, many users objected to its much larger main window. This time around, Skype developers have attempted to address that with a compact option; they have also changed the way contacts are grouped and made notifications stand out more.

The newest beta features the same streamlined installation as previous versions, and the process doesn't require as much personal information as SightSpeed's install does, but the download is bigger—23.6MB versus 8MB. The large main window is still the default in Beta 2, but now you can choose Compact Mode, which splits the program's main window into two smaller windows. The new version also cuts down on scattered windows by including instant messaging at the bottom of the call window. The less-crowded new interface also makes controls such as volume and video settings more visible.



### Skype 4.0 Beta 2

PC-to-PC calls, free; calls to and from phones, \$0.02 per minute or \$2.95 monthly  
Not rated

**PROS** Free PC-to-PC voice and video calls. Low rates for calling to and from phones. Clear notifications. Large community. Video and sound quality is improved from the previous version.

**CONS** Default windows are too large. Compact view requires two windows. Video image not as good as SightSpeed's. No video mail. No built-in call recording. No Web client.

[Click here for more.](#)

Placing calls is very similar to that of the previous versions. When I talked with a person in Bangladesh, the audio quality was quite clear, though with occasional gaps. Conversations over Skype-Out—which you need to reach people who don't use Skype—sounded clear, though not quite as clear as a calls over a landline. To receive calls from non-Skype users, you'll need a SkypeIn account (\$20.25 for 3 months or \$67.50 for a year). Video calling is also slightly better. Although this Beta version contains some glitches and missing features, it is nonetheless stable and usable overall.—*Michael Muchmore*

## PICASA 3 (BETA)

## Picasa 3 Makes a Great Impression

After your great vacation, your digital camera is no doubt chock-full of images (and maybe a few videos). So how do you view them, touch them up a bit, and share them with friends and family? For Windows users, Picasa has been the best way to do this for a while. Google's online offering is a slickly integrated image organizer, editor, and enhancer, with cutting-edge online galleries. And what's more, it's a free service that competes favorably with pay services.

On the Mac, iPhoto is nearly as good at consumer photo editing. If you want the online galleries, however, you'll have to pay a hundred bucks a year for Apple's MobileMe service, and you still won't get the rich mix of features you'll find in Picasa Web albums, such as geotagging and viewer commenting. With this release, Picasa adds the abilities to sync local edits with online gallery images, to edit digital movies, and to retouch photos for blemishes. It also turbocharges red-eye fixing, collage creation, and slideshow presentations.

After installation, Picasa gives you a choice of scanning either your hard disk or just My Documents, My Pictures, and the desktop for image files. You don't have to worry about the scan picking up all those temporary Internet image files, by the way—it's smart enough to ignore them. The scan



### Picasa 3 (beta)

Free



**PROS** Polished interface. Geotagging in Web albums. New blemish removal tool. Support for RAW camera files. Syncs local edits with online images.

**CONS** Atypical interface may confuse some users at first.

[Click here for more.](#)

is fast, and a small gray bar on the right-hand side of your screen shows its progress. Picasa 3 doesn't have a drastically updated interface, but rather adds a lot of new functions within the existing interface, such as automatically scanning for new images; viewing images as a slideshow, collage, or movie; Movie, Geo-Tag, and Upload buttons; and the cool new Silhouette button (which finds any picture in an album that contains a face). In short, for everyday shutterbugs who want to get those pictures off their point-and-shooters, organize them into albums, fix them up a bit, and—most important—share them with their loved ones, Picasa is the way to go.—*MM*



# Quick Looks

Visit [pcmag.com](http://pcmag.com) for the full reviews of these and scores of other software products.

RED indicates Editors' Choice.	PROS	CONS	BOTTOM LINE
<b>MOBILE APPS (IPHONE)</b>			
<b>Air Sharing</b> \$6.99 direct ●●●●○	<ul style="list-style-type: none"> <li>Lets you transfer files from computers to the iPhone and back</li> <li>Works with Mac, Windows, and Linux</li> <li>Offers Web access to files on iPhone</li> <li>Thorough built-in help</li> </ul>	<ul style="list-style-type: none"> <li>Some limitations to Office file viewing</li> <li>No file-editing features</li> </ul>	Air Sharing turns your iPhone into a networked drive that can wirelessly transfer files to and from your computers, while also letting you view a wide variety of file types on your phone.
<b>BeejiveIM</b> \$15.99 direct ●●●●○	<ul style="list-style-type: none"> <li>Can connect to multiple IM clients and send message notifications to iPhone Mail</li> <li>To switch chats, you simply shake the phone</li> </ul>	<ul style="list-style-type: none"> <li>Expensive for an iPhone app</li> <li>No emoticons</li> <li>Can't send attachments</li> </ul>	For a whopping \$16, BeejiveIM gives you the ability to stay connected to multiple instant-messaging services on your iPhone—even when you close the app.
<b>OneTap Movies</b> \$1.99 direct ●●○○○	<ul style="list-style-type: none"> <li>Finds theaters and showtimes based on your location</li> <li>Serves tons of trailers</li> </ul>	<ul style="list-style-type: none"> <li>Charges for features that similar apps offer free</li> <li>No search function</li> <li>Accessing third-party film info loads Safari, closes app</li> </ul>	The OneTap Movies iPhone app can help you locate a nearby flick when you're on the go, but so can other apps that don't charge you \$2. Save your money for the popcorn instead.
<b>SpeakEasy Voice Recorder</b> \$1.99 direct ●●●●○	<ul style="list-style-type: none"> <li>Very easy to use</li> <li>Lets you download files to listen to with iTunes</li> <li>Five recording-quality options</li> </ul>	<ul style="list-style-type: none"> <li>Can't record iPhone calls</li> <li>Recording options are buried in iPhone's Settings</li> <li>Downloading files requires separate SpeakEasy Connect software</li> </ul>	SpeakEasy Voice Recorder stands out among the many voice-recording iPhone apps, thanks to its simple interface and ability to download files to play in iTunes. A few technical limitations keep it from being a perfect solution, however.
<b>TextGuru</b> \$4.99 direct ●●●●○	<ul style="list-style-type: none"> <li>Cut, copy, and paste features</li> <li>Extensive help</li> <li>File viewer for Microsoft Office docs, PDFs</li> </ul>	<ul style="list-style-type: none"> <li>No undo</li> <li>Highlighting text for cutting and copying is a bit awkward</li> <li>Can't edit Office docs</li> </ul>	A full-featured text-editing app, TextGuru finally adds cutting and pasting to the iPhone. Its implementation isn't ideal, however, and the interface could stand a few additions.
<b>DATABASE</b>			
<b>Bento 2</b> \$49 list ●●●●○	<ul style="list-style-type: none"> <li>Clear, pleasing interface</li> <li>Includes templates for common uses</li> <li>Easy form design</li> <li>Imports and exports Excel and Numbers files</li> </ul>	<ul style="list-style-type: none"> <li>Lacks sharing and true reporting features</li> <li>Works with Mac OS X Leopard version only</li> <li>Still introduces database complexities that may be scary to consumers</li> </ul>	By putting a simpler face on FileMaker, Bento offers an inexpensive, easy, and attractive way for Mac users to keep track of collections or projects, but it doesn't entirely eliminate the complexity of databases, and still doesn't offer enough in the way of sharing data.
<b>PORTAL</b>			
<b>iGoogle (Fall 2008)</b> Free ●●●●○	<ul style="list-style-type: none"> <li>Canvas view lets you do more with gadgets</li> <li>Full-page feed view</li> <li>Loads faster than Netvibes or Pageflakes</li> <li>No display ads</li> <li>Theme search</li> </ul>	<ul style="list-style-type: none"> <li>Still trails Yahoo in content service integration and display conveniences</li> <li>Pageflakes has a slicker customization interface and better sharing options</li> </ul>	iGoogle steps closer to the top of the personal portal/start page class with its latest revision. The new Canvas view gives more space to content, and the company has addressed several of the issues we brought up last time around, like editorially recommended gadgets.
<b>MUSIC PLAYER</b>			
<b>Lala (Fall 2008)</b> Free ●●●●○	<ul style="list-style-type: none"> <li>Responsive, well-laid-out interface</li> <li>Puts local music library online</li> <li>DRM-free music library rivals Amazon and Rhapsody in size</li> <li>Ad-free</li> </ul>	<ul style="list-style-type: none"> <li>Music Mover misses lots of tracks</li> <li>Some interface glitches</li> <li>No mobile-device compatibility (aside from buying unprotected MP3 files)</li> <li>No Internet radio channels</li> <li>Lacks traditional music discovery options</li> </ul>	Could the third time be the charm? Lala takes a different approach to digital music by attempting to bridge local music libraries via cloud computing—with mostly positive results.
<b>WEB SITES</b>			
<b>Windows Live Home (Wave 3)</b> Free Not rated	<ul style="list-style-type: none"> <li>Aggregates e-mail, social network updates, online photos, news feeds, and Web storage</li> <li>Adding favorite movies, music, and books is slickly assisted by Web services</li> </ul>	<ul style="list-style-type: none"> <li>Duplicates some functions of hugely popular social networks</li> <li>Not as rich in social-network capabilities as Facebook</li> </ul>	The new start page for Windows Live services brings Microsoft into social-networking territory. Its customizability, contact organization, and ability to combine your various Web inputs and services are commendable, but it probably won't replace Facebook or Twitter.
<b>Windows Live Mail (Wave 3)</b> Free Not rated	<ul style="list-style-type: none"> <li>Slick interface</li> <li>Combines several e-mail accounts into one interface</li> <li>Picture mail saves your friends' inboxes from huge attachments</li> <li>Contacts update automatically</li> </ul>	<ul style="list-style-type: none"> <li>No Exchange server support</li> </ul>	When Windows 7 ships, no e-mail program will tag along, but this smooth redesign of Vista's Windows Mail more than fills the bill. Very capable feed and newsgroup readers round out the package.



JOHN C. DVORAK

# Our History: Error 404

Those alive today are probably going to be the first generation of humans that risks losing its history to digital technology. It's already begun.

I was doing some minor research on some 1996 events and found links on the BBC site to two articles on other U.K. sites that sounded compelling. But both had become nothing more than 404 errors; the files were gone. The London *Times* has done this to me as well. A famous war historian wrote a fascinating essay shortly after 9/11, and about a year later, I sent the link to a friend, but by then, the *Times* had already taken it off-line. Why?

This and other deletions have led me to

editions here and there. What will these independent collectors do now that the publication has become all digital? I doubt they will print out every single page and keep a hard copy.

It's not as though *PC Magazine* is careless enough to lose its files or just stop making them available. But I remember that when *PC Magazine* and ZDNet split into two companies several years ago, ZDNet for a number of years got to repurpose portions of *PC Magazine* all to itself. After *PC Magazine* recaptured the online version of its own magazine, much of the old stuff went into limbo and then disappeared from the Web.

everyone will be reading on a Kindle or with erasable paper or some such thing that will end hard copy forever. That point will mark the end of history, as everything will be subject to permanent erasure.

And how many old books, when they have all been scanned by Google and others, will still be around within a few decades of their digitization? I'm already collecting numerous classic books that have been removed from one university or another, stamped "Removed from circulation," and sold as junk. "Why keep the old-fashioned book when you can have a searchable PDF?"

Once the transition is complete, then, given the way corporate mergers and acquisitions work, the source material will begin to disappear. If you don't think so, look into the copyright quagmire regarding out-of-print books. One publisher bought another then merged with another to be bought out and renamed by a third. In all the confusion few publishing companies even know what old titles they own.

I can do this exercise on piles of books I own. On my shelf is a 1964 book called *The Spice Cookbook*, published by David White Co., New York. If I wanted to license the book, where would I go? Nobody knows.

Media is crawling with this sort of problem. Comic Redd Foxx was highlighted on numerous records produced by Dootoo Records out of L.A. Who owns those copyrights? Nobody knows. This all becomes lost media and lost information in the years ahead. Our heritage, our history. It's all poised to disappear in the years ahead from a combination of dead media, corporate neglect, and digitization.

I'm guessing that our times will be remembered as the era of the Cat Playing the Piano, and not much else.

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*At some point everyone will be reading on a Kindle or with erasable paper. That will mark the end of history, as everything will be subject to permanent erasure.*

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the practice of not only saving bookmarks to interesting links, but saving Web pages with Save Web Page Complete and just storing them on my own hard disks. So much for the Web and its convenience.

While some people might say that the Internet Archive, initiated by Brewster Kahle ([www.archive.org](http://www.archive.org)) saves a lot of pages, I don't think these articles I was looking for were in there.

What makes matters worse is the fact that many newspapers won't even be around in ten years. They'll either be bought and sold or will go belly up. They'll add new content-management systems and blow off the archives once a bean counter decides the payback won't make up for the costs of transferring the data.

Even savvy *PC Magazine* is a good example of this phenomenon. Some of our readers have collected hard copies of the magazine since Day One, and there are physical archives for all the printed

At some point we will look back and see a huge gap in our accumulation of knowledge. A giant hole in the historical record. And while someone might possibly find a cache of old backup tapes or a hard disk farm with lost data, the lost data will probably never be recovered in spite of being found—because of the dead media problem, which has already been affecting us.

Many of us have weird old cartridges and backup mechanisms that no longer work after ten OS upgrades and abandonment of the devices by the companies that made them in the first place. Some of the backups were transferred to newer media before it was too late, but the accumulation of data often makes it impossible to keep up with the changes. Laser rot and damage do not help either. It's a lost cause.

Fortunately we are still printing newspapers, books, and magazines, but we know where that might be headed. At some point there will be the final nail in the coffin and

**DVORAK LIVE ON THE WEB** John's Internet TV show airs every Wednesday at 3:30 ET on [CrankyGeeks.com](http://CrankyGeeks.com). You can download back episodes whenever you like.



# Dvorak's InsideTrack

**Gloom and Doom Dept.:** If you want to feel good about the economy, **do not read any of the trade publications.** They're predicting a continued downward slide in every imaginable aspect of the industry except for MEMS. I also expect a boom in **free and useless** iPhone apps; I hope the economy turns around just to get these coders back into real jobs. If you pick up anyone's iPhone nowadays you'll find perhaps 50 or more of these applications, all of which are essentially useless but kind of interesting in a very **nerdy** way.

**Chip Business in a Nutshell Dept.:** Right now the semiconductor business is in one of the worst slumps I've ever witnessed. A **slump** like this has invariably been followed by a **huge boom** because the normally planned capacity increases have been halted, and then when more chips are needed they're not available, leading the prices of what is available to skyrocket. This causes a classic boom in semiconductors, followed by a build-out of more capacity and then, of course, **overcapacity**. Chip prices then plummet, leading to a boost in profit margins for manufacturers who use the chips in their products. If these manufacturers played their cards right, they would then lower their prices on the consumer products in high demand, **the public would go nuts** and buy everything it could at a great price, and everyone would be happy as long as the demand was maintained. Manufacturers usually keep demand up by increasing the product cycle frequency and turning out new models faster and faster. Eventually, quality begins to fluctuate just as the consumer market is saturated, and demand falls. Chip companies cut back on their plans to increase capacity, and a new slump begins. That's where we came in and here we are. **End of scenario.**

The one thing to note about this chip cycle is that **at no time does the Moore's law drum stop beating.** The new designs and increased power continue to be built into whatever is being sold at the moment. Fewer chips may be made and sold, but that doesn't mean that the pace of chip design is slowing down. This is also true for the hard disk business as sales slow down. They'll still be selling 2TB drives instead of 1TB drives by this time next year. It may even be 3TB drives.

I was at a recent Seagate event where I could see the executives **visibly shudder** when I talked about the idea that a terabyte is approaching \$99. They say that as of Q4 of 2008 you could not sell a terabyte for \$99 profitably, and people who *could* find a \$99 terabyte were buying a loss leader or a gimmick sale. (In other words, in consumer parlance, a good deal!) They knew that once **the meme of a \$99 terabyte** got into the public consciousness, then the drives would all be \$99 and hopefully they could make money on a \$199 2TB drive. That's until people begin to think of a \$50 terabyte.

Back in 1979 when a 5MB drive (yes, five megabytes!) cost over \$1,000, I never imagined I'd someday be paying \$50 for a terabyte. **What comes after terabyte?** Well there's the petabyte—1,024 terabytes. Then comes the exabyte (1,024 petabytes). Then the zettabyte, followed by the yottabyte. At the rate of growth (no letters, please) beginning with the 1979 5MB drive, we went from a 5MB to a terabyte desktop drive in 30 years. That means an increase in capacity of over 200,000 to 1. And a decrease in price of 10 to 1. I reckon, roughly, that by 2039 we will be looking at **having a 200-petabyte drive and it will sell for \$10.** And you think you've accumulated a lot of crap on your hard disks today! Can you imagine? Although I suspect most people will be using their **1-petabyte thumb drive** for most of their important stuff.

**Doomed Technology Dept.:** Lurking underneath the **gloom and doom** are a lot of new ideas and concepts that will actually hit the market in 2009. **Most will be bad** or desperate concepts. The one that goes to the top of my list in 2009 as a doomed technology is **the gesture interface** for the TV. Yes, a number of Japanese companies have taken the gesture interface as perfected by the Apple iPhone and adapted it for use on the flat-panel television. You wave your arm and the channel changes. You do something else and the volume goes up. Who knows what other **idiotic functions** will be employed.

**This feature gets disabled** the day you have some friends over for a football game and, as you watch the waning seconds of the big game with no time-outs, the quarterback goes back to pass, the flanker is wide open, he throws, your pal jumps up to cheer and waves his arms in a fit, and the set changes the channel to the 700 Club. **Oops!**

And I don't even want to get into **the family battles** that would ensue with nobody in total control of the remote.

**Car Battery Conundrum Dept.:** One of the hottest things going on insofar as throwing money around is the development of battery technologies that might make the electric car viable and something more than a **golf cart** or a two-seat hot rod. Somewhere along the way the idea was floated that **Intel should devote itself to this pursuit**, and this was picked up by numerous pundits and some retired Intel executives. If Intel began to get into this **arcane primeval business**, then I would know that the end was near and we should head for the exits. **Intel, king of the microprocessor**, going into battery development would be like asking Toyota to go into manufacturing doll house furniture. **It's crazy.** End of sermon 714.

**WANT MORE DVORAK?** John writes a weekly column for our Web site, too. Log on to [go.pcmag.com/dvorak](http://go.pcmag.com/dvorak). You can also e-mail him at [pcmag@dvorak.org](mailto:pcmag@dvorak.org).





SASCHA SEGAN

# Why I Hate Touch Screens

If Apple does it, it must be right. That's the refrain of lemming-like mobile companies all desperately trying to follow the iPhone's touch-screen lead. The touch-screen fad isn't just in mobile, of course. Laptop and desktop makers are also talking about throwing away their keyboards and mice for big glass panels that go bump in the night.

Huge mistake.

The problem isn't touch screens; touch screens have existed for years. The problem is the pernicious idea that touch-screen-only interfaces will gobble up all other input devices. It's painful to watch folks at Microsoft's mobile division throw

The missing senses also play a role in why "live meetings" don't feel alive and why "teleconferencing" doesn't feel like attending a conference. Deep in our animal brains, we think of reality as something that engages *all* the senses. You may not like the way a coworker smells, but that smell makes him or her more real, whether you consciously think about it or not. I love cell phones, but when a friend signs off phone calls with "thanks for the visit," I wince a little. A phone call isn't a visit. Visits use more senses.

And so we get to touch screens. Touch screens are actually touch-less screens; they're an unintuitive illusion that we

information interface. In that movie, Tom Cruise donned special gloves to interact with an awesome PC where he literally grabbed windows and tossed them around the screen. But that interface is impractical without the proper feedback—without actually being able to feel where the edges of the windows are.

Touch-screen makers (especially those at Synaptics) aren't stupid, so they're trying to find ways around the problem. Haptics makes things vibrate in response to touch. Unfortunately, all handheld haptics so far have been pretty crappy. RIM's BlackBerry Storm click-screen actually gives the touch screen a physical aspect, which is brilliant but very much a version-1.0 idea. The technology is just not there yet.

Touch screens can also restrict form factors, making interfaces surprisingly more cumbersome to use. On mobile devices, you need at least a 9mm target area to be able to click something with your finger. That dictates a lot of iPhone-like large slabs with big interface elements and fewer small, pocketable devices. On PCs, a touch-oriented interface can create a lot of awkward hand and arm movement from one location to another. I interact with my laptop by using a lot of subtle twitches; fingers between keys, thumb reaching down to the trackpad. To have to reach up to the screen to pop down menus would slow me down.

Obviously we can psych ourselves into accepting the minuses of touch-screen interfaces in exchange for gaining the many pluses, such as enabling larger displays and dynamically configured pseudo-keyboards. But let's not fool ourselves into thinking there are no minuses. Adopting touch screens as a religion, right now, throws away one of our senses. And to me, that just sounds senseless.

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*Touch screens—at least the way they work today—are actually less tactile than keyboards. When you press a button on an iPhone, you feel nothing.*

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away all their non-touch-screen devices in an obsessive chase of the iPhone. The truth is that touch screens—at least the way they work today—are actually *less* tactile than keyboards.

We experience the world with five senses. Electronic entertainment has played up sight and hearing at the cost of the rest, but smell, touch, taste, and proprioception/kinesthesia (the knowledge of body position and motion) still play major roles in what we as humans consider reality. This is one reason why "virtual reality" environments like Second Life have never taken off with anyone except those who want to escape their own physical bodies. If your reality isn't essentially unpleasant, then to walk into a world made only of sight and sound is to cripple yourself by choice. It's also one of the many reasons the Nintendo Wii has become so successful: It uses the kinesthetic sense in ways the PS3 doesn't.

accept because computer interfaces are chock-full of metaphors and unintuitive illusions. We're tool-using mammals; we interact with physical objects. As I'm typing this, I feel the ridges of the keys, the smoothness of the letters and the wrist rest, and the throw of the scissor hinges below the plastic parts. I hear the click as the buttons go down and sense the motion of my fingers confirming the action.

When you press a button on an iPhone, you feel nothing. Every button feels the same—like nothing. Every action feels the same—like nothing. There's a certain effortless liberty in that. Since the heavy lifting is now all virtual, you feel as if you can lift tons. But you've given up at least one of your senses. You can't dial with your eyes closed any more. The interface is all sight and sound. No touch. A touch-less interface.

This is one of the reasons why we don't yet have the famous *Minority Report*

**STAY PHONE-SMART** Keep up with the latest on smartphones by reading Sascha's column at [go.pcmag.com/segan](http://go.pcmag.com/segan).





DAN COSTA

# Print Is Dead. Long Live Print.

Back in December, Ziff Davis announced that it would cease publishing the print version of *PC Magazine* after 27 years, and move to an all-digital format. These days, it simply doesn't make economic or environmental sense for us to print copies of *PC Magazine*, load them on trucks, and send them across the country when we can deliver the same information in the form of a digital magazine. You can view it online or download it to your computer and read it whenever and wherever you want.

At about the same time as the Ziff Davis announcement, my girlfriend gave me a love letter: a paperback book she made herself with glossy pages, full-color photos,

everything from the future of the software industry to Havanese puppy photography.

Now, I don't want to get into too many details about the contents of the love letter/book I received. Suffice it to say that the book was 24 pages long, had photos of Napa, California, and contained various romantic odds and ends, ranging from text messages from China to the first e-mail I ever sent her. Clearly, this is not a book that will have mass-market appeal. Even so, this print product with a maximum potential audience of one cost just \$12.99 to produce.

My girlfriend produced it using Blurb, an excellent print-on-demand service

And think about how much energy it takes to ship magazines to every newsstand in the country. Of the 4.7 billion magazines that are delivered to newsstands every year, about 2.9 billion are never read. Environmentally, there is no reason to print something that will be useless in 60 days and spend the next 20 years in the ground. Going digital is going green.

Just as Blurb and Lulu.com enable authors to self-publish, *PC Magazine Digital Edition* will be available on the Zinio platform. All current subscribers will automatically get access. It will offer a curated selection of the best PCMag.com articles so that readers who want to peruse our stories and reviews won't have to do so in a Web browser. The digital edition will give us the flexibility to offer some interesting multimedia features (video, podcasts, and more), as well as to present pages that users can print out at home if they want to for archival purposes.

Print businesses aren't dead, but they do need to change. Printing should be reserved for archival information—artifacts you'll hold on to for years instead of hour or days. And yes, sentiment can play into this as well. Big publishers will continue to scale back on their print operations, but there are millions of micro-publishers out there with how-to books, cookbooks, memoirs, even love letters that they can now affordably publish and make available to the world.

For those of us who love magazines, these are difficult days. Yet PCMag.com now serves more readers than the print magazine ever did and offers a lot more functionality. A Letters to the Editor section has nothing on message boards and talkback. Stopping the presses is a milestone in PCMag's journey, not a headstone. Welcome to the world of print on demand.

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*Print businesses aren't dead, but they do need to change. Printing should be reserved for archival information you'll hold onto for years instead of days.*

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and production quality that would make any magazine art director salivate. How can she afford to print a single book when big publishing companies lose money selling hundreds of thousands of copies? Welcome to the world of print on demand.

Print on demand has been around for years, and the idea is simple enough. Instead of printing, distributing, and selling books in bulk, technology now allows publishing companies or individual authors to print books as readers order them. At first this appealed mostly to aspiring writers who couldn't find "real" publishers. I myself published a book via iUniverse after 9/11 titled *In the Shadow of the Towers*. This phenomenon was known to some as vanity publishing, and the end result was typically the author stuck with boxes of books to peddle to friends, family, and coworkers. Today, self-publishing has evolved into a flexible option that lets people create print projects covering

that offers a lot of flexibility in terms of design and graphics. Our Editors' Choice for print-on-demand service is Lulu.com, which offers even more printing options, and the results can be impressive. When we tested the service, we spent less than \$15 and created a book that was indistinguishable from one you would find in Barnes & Noble.

Sure, you say, but those are books. What about magazines? I would argue that the difference between books and magazines is simply about the publishing schedule, at this point. And publishing schedules that move faster—be they monthly, weekly, or even hourly—will always be better suited for online publication than for print. This is bad news for newspapers, magazines, and other print media.

Print publishing is also an environmental nightmare. According to the PAPER Project, the magazine industry consumes approximately 35 million trees each year.

**TALK BACK TO DAN** E-mail your thoughts to [dan\\_costa@ziffdavis.com](mailto:dan_costa@ziffdavis.com).

# RECLAIM YOUR ONLINE PRIVACY

**We reveal the methods you need to surf, e-mail, IM, and more while taking back your ever-more-elusive online confidentiality. *By Eric Griffith***

Do you remember a time before everyone knew your every move?

Maybe it's our own fault. We live in an age where microblogs and social networks are all about keeping in touch—to the extreme. It's fun to follow friends, so we forget that posting pictures of that drunken holiday party might not bode well for future relationships with employers, friends, or even the law. We forget that, sometimes, giving just a little tells a lot. You can't do anything online without signing up for an account, typically supplying your e-mail, at a minimum.

End-user license agreements (EULAs) today are more invasive than ever. Disney put one out that's over 50 pages long—for a DVD of *Sleeping Beauty*. Even “don't be evil” Google took flack for the Chrome browser EULA, which proclaimed the corporation owned whatever you might post through it. Google changed that policy—eventually. But the company still hangs on to plenty of information about its users, the better to sell you stuff.

All that sounds innocuous compared with full-blown identity theft, but identity theft wouldn't be a plague if our personal data weren't out there for the taking—and it's definitely out there. Companies like PallTech, an online service for investigators and collection agencies, have databases with just about every American's name, address, date of birth, and Social Security number.

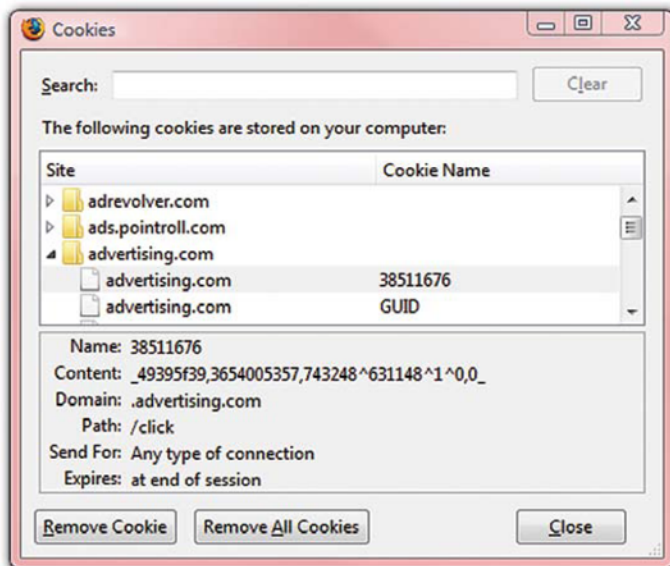
Have we as a culture abandoned our right to privacy? Absolutely not. While it's easy to lose hold of, it's also easier than ever to get back. The newest Web browsers take privacy seriously, and they're just the beginning. We'll show you how to go online and surf as stealthily as can be, so the chances of your being ID'd without your consent, or having your ID stolen, are slim to none.

All the major browsers for Windows—Internet Explorer 8, Firefox 3, Chrome 0.2, Opera 9.6, and Safari 3.1.2—offer some kind of security and privacy settings, at the very least to give you control over cookies, cached files, and your stored surfing history. How it's done is a little different in each browser.









## COOKIE TRAIL

Firefox makes it easy for you to view the cookies stored on your PC and to remove the ones you don't want.

**COOKIES** Cookies are little strings of text that Web sites store on your computer as a means to identify you to that site later. This is handy, as it means not entering your passwords for sites over and over again. However, you may not want all the cookies that sites want to place with you on the Internet tracking you. Cookies won't store anything personal unless you hand the info over via a Web form; however, just visiting a Web site allows it to put a cookie that stores your browser type and IP address onto your computer, assuming your browser is set to allow that.

Why is that a big deal? Maybe it isn't. Cookies are neither good nor evil. They're a convenience, and like most conveniences, they come at a price. Consider this: Your e-mail program, even Gmail, suppresses the images in your messages by default. The reason is that spammers and marketers put special images containing URLs into those messages. Each URL is specific to just the message sent to each recipient. These are called Web bugs or Web beacons. If the image loads, even if it's an invisible, single-pixel picture, the server that supplies the image may also look for cookies it can read, associating your IP address with that URL, and for other images (advertisements) you may have seen. The marketers will know about your browsing history in an instant.

Browser preferences/options let you opt to accept all cookies, accept only those from sites you visit (eliminating those from third-party advertisers, for example), or never accept them at all. The latter is a shoot-yourself-in-the-foot move; go for the "from sites I visit" option and, if you're paranoid, check the box to be asked for permission before the browser allows the installation of cookies. But even that gets

old fast. A button reading "manage" or "show" cookies will provide some granular control of cookies on a site-by-site basis.

**PRIVATE DATA** The information your browser terms "private" encompasses a lot—everything from your browsing history to download history, the cache of Web page files on your hard drive (aka temporary Internet files), cookies, and even saved passwords. All major browsers can clear all of the above with a button click, and most can be set to delete history whenever the software is closed or by some other time increment. Both are very important steps on a shared computer, even more so if the PC in question is a public computer. Clear your tracks when you're done.

The latest versions of some of these browsers take an extra, much-needed step, letting you invoke a *privacy mode*—some call it "porn mode" for obvious reasons—that prevents cookies and private data from being recorded in the first place. Your history of sites visited and searched for is not kept. This doesn't affect bookmarks you save or files you download, just your

history. Chrome calls this mode *incognito*; in IE8 beta it's called *InPrivate Browsing* and accessed from the Safety menu; Safari and Firefox call it simply *private browsing*. Safari has had this feature since Version 2 in 2005.

The current Firefox 3.1 beta has not yet integrated the feature, but it's coming soon. In the meantime, those with the current or older Firefox can get the same feature using the Stealther extension.

You can tell you're in the privacy mode in different ways for each browser. IE8 puts a button in the address bar that reads *InPrivate*. Chrome's incognito mode puts an icon reminiscent of Claude Rains's Invisible Man—sunglasses, trench coat, fedora—in the upper left-hand corner by the tabs. In Safari, look for a check mark next to "Private Browsing" on the Edit menu. If you began a session without enabling private browsing, you can still "stealth up": Turn private browsing on, then select *Reset Safari* on the Edit menu to reset all your current pages to stealth mode.

In all cases, privacy mode is not on by default when you start browsing. You need to activate it when you launch the browser.

IE8's InPrivate Blocking goes a step further than the others, not only not storing info from sites you browse, but also blocking third-party content providers—like advertisers—known for collecting data about you, even without looking at your cookies. InPrivate Blocking will obstruct the most frequently encountered third-party content providers first. You can subscribe to lists of sites to block on a regular

## INCOGNITO

Google Chrome's browser displays this faceless, fedora'd icon when in incognito mode.





basis, and once you've blocked a few you can publish a list of your own to share.

### Personal Proxies

It doesn't take much to figure out such details about a person as address or phone number. With a partial name and location, you can find plenty for free on sites like Pipl or ZabaSearch or even Google. People who are willing to pay get a lot more.

Your broadband modem typically has a unique IP address, and it's easy for any Web site or other snooper to see; the IP address is usually included in the headers sent with e-mail, too. An IP address alone can easily give an approximation of your location, based on where your ISP is located. Visit *WhatIsMyIPAddress.com* and it will reveal your IP address—plus a Google Map that will probably pinpoint the town you're in.

What's needed is a way to surf anonymously that goes beyond browser privacy modes for protection. Luckily, they exist. The fundamental stealth method is an anonymous proxy server. Plug settings from a proxy server into your Internet software (browser and e-mail) and all requests sent to the Internet from that software will be relayed through the proxy. This is also an effective method of making yourself appear to be in another location; the only problem is that you may also find yourself looking at foreign versions of sites like Google, which load languages based on a user's location. Using a proxy carries the bonus of making your PC less susceptible to outside attacks, but those are a problem only if you're not using a router and a software firewall (which you are, right?). Not all proxy servers guarantee anonymity, so choose accordingly.

Setting up proxy servers should be simple: You get an IP address and a port number to plug into fields in the options for your browser, e-mail client, and other Internet software. Sites like Proxy 4 Free and Public Proxy Servers list some you can try. You can try skipping the entry, too: get-proxy.com lets you click a link to a proxy server and start surfing to sites immediately as if you're not yourself. These usually add an unsightly extra address bar at the top of the page to use for browsing anonymously.



### "PORN MODE"

Most browsers, including Internet Explorer (left), offer a privacy mode, which allows you to keep your browsing paths to yourself.

A more advanced method is to install a proxy server/service of your own. Tor, short for "The Onion Router," is one that's free. Install the Tor Vidalia software bundle for Windows, Mac, or Linux and then set up your software to use it for anonymous surfing. Tor recommends using Firefox with an extension called Torbutton to automate the proxy server. Of course, not everyone thinks Tor is very secure, because it doesn't tell you which servers your traffic goes through. IronKey, maker of a super-secure USB thumb drive, offers Secure Sessions mode for browsing through its own Tor servers, which it claims are more reliable and faster because they're controlled.

Paying for anonymous proxies is also an option. Anonymizer (\$29.99 for one year) is probably the best known, and GhostSurf (\$29.95 per year) is another anonymous proxy. Both pledge to make you completely invisible when surfing the Web. ZoneAlarm ForceField (\$29.95) takes a different tack: It's a virtualized "bubble of security" that separates the browsing from the operating system, keeping your computer safe from browser exploits. It doesn't anonymize, though it does offer a private browser mode.

### Encrypted E-Mails

Using cryptography to ensure that messages can be read only by intended recipients goes back to a time long before e-mail. It's just easier to implement electronically.

Programs like Pretty Good Privacy (PGP) use algorithms to encrypt and decrypt your messages. PGP, created back in 1991, isn't just pretty good—the encryption it applies is so good that its author,

Phil Zimmermann, was targeted for criminal investigation. When sent overseas, cryptography that effective was considered munitions by the U.S. government. Zimmermann got around the charges by publishing the PGP source code in a book, protected by the First Amendment.

Here's the gist of how public key cryptography like PGP works. You create both a public key and a private key. The former you can tell the world. The latter you tell no one. Ever. All your friends do the same. You use their public key to encrypt things sent to them; they use your public key to send to you. Only your individual private keys can decrypt the messages received, because the public and private keys were created to work hand in hand. Keep things even more on the down-low by creating a "web of trust" between friends and share your keys only with those in the circle.

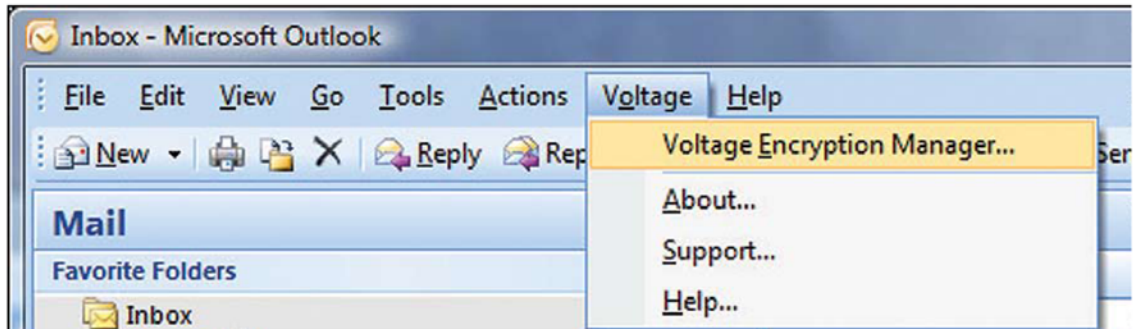
PGP now comes in commercial products from PGP Corp. (including top-rated PGP Desktop Pro). Products such as Voltage Security Network and eCipher Pro have similar public key cryptography. All do the job and work with just about any e-mail client, but they cost around \$80.

You can get open-source (free) encryption via a package called GnuPG. It works with front-end applications that interact directly with your e-mail. For example, Enigmail is an extension for Mozilla Thunderbird that uses GnuPG on Windows, Mac, or Linux to get you started with message encryption.

There are even ways to secure Web-based Gmail. The simplest thing you can do is to make sure the URL to access Web mail starts with *https://*. The "s" indicates that the page is encrypted using a Secure Sockets Layer (SSL) connection from you

## SECURE E-MAIL

Voltage Security Network offers public key cryptography for just about any e-mail client.



to the server. The Firefox extension Better Gmail can force Gmail to sign on with SSL. This isn't the same as encryption, but it is the same technology that protects your credit card info when sending it to servers like Amazon's. However, once that message leaves the server to go to a POP3 e-mail, it's no longer secure.

If you use Gmail's IMAP feature to access messages via Thunderbird, you can continue to use Enigmail and GnuPG and just send messages that way. Of course, the person on the other end needs to have both installed for decryption.

Want to go entirely stealth-mail all the time? Hushmail.com claims its free accounts are always secure and private, with all messages and attachments encrypted using open PGP. A Premium version offers more storage and IMAP-based e-mail access from desktop e-mail clients. The site even lets you send messages as if they're from your own e-mail, complete with a decrypter question you must include that only you and the recipient can answer. Once answered, the e-mail message is displayed on the Web.

Anonymizer Nym is a program you can subscribe to for \$19.99 a year. It creates temporary, disposable e-mail addresses (called DEAs, or "nyms") you can check with your regular e-mail client—perfect for all those online sign-ups. Nym also prevents spam and malware. You can also get DEAs free at Mailinator, GuerrillaMail.com, and many, many others.

## Intimate IMs

Instant messages go out over many networks using different protocols, but almost all are in cleartext. That means they're easy to read by the recipient with no extra processing by the software, which makes good sense when you're doing real-time chats. It also means they're easy to read if intercepted. Most IM clients can also send file attachments, which can include malware.

It should go without saying, then, that you should accept IMs only from people you know. But how do you ensure that sensitive messages sent and received are as secure as can be in transit? Zone Labs had a product for a while called IMSecure, but the company discontinued it in the summer of 2008, removing all IM protections built into the ZoneAlarm Internet Security Suite. Zone Labs says several of the dominant IM services—AIM, Microsoft, Yahoo—now offer features like encryption, IM spam blocking, and more, either integrated or through third-party add-ons.

Older versions of the AIM client allowed the use of a personal digital certificate for encrypting, just in case someone out there is packet-sniffing your network. You can still get older AIM versions (5.9, for example), and then a free certificate from Comodo.com or AIMencrypt.com. The current versions of AIM and the business-oriented AIM Pro automatically use SSL when transporting messages, but don't do certificate encryption. Even Trillian, the multiprotocol IM client, supports SSL

for AIM and ICQ. Yahoo Messenger has its own stealth and privacy settings, so you can sign on as invisible or ignore people, but it has no encryption of IMs. One other product, SimpPro (\$25, [www.secway.fr](http://www.secway.fr)), promises to encrypt all traffic on AIM, Google Talk, ICQ, Jabber, MSN, and Yahoo, plus all their respective client apps.

Of course, no two IM systems offer the same security features. Web-based IM front ends, such as AIM Express or the multiprotocol Meebo, won't support any of these security extras yet.

## Thwarting ID Theft

Overall, identity theft is down since 2002. That's the good news. In 2007, 1.6 million people claimed they were victims of identity theft, but fewer than 2,000 people were tried and convicted of the crime, according to The President's Identity Theft Task Force Report of September 2008. That means it's up to you to protect yourself—the cops aren't up to it. Always keep in mind the social engineering that grifters use to get your important digits, specifically your Social Security number. The number one recommendation in the report is to reduce or eliminate the unnecessary use of SSNs in the public sector. It would be smart to start now, because another recommendation is that victims of ID theft get *another* piece of ID to carry, specific to them. Ugh.

Contributing editor Matthew D. Sarrel has covered in great detail the topic of stolen identity and how to avoid "losing" your identity. Read his advice on PCMag.com and add the practices he suggests to your everyday way of working, both online and off. If you want a high-tech approach to online protection, check out Identity Finder Professional Edition 3.4 or MyTruston. Both keep an eye on your PC for information that should be secure—such as your address, phone numbers, and credit card numbers—and either warn, delete, or encrypt the data before it goes out the tubes to the rest of the world. A number of security suites offer this feature as well. □

## FURTHER READING

**Instructables** There's many a stealthy how-to to be found at [www.instructables.com](http://www.instructables.com). Check out those by w1n5t0n, who just happens to have the same name as the protagonist of über-blogger Cory Doctorow's antiauthoritarian young adult novel *Little Brother*.

**Privacy Rights Clearinghouse** The nonprofit group Privacy Rights Clearinghouse publishes many tips for ensuring your privacy in the real world and online.

**Electronic Frontier Foundation** The EFF is at the forefront of court cases that protect digital privacy. Read up on what the group is fighting for on your behalf.

**Electronic Privacy Information Center** EPIC focuses its fight on getting attention for privacy issues emerging from the corridors of power in Washington, where the organization is headquartered.



# Security Suite Smackdown

Which of the new versions best suits your needs? Here's our head-to-head comparison.

RED indicates Editors' Choice.	PROS	CONS	BOTTOM LINE
<b>BitDefender Total Security 2009</b> 3 licenses, \$79.95 direct ●●●●○	<ul style="list-style-type: none"> <li>Includes 2GB of online backup</li> <li>Resists tampering</li> <li>Almost no false positives from antispam</li> <li>Blocks phishing sites</li> <li>Can limit children's Internet use</li> <li>Can restore virus-damaged files from backup</li> </ul>	<ul style="list-style-type: none"> <li>Malware scanner frequently left threats uncleaned even after multiple passes</li> <li>Parental control blocks many valid sites</li> <li>Duplicate file finder can damage system</li> </ul>	BitDefender has added a ton of new features—online backup and remote configuration, for example. It includes all the expected security elements, with decent performance from most of them. It's a reasonable choice if you're excited by those extra features.
<b>F-Secure Internet Security 2009</b> 3 licenses, \$79.90 direct ●●●●○	<ul style="list-style-type: none"> <li>Very good at preventing malware installation</li> <li>Parental control now includes time-scheduling</li> <li>Simple user interface</li> <li>Linux-based Rescue CD can wipe out entrenched malware</li> </ul>	<ul style="list-style-type: none"> <li>Extremely slow at preventing malware installation</li> <li>Big problems installing on malware-infested systems</li> <li>Ineffective antispam and parental control</li> </ul>	F-Secure Internet Security 2009 is easy to use, without complicated settings and extras. But getting it installed was a nightmare, and it took too long deleting inactive malware. The firewall is old-fashioned, and the antispam and parental control apps are ineffective. The suite hasn't kept up with the times.
<b>Kaspersky Internet Security 2009</b> 3 licenses, \$79.95 direct ●●●●○	<ul style="list-style-type: none"> <li>Application filtering protects specific system areas against unknown programs</li> <li>Repeat scans are blazingly fast</li> <li>Checks for OS and program vulnerabilities</li> <li>No big performance hit</li> </ul>	<ul style="list-style-type: none"> <li>Parental control is still rudimentary</li> <li>Antiphishing is weak</li> <li>Spam filter blocks much valid mail</li> <li>Difficulty installing/scanning on malware-infested systems</li> </ul>	Kaspersky Internet Security's new user interface hides messy security details but leaves them accessible to power users. The new application filtering feature makes the suite smart enough to make its own decisions without hassling the user.
<b>McAfee Total Protection 2009</b> \$79.99 direct ●●●●○	<ul style="list-style-type: none"> <li>Powerful malware blocking</li> <li>Effective malware removal</li> <li>Network intrusion detection</li> <li>Remote monitoring and management</li> <li>Research-based site ratings</li> <li>System cleanup</li> </ul>	<ul style="list-style-type: none"> <li>Unresponsive user interface</li> <li>Saps system performance</li> <li>Limited and porous firewall</li> <li>Ineffective parental/privacy control</li> <li>Difficult installation on malware-infested systems</li> </ul>	McAfee's latest suite has improved malware detection, and its spam filter is much improved. But most of its overabundance of features haven't changed at all. Its UI is sluggish, and it saps system performance.
<b>Norton Internet Security 2009</b> 3 licenses, \$69.99 direct ●●●●●	<ul style="list-style-type: none"> <li>Minimal performance impact</li> <li>Extremely effective spyware and virus protection</li> <li>High-powered, comprehensive firewall</li> <li>Phishing protection</li> <li>Automated log-in, form-fill</li> </ul>	<ul style="list-style-type: none"> <li>Antispam misses too much, blocks too many valid messages</li> <li>Rudimentary parental controls</li> <li>Network map allows no remote correction of reported problems</li> </ul>	This is definitely the slimmest, most unobtrusive Norton ever. Its protection is top-notch where it counts, though antispam and parental control are still weak. As the best all-around security suite yet, it's our new Editors' Choice.
<b>Panda Global Protection 2009</b> 3 licenses, \$89.95 direct ●●●●○	<ul style="list-style-type: none"> <li>Accurate spam filtering</li> <li>Moderate effect on performance</li> <li>Collective intelligence aids malware recognition</li> <li>Firewall resists attack</li> <li>Detects Wi-Fi intruders</li> </ul>	<ul style="list-style-type: none"> <li>Less effective against spyware than previous edition</li> <li>Expensive</li> <li>Tune-up feature is pointless</li> <li>Phishing protection barely works</li> <li>Rudimentary local/online backup</li> </ul>	Except for the new main screen, Panda's 2009 suite doesn't look much different. Its collective intelligence promises better protection, but its action is spotty: Spam filtering got much better, spyware protection got worse. Wait for next year's version if you're thinking of switching to Panda.
<b>Trend Micro Internet Security Pro v2</b> 3 licenses, \$69.95 direct ●●●●○	<ul style="list-style-type: none"> <li>Helpful live-chat support</li> <li>Effective malware removal</li> <li>Rates sites by reputation</li> <li>Parental control better than most</li> <li>Accurate spam filtering</li> <li>Remote management</li> <li>System tune-up</li> </ul>	<ul style="list-style-type: none"> <li>User-interface problems on malware-infested systems</li> <li>Difficult installation on malware-infested systems</li> <li>Remote management lacks security status indicator</li> </ul>	Trend Micro Internet Security Pro v2 is a big improvement over last year's edition. It's an effective anti-malware tool, and it's loaded with Pro features that are truly useful. If you've sworn a lifelong grudge against Norton, give Trend a try.
<b>Webroot Internet Security Essentials</b> 3 licenses, \$59.95 direct ●●●●○	<ul style="list-style-type: none"> <li>Excellent malware cleanup</li> <li>Powerful multilayered malware blocking</li> <li>Includes 2GB of online backup, with remote restore and file sharing</li> <li>Cleans up browsing and system usage traces</li> </ul>	<ul style="list-style-type: none"> <li>Firewall failed port-scan tests and exploit test; pops up many queries</li> <li>No antispam, privacy protection, or parental control</li> <li>Has a negative impact on performance</li> </ul>	Webroot Essentials omits features that other suites include, yet it still affects system performance. Malware protection is excellent and includes 2GB of online backup, but its firewall component doesn't do the job. Spend \$10 more and get Norton or Trend Pro!
<b>ZoneAlarm Internet Security Suite 2009</b> 3 licenses, \$69.95 direct ●●●●○	<ul style="list-style-type: none"> <li>Firewall protects against hacks and exploits</li> <li>Layered protection totally prevented malware installation</li> <li>Comprehensive and accurate spam protection</li> </ul>	<ul style="list-style-type: none"> <li>Installation rendered one infested test system inoperable</li> <li>Performance of common file and folder actions was slowed</li> <li>Malware cleanup is so-so</li> <li>Parental control is useless</li> </ul>	ZoneAlarm is strong on defense. It has a tough firewall and keeps malware totally out of a clean system, but it's less effective in cleaning up entrenched malware, and some of its features are antiquated. Nonetheless, ZoneAlarm is still a fine choice.



SPECIAL REPORT

# The Best of CES 2009

These 15 products wowed us at the world's largest tech trade show. *By the PCMag staff*

As is our annual PCMag tradition, we sent an army of editors and analysts to descend upon the 2009 Consumer Electronics Show in Las Vegas in early January, in search of the newest, coolest products and technologies. The buzz on the show floor was about pocket-size devices that do more, inexpensive and highly portable net-

books, thin and energy-efficient LCDs, and Blu-ray priced for prime time. Phones, camcorders, and even projectors that are powerful and palm-size dazzled us, as did wireless charging devices. Which products are we still buzzing about? Here are our 15 favorites—some of which are on store shelves now; the rest will be soon.



## SONY LIFESTYLE PC

Move over, netbooks. Sony's stylish, 1.4-pound system offers an 87 percent keyboard and an 8-inch LED screen with a native resolution of 1,600 by 768, allowing you to view three file Explorer windows with no overlap. The processor isn't the most powerful, but battery life is impressive. (\$899)



## CLICKFREE TRANSFORMER CABLE

This is set-it-and-forget-it backup, plain and simple. No need to install backup software: You just plug any USB drive into the Clickfree cable, then plug the cable into your PC, and wait. The drive will automatically begin storing your data. Now there's truly no excuse for not backing up. (\$60)



**DISH NETWORK VIP922** This HD digital video recorder is the first to incorporate Slingbox technology, allowing Dish Network subscribers to watch their recorded programs from anywhere—the next room, at work, or in a hotel in Shanghai—on a laptop or mobile phone with a broadband connection. (Price undetermined)







**PALM PRE** Deemed the hottest product at CES by Editor-in-Chief Lance Ulanoff, the Pre boasts a new people-centric OS that consolidates contact information from various sources and makes it easy to connect with people in any number of ways.

Add to that a large multitouch screen, a powerful processor, an accelerometer, a hidden QWERTY keyboard, GPS, 802.11g, and a 3.2-megapixel camera, and you've got the most innovative smartphone since the iPhone. (Price undetermined)



**SAMSUNG 8000 SERIES 240-HZ LED HDTV** Samsung's 8000 series combines two cutting-edge technologies: 240-Hz frame-rate technology, in which pixels are updated twice as fast as current 120-Hz screens, and LED technology, which offers higher contrast ratios, slimmer designs, and lower power consumption than traditional LCD models. (Price undetermined)

**VIZIO VBR100** The big news here: Vizio's first Blu-ray disc player is expected to sell for a jaw-droppingly low street price—under \$150—when it's released in April. Features include an Ethernet port and 1GB of storage, which allow it to offer BD-Live streaming multimedia support. (\$199 list)



**SONY CYBER-SHOT DSC-G3** This is the first Wi-Fi camera with a built-in Web browser, allowing users to access the many Wi-Fi networks that require you to accept terms from HTML pages. The DSC-G3 also streamlines the process of uploading pictures and video to popular sharing sites. (\$499)



#### DELL STUDIO XPS 16

This gorgeous media center PC earns our Editors' Choice for its design, home-theater features, and a vibrant RGB LED 16-inch wide-screen. The keyboard is illuminated, right down to the mouse buttons. A Blu-ray reader is included, and the system offers both HDMI and DisplayPort technologies. (\$1,804)







### MSI X320

If you want a MacBook Air but can't afford one, here's your answer. It looks very similar to the Air, but costs half as much. This 2.9-pound system offers a 13-inch widescreen, a 160GB, 5,400-rpm hard drive (expandable to 250GB), and an Intel Atom Z520 processor. (\$800 to \$1,000)



**TOM TOM GO 740 LIVE** With a built-in wireless connection, this GPS device provides real-time traffic info, local fuel price data, and local search services. An extended version of TomTom's IQ Routes technology calculates routes and travel times based on every road's historic traffic patterns for the specific day of week and time of day you are traveling. (\$499)

**PANASONIC DMP-B15** Touted as the world's first portable Blu-ray player, the DMP-B15 features an 8.9-inch WSVGA LCD and a 3-hour rechargeable battery for to-go high-def video viewing. You can also connect it to an HDTV. (Price undetermined)



**WINDOWS 7 BETA 1** Made publicly available during CES, this beta of Microsoft's next OS looks like Vista done right, with a smaller disk and memory footprint, faster start-up, and fewer annoyances. (Free)



**SAMSUNG P3** This latest portable media player from Samsung, an update to the P2, features a 3-inch TFT LCD with "haptic feedback"—meaning it offers some sort of tactile response when you press it. The screen has a true 16:9 aspect ratio, supporting video playback at 30 frames per second. It is available in 8, 16, and 32GB versions. (Price undetermined)



**LG GD910 WATCH PHONE** All the rage at CES, this phone/MP3 player/calculator watch isn't available in the U.S.—yet. Its touch screen responds well to light touches and gestures, and the tiny on-screen dial pad is surprisingly easy to use. (Price undetermined)



**POWERMAT** Charge multiple devices at the same time using just one power source. First, attach Powermat receivers—in the forms of dongles, cases, or docks—to the devices you want to charge. Then place the devices on the Powermat's thin mat, and plug the mat into an outlet. Through magnetic induction, the mat will charge all the devices wirelessly. (Price undetermined, but estimated at \$25 per receiver or mat)



# Solutions

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## Build a PC for Under \$250

Why spend more than you should on a cheap desktop PC? In less than 30 minutes, you can build a low-budget Linux PC that can handle a variety of everyday tasks.

*By Brian K. Neal*

Today's desktop PCs have capabilities far beyond the needs of most people. Trying to keep up with all the computer trends, many of which are of little relevance to the average user, is expensive, unnecessary, and enough to make your head spin. The reality is that a computer capable of handling everyday tasks like Web surfing, e-mailing, burning CDs, editing images, word processing, and preparing presentations doesn't require cutting-edge (read: expensive) technology—and will satisfy the requirements of most average PC users. If tasks like these are what you do most, we'll show you how you can quickly and easily build a stable, stylish, inexpensive PC for under \$250.

Building your own PC has several advantages over buying one at retail. For starters, you get to choose the components based upon your criteria. If your work area has limited space, you can pick the right chassis and not be restricted to the bulky, clunky desktops that largely fill the aisles at retail chains. Probably the biggest advantage to building your own budget PC is the absence of crapware, the annoying preinstalled software—mostly trial programs you likely won't want. Crapware wastes hard drive space and eats up system memory, and it's a common problem found



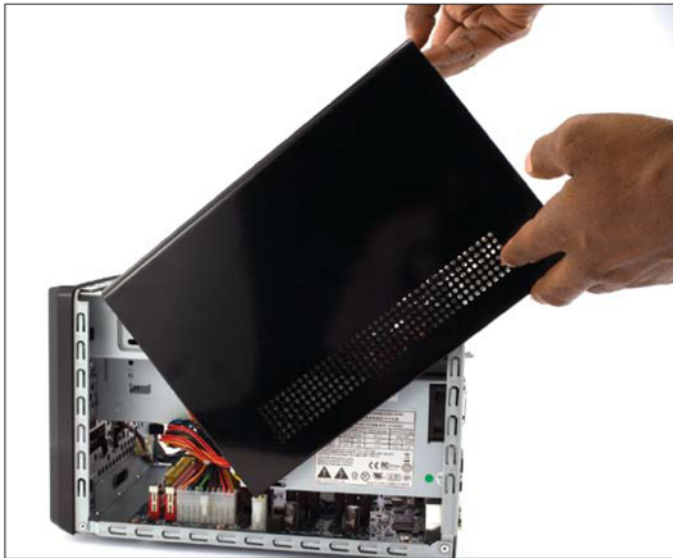
## COMPONENTS

- **Shuttle "G7" Chassis K48 barebones kit**  
\$129.99 *Newegg.com*
- **Intel 1.8-GHz Celeron 430 (Conroe) processor**  
\$39.99 *Newegg.com*
- **1GB Crucial DDR2 memory**  
\$11.99 OEM *Newegg.com*
- **80GB Western Digital Caviar**  
\$35.99 OEM *Newegg.com*
- **Lite-On dual-layered DVD 3 RW drive**  
\$22.99 *Newegg.com*
- **Ubuntu 8.04**  
Free *www.ubuntu.com*

on budget retail systems. In the time you'd spend removing the crapware, which could take as much as an hour in some cases, you could build our PC two or three times over, as it takes roughly 25 to 30 minutes to assemble. All the components gathered for this particular project are readily available at online retailers like Newegg.com, and it's fairly easy to piece them together.

For starters, we chose the Shuttle "G7" Chassis K48 barebones kit. This case/motherboard/power supply combo has a small footprint and is a good find at \$129.99. The K48 is stylish and also allows you to "customize" its look by inserting a photograph into the unit's front panel. Even better, it comes preassembled, saving you time and energy. We opted for an inexpensive

(\$39.99) single-core Intel (Conroe) Celeron 430 processor running at 1.8 GHz (which is more than suitable for the Linux operating system we've chosen for the project) and a single 1GB, 667-MHz stick of Crucial DDR2 (\$11.99 OEM) memory to help the system when multitasking. An 80GB Western Digital (\$35.99 OEM) hard drive offers ample storage space to archive music, photos, and



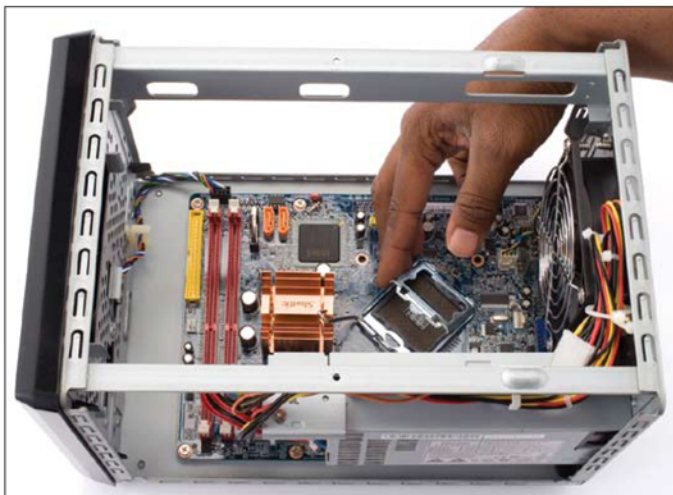
## 1 INSPECT THE CHASSIS.

The Shuttle "G7" Chassis K48 barebones kit comes pre-assembled, eliminating a good deal of your workload. The first thing you'll want to do is inspect the chassis for damage and/or errors like loose (or missing) cables. To start, unscrew the three thumbscrews at the rear of the chassis, then slide the cover backward and lift it up to remove.



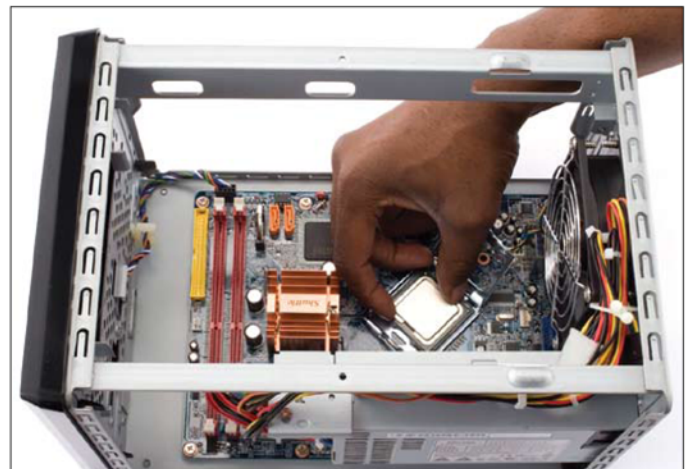
## 2 REMOVE THE RACK MOUNT.

Two screws hold the rack mount for the drives in place. The rack mount must be removed to install the rest of the components, so remove both screws and lift the rack mount from the chassis. Set aside.



## 3 PREPARE THE SOCKET FOR CPU INSTALLATION.

Begin CPU installation by pulling the socket's lever sideways, then lifting it up to a 90-degree angle. Remove the protective socket cover, and lift the metal plate to reveal the socket. The two triangles on both the CPU and socket will serve as a guide when you insert the CPU.



## 4 SLIP THE CPU INTO THE SOCKET.

Hold the Intel Celeron 430 CPU by its sides to avoid touching the underlying pins when inserting it. Align the triangle on the CPU with the triangle of the socket, and fit the CPU into place. The CPU should slip into the socket without requiring any real force. Retract the metal plate and push the socket lever down to secure the CPU.



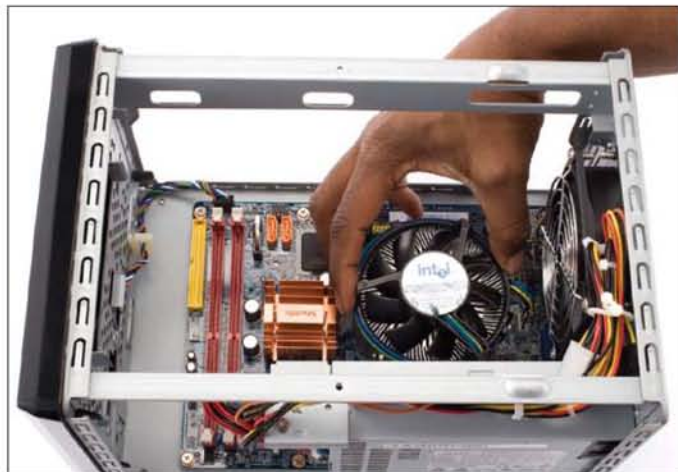
videos. Last but not least, a Lite-On dual-layer DVD  $\pm$  RW drive (\$22.99) is versatile for watching movies, burning music, and archiving data.

This time around we decided to go with the Ubuntu (Linux) OS over Windows Vista Basic (or Windows XP). One reason is that Ubuntu is free, saving you roughly \$85 over Vista Basic or Win XP. Second,

Ubuntu is based on Linux, so it's a highly stable OS that can fend off viruses and spyware better than Windows. And just because Ubuntu doesn't cost you a penny, that doesn't mean it skimps on features. It handles a whole range of tasks: CD burning, Web browsing (the latest Ubuntu 8.04 is equipped with Firefox 3), photo managing and editing, even office productiv-

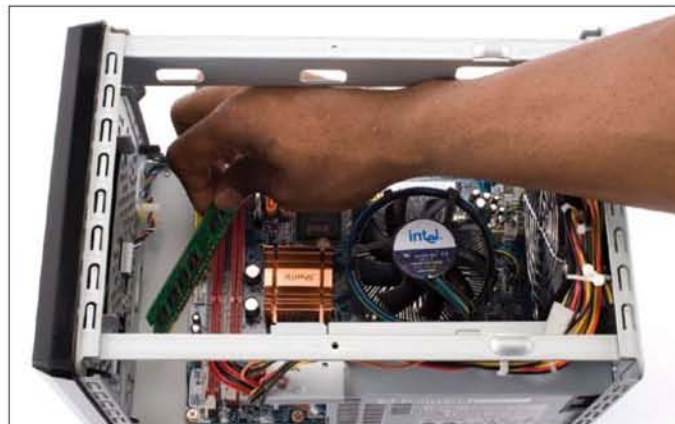
ity (it's bundled with OpenOffice.org, which is compatible with most Microsoft Office documents)—are all available with Ubuntu.

The Celeron 430 can easily handle running Ubuntu. Our components are well above Ubuntu's recommended minimum system requirements, which call for a 300-MHz x86 processor, 64MB of system



## 5 INSTALL THE HEAT SINK.

To avoid cracking the processor, make sure the triangles are aligned properly before retracting the socket lever. Place the heat sink on top of the CPU, aligning the heat sink's pegs with the four holes on the motherboard. Twist each peg handle counterclockwise to lock into place. (The thermal compound that assists in CPU cooling is factory-applied to the heat sink that ships with the Celeron 430, so there is no need to self-apply it.)



## 6 INSERT THE MEMORY MODULE.

The motherboard that ships with the Shuttle K8 can accommodate up to 2GB of system memory and has two available slots. We'll be using just a single stick, leaving one slot available for future expansion. Locate DIMM socket 1 and unlock the DIMM latch by pushing the retaining clips outward. Align a memory module on the socket so as to match the notch on the pin side of the module with the break on the socket. Seat the memory module firmly in the socket, and secure the DIMM latch by retracting the retaining clips.



## 7 SECURE THE HARD DRIVE.

Place the hard drive into the bottom chamber of the rack mount that was removed in step 2, and secure with four screws, two on each side. Attach one SATA data cable to the drive.



## 8 REINSTALL THE RACK MOUNT.

Place the rack mount back into the chassis, and refasten it with two screws. Attach the SATA cable from the hard drive to an open SATA port on the motherboard. SATA cables have a few advantages over IDE: Not only are they easier to connect (with fewer pins), but they allow faster access to hard drive data.

memory, and 4GB of hard disk space. Our single-core 1.8-GHz rig will handle the OS just fine. The latest Ubuntu update does take (slight) advantage of the threading capabilities of dual-core processors, so for \$11 more, you can opt for the dual-core Celeron E1200.

Ubuntu can be obtained in several ways. You can download the OS directly

(free) from Ubuntu's home page ([www.ubuntu.com](http://www.ubuntu.com)). You could also request a copy from Ubuntu, which will be shipped free of charge (although delivery can take up to ten weeks). Last but not least, you can find a copy of the latest build at online retailers like Amazon.com for around \$13. I prefer the download method, as it's both free and the fastest way to get started.

Our configuration came to a very affordable \$240.95. Overall, this inexpensive PC is solid for most any student or home user. For enthusiasts, it makes a good second (or third) PC for the home as well. The assembly takes roughly 25 to 30 minutes, and it's easy to piece together. Follow our ten-step guide and you'll be computing away on your own customized PC in no time. □



## 9 ADD THE OPTICAL DRIVE.

Remove the 5.25-inch bay cover from the chassis, and slide the optical drive into the rack mount from the top of the system. Secure the optical drive with screws on both sides, and attach one SATA data cable to its end.



## 10 ADD POWER CABLES, AND CLOSE THE BOX!

Connect one Molex SATA power adapter to the Molex plug from the power supply, and attach the SATA power connector to the hard drive. Attach the second SATA power cable to the hard drive. Replace the cover (securing it with three screws); attach peripherals (keyboard, monitor, mouse); and begin installing Ubuntu!



## ONLINE MARKETING

# Build Your Business on Blogging

Use a blogging platform to build out your company Web site. Blogging is easy and inexpensive—and your site won't even have to resemble a blog. *By Robyn Peterson*

You're no dummy: You already know your business needs a strong Web presence, whether you sell knickknacks or manage a law firm. But how do you go about building one? A lot depends on your budget. If you're on a shoestring budget, choose a service like our current Editors' Choice, Yahoo Small Business (YSB), which lets you build out your site in 60 minutes or less via a set of provided templates. If you can afford to hire developers, a systems administration team, and perhaps even project managers, consider stepping up to a full-featured open-source content-management system, like Drupal or Alfresco.

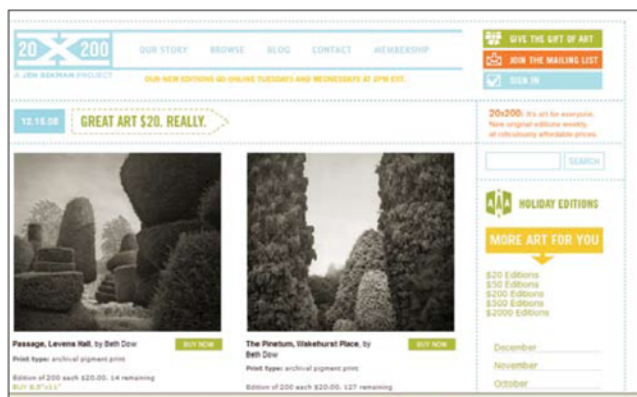
But a third path exists that most people don't even consider: You can build your site on a blogging platform, even if you don't want to have a company blog. Sounds counterintuitive, right? It's not, and I'll explain why.

## A Blog Doesn't Have to Be a Blog

A blogging platform can manage Web-site content other than blog posts. In fact, you can use it to manage just about any kind of Web site. Blog platforms, in general, are very good at organizing content. They're in essence simple content-management systems, and all major Web sites are powered by some sort of content-management system.

Content is the lowest common denominator of Web sites. If you have a reasonable amount of information on your site, you'll use a content-management system to, well, manage the site's content. With a good one in place, when you need to post a new press release, for example, you just enter the release's title and body, without worries about writing HTML for the navigation, search box, footer, and so on. You define all of that HTML just once, in a template. The content-management system will then display your content using that template. So there's a start-up project of creating templates, but after that, it's much easier to maintain.

Blog platforms specialize in two things: managing blog posts and listing out these



## BLOG BACKBONE

Art store 20x200.com uses the Movable Type blogging platform as its content-management system, though you'd never be able to tell.

posts (by category or by date) on an aggregate page. So a blog platform displays content. It's a simplified content-management system. And it's inexpensive.

## Hosting Providers Can Install a Blog Platform for You

Blogging is ubiquitous. Lots of everyday people want a blog. That has driven Web-site hosting providers to supply easy methods to install blog platforms on leased servers. In fact, quite a few will provide "one-click" installation of WordPress or Movable Type, two very popular open-source blog platforms. Quite frequently, you won't even have to write a line of code or configure anything on the server outside of the hosting provider's Web interface.

While there are content-management systems available that are suitable for company Web sites, none are as popular as the blogging platforms. So if you choose one of these systems, you'll often need to install them yourself and work out all the kinks (or pay someone else to do so). And then you'll likely need to pay for support. With a blog platform installed via the one-click method, a hosting provider will often supply the basic support you need.

## It's Not Hard to Build a Site Using a Blog Platform

Here's where you have a big choice: Learn how to build the Web site yourself, or hire someone else.

If you choose to build it out yourself, you will need to know some HTML to build your site, but you can use a WYSIWYG (what-you-see-is-what-you-get) HTML editor to assist you in building your pages.

And you'll need at least a cursory understanding of the blog platform, as you have to know how to instruct it to, say, write out your press releases in reverse chronological order. But that's not as complex as it sounds. You can simply enter your releases as blog posts and create a category called "Press Releases," which you use to label each of these blog posts. Then, usually with just one tag, you can tell the system to display the latest 20 press releases in reverse order by date.

If you choose to hire someone else to build out your site, blog developers tend to price their services pretty reasonably. In fact, it's so easy to build out sites on a blogging platform that I would go so far as to say that anyone who knows HTML can build a site.

Contrast this scenario with others you've likely encountered while running your business. If you've ever had to hire developers who specialize in business applications, then you know that they'll charge a premium simply because it's business software instead of consumer software. So turn the equation to your advantage by using consumer-oriented software for the benefit of your business. □

# Personalize Revisions Styles in Microsoft Word

No one uses comments and revisions tracking because they're fun. So how can you make these workplace tools work better for you? *By Neil Randall*

If you collaborate on documents, you already know that Word's reviewing features—Comment and Track Changes—are vital tools. But you don't have to accept the default configurations for these tools. With a few clicks, you can customize them to your liking.

To begin, click *Review* in the menu bar to reveal the Review bar. Highlight a word and click *New Comment*, then type a comment. By default, Word uses the Calibri typeface in comments, but you can change this just as you would in regular text, in the *Font* slab of the *Home* ribbon. For a permanent change, modify the style called *Comment Text*: On the *Home* bar, click the small expansion icon on the bottom right of the *Styles* section, and click the *Manage Styles* icon at bottom middle of the resulting *Styles* window. Scroll to the *Comment Text* entry and double-click to bring up the *Modify Style* dialog. Make your change to the typeface, and click *OK*. Your comments

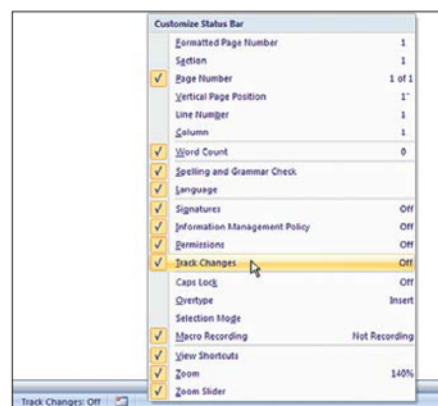
will now appear in that typeface.

If you used the options available in the *Home* tab to change the typeface of a single comment and want to update the style, you can change *Comment Text* by right-clicking on the comment in the *Reviewing* Pane, then choosing *Styles | Update Comment Text to Match Selection*.

## Better Revision Tracking

Word's *Track Changes* feature shows you not only everything that's been changed in the document by other collaborators but also everything you change as you type. Toggling the feature on is a simple matter of clicking the *Track Changes* icon on the *Review* bar, but you don't have to accept the default configuration—you can customize it in numerous useful ways.

Before diving in to the customizations, I need to address an odd decision Microsoft made with Word 2007. Users of previous versions may have been used to clicking

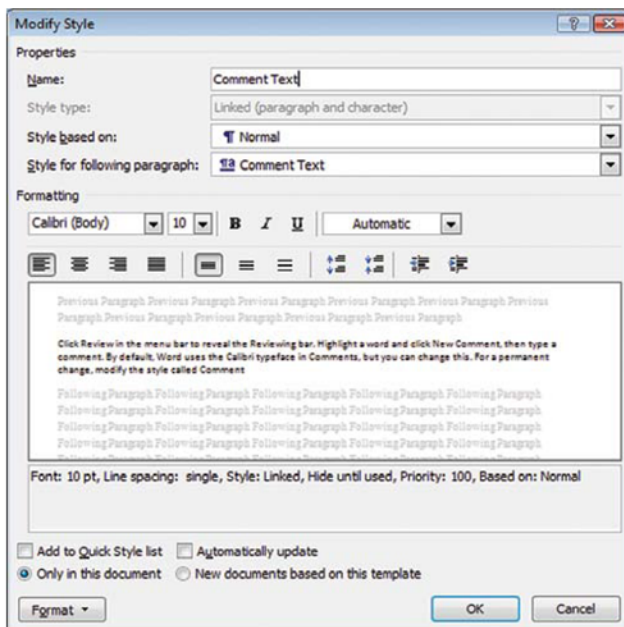
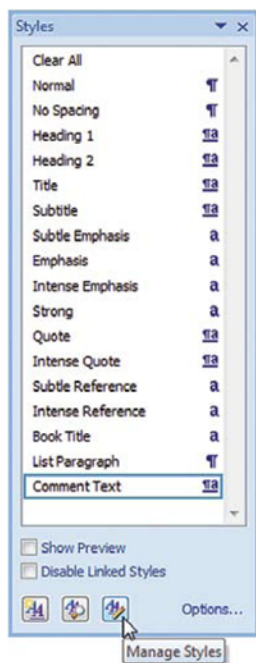


**GET ON TRACK** Track changes in a file; select *Track Changes* in the *Review* bar.

the small *TRK* icon in the status bar at the bottom of the Word window. One click to track changes, one click to stop—convenient. To get that function back, right-click on the status bar and click *Track Changes*.

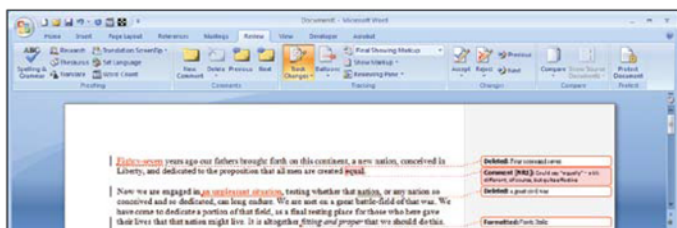
You have several options for displaying changes within a document, and most people find they have a definite preference. Decide whether you want your changes to appear inline (in the text itself), in a separate reviewing pane, or as balloons outside the text. If the last, you can have all revisions appear in balloons or only your formatting changes and your comments. To toggle the *Reviewing* Pane on and off, click the *Reviewing Pane* item on the *Review* bar; click its down arrow to switch between a vertical (left-side) or a horizontal (along the bottom) pane.

No matter where your edits and comments appear, you can act on them identically: Right-click the edit in the balloon, the *Reviewing* Pane, or the text, and accept or reject the change. (An unfortunate change in Word 2007 is the elimination of the plain old *Accept* and *Reject* buttons; clicking on *Accept* or *Reject* now performs the chosen action and then moves on to the next revision. To avoid moving on, you must click the arrow next to the button. It's a whole

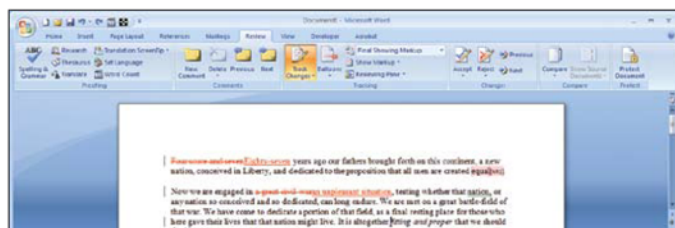


**STYLE CHANGE** You can change the style of your comment text easily by going to the *Styles* section on the *Home* bar.

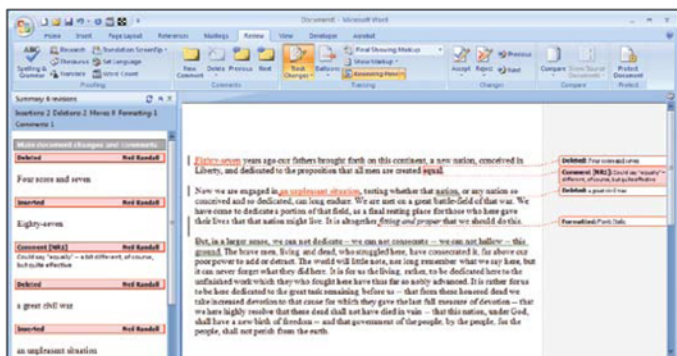




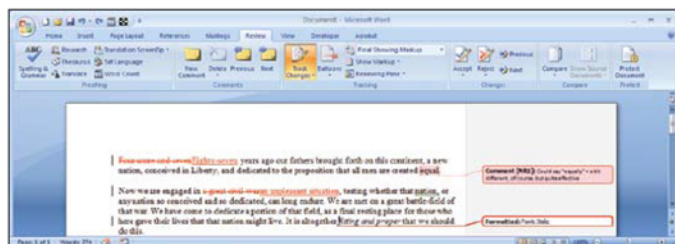
**BALLOONS** Changes in text can be displayed in balloons.



**CHANGES INLINE** Some prefer to see revisions within the text.



**OFF TO THE SIDE** Changes can be shown in a reviewing pane.



**A LITTLE BIT OF BOTH** You can choose to have revisions shown inline, and comments shown in balloons.

procedure; I find right-clicking easier.)

The most generally overlooked set of customizations appears under the *Show Markup* item on the Review bar. Clicking this item reveals a list of items you can include or exclude in your document when reviewing is turned on. Most are immediately clear: You can show—or decline to show—comments, insertions and deletions, and formatting changes. You can remove the vertical highlight (the shaded

area) in the markup area on the right side of the screen. The other two items are less obvious. The first lets you show or hide Ink annotations (made by a stylus on a tablet PC). And the bottom choice, *Reviewers*, is the most useful. As collaborators change the document, it can fill with text and annotations of various colors; *Reviewers* lets you hide the comments from which-ever reviewers you wish, letting you zero in on the work of specific collaborators. You can even check one or more reviewers and then use the rest of the *Show Markup* menu to display only specific types of markups from them.

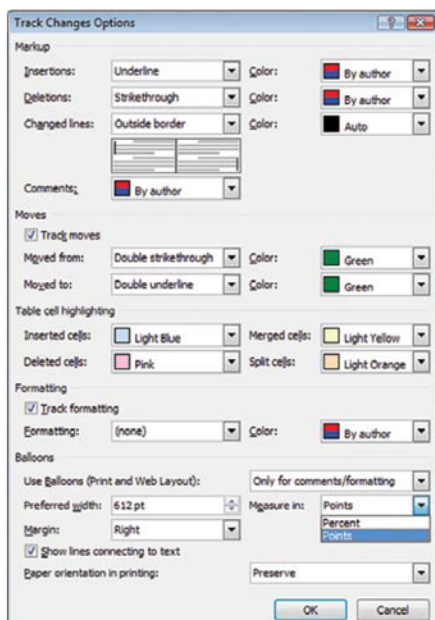
Clicking the *Track Changes* label below the icon and then choosing *Change Tracking Options* gives you access to a wide range of options. By default, for example, Track Changes displays each insertion with an underline and each deletion with a strikethrough, but you can make either or both of these bold, italic, or double underlines instead, or simply display it in a specific color.

Also by default, text that you move from one location to another in the document is displayed with a double strike-through at its origin point and a double underline at its destination, but you can change these designations as well, including hiding the original (useful with large text moves, which otherwise can make the document nearly unreadable). Moved text also appears in green by default, but

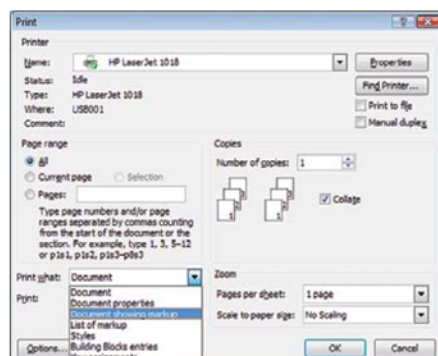
a drop-down menu lets you customize the color for both the original text and the text once it's moved.

Finally, several options are available to you at print time. Near the bottom left of Word's Print dialog is a drop-down menu labeled *Print what:*. Clicking here reveals two options tied to the reviewing features. *Document Showing Markup* prints your document with all the changes you've tracked. *List of Markup* prints only the changes made in the document and the username of the person who made each change, without any context.

Word's reviewing features are powerful. But with numerous collaborators your documents can become difficult to read and interpret. Using the numerous customization features lets you select only the features you need. □



**CHANGE COLOR** Tracked changes can be bold, italic, or another color.



**PRINTING CHANGES** You can choose which tracked changes you'd like to print.

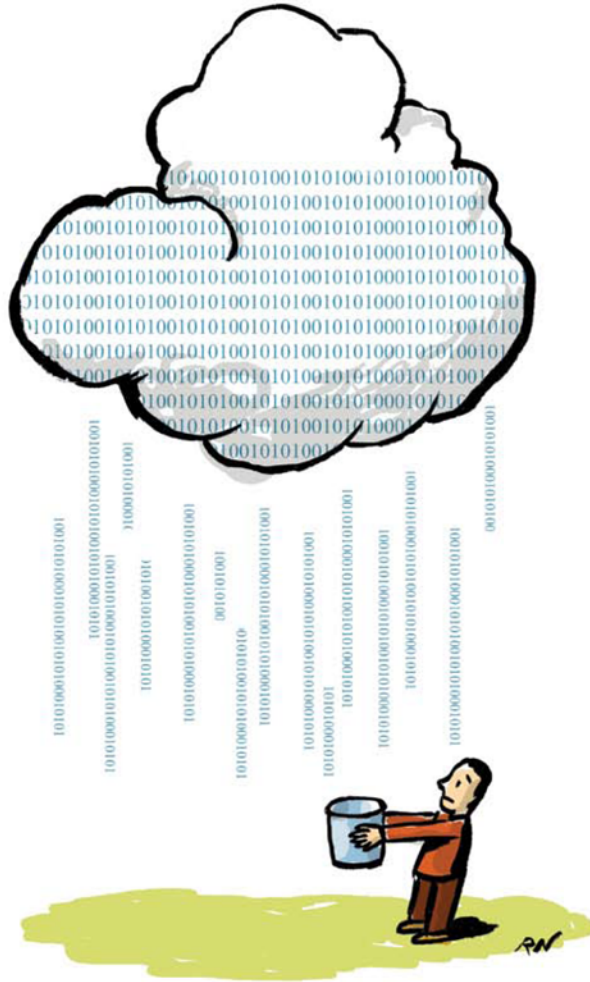
# The Darker Side of Cloud Computing

We've been hearing about "computing in the cloud" for some time now. Sounds peaceful. But cloud computing is just another term for *outside your control*. By Matthew D. Sarrel

Cloud computing is a marketing buzzword that's thrown around an awful lot today. A vague (but useful) definition is that cloud computing refers to data, processing, or experiences that "live" out there somewhere in the cloud we call the Internet. Every business has something going on in the cloud these days: collocating or hosting Web or e-mail servers, social networking, software as a service (SaaS), even infrastructure as a service (for example, off-site online storage). Cloud computing is becoming very popular, primarily as a money-saving technique—cloud services don't require expensive in-house hardware, software, and staff. In addition, cloud services are usually available for a small monthly fee rather than a huge up-front expense, which makes them even more attractive from a budgeting standpoint. Like many things that seem to have only an upside, cloud computing makes me nervous.

The cloud is burgeoning. Businesses are using Salesforce.com for CRM; Zoho, Microsoft Office Live, and Google Apps for office productivity; Intuit QuickBase or a hosted Microsoft SQL Server for databases—and the list goes on. More features, less expense, and fewer IT resources? It almost sounds too good to be true. And it may be. Much as in the early eighties we asked "Where's the beef?" we should now be asking "Where's the security?"

To secure data, you need to understand something I like to call the data life cycle: How data is collected, entered, processed, transmitted, stored, reported, and exported. Any one of these stages may contain multiple vulnerabilities, some ubiquitous and some particular to your environment. To assess the security of corporate data, you'll have to understand the risks that apply to each stage of the data life cycle. You will be able to take proactive



steps to prevent data from being compromised by understanding the integration of security risks, business processes, and the data life cycle.

By now you are probably beginning to see the downside to cloud computing—it's difficult enough to protect data that doesn't leave your control as part of ordinary business, but in the cloud you've relinquished control. Depending on your contract, you may not even own your cloud-resident data! And worse, there are clouds within the cloud—your provider may subcontract with another provider for data storage, and that provider might also subcontract for data storage management. Your provider may not even be able to tell you where your data is, or even which country it is

in and whether the laws that apply to you regarding data security and breach disclosure even apply in that twice-removed jurisdiction.

Gartner published a great report in early June that is the industry's first attempt to identify the security risks of cloud computing. In it, Gartner urges something that we at *PC Magazine* have been advocating for decades: full disclosure (aka "transparency") regarding security practices and procedures. The reasoning is simple: If your provider can't tell you exactly what it does to protect your data at each stage of the data life cycle, then how good a job do you think that provider is doing?

Here are other recommendations that spring from Gartner's findings:

- Apply internal risk assessment and controls to all externally sourced (cloud) services.
- Assess all legal, regulatory, and audit issues associated with location independence and service subcontracting.
- Demand transparency. Anything less is a deal breaker! Don't contract for IT services with a vendor that refuses to provide detailed information on its security and continuity management programs.

Yes, cloud computing is a set of powerful technology solutions that are here to stay. It provides cost savings that may temporarily blind you to the risks. But don't dive in simply to save money and time. Evaluate each service's security the same way you would evaluate off-the-shelf hardware and software. Ask tough questions about data security. If your provider refuses to answer, or his answer doesn't adhere to your current security policy, look elsewhere. I've sat through countless vendor meetings and I guarantee you this: Every time a security concern is dismissed as "taken care of" without explanation, it's a potential problem. □



# TechTips

Useful tidbits from PCMag editorial staff, Labs analysts, and readers

As part of our special security issue, we have assembled our top security tips. For more, visit [go.pcmag.com/securitytipsandtricks](http://go.pcmag.com/securitytipsandtricks).

## FOR NEWBIE NEIGHBORS (OR FRIENDS, OR RELATIVES, OR...YOU)

### Use Strong Passwords

For your operating system, e-mail accounts, and all online log-ons, use a password that:

- is six or more characters long;
- contains a mix of letters, numbers, and symbols;
- is not the name of your dog or cat; and
- contains words not found in the dictionary.

### Disable File and Printer Sharing

In Windows XP, open Network Connections from the Control Panel. Right-click on the connection and choose *Properties*. In the resulting dialog, uncheck the box labeled *File and Printer Sharing for Microsoft Networks*. In Vista, right-click on the Network icon in the system tray or open Network and Sharing Center from the Control Panel. Under Sharing and Discovery, choose *Off* for file sharing or printer sharing, depending on your needs.

### Back Up and Encrypt

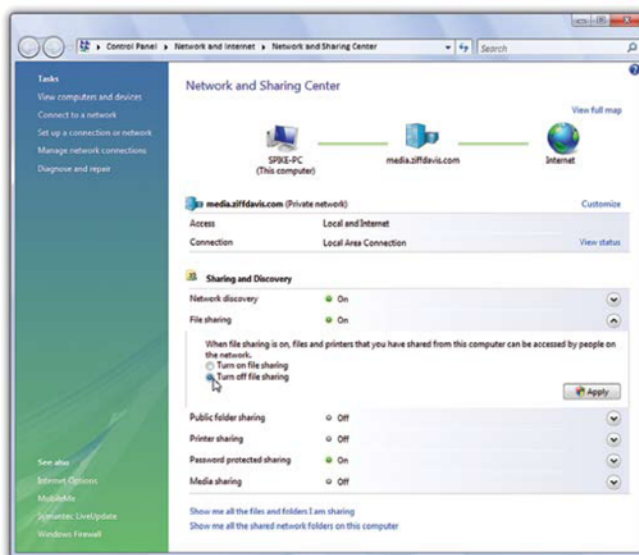
Make regular backups of important files and folders, and encrypt them, too. Compression utilities such as WinZip will encrypt archive contents, and so will the Windows (XP and later) option *Send To | Compressed (zipped) Folder* you can access by right-clicking on a file or files, or a directory.

## FOR FILE SHARERS

### Windows Shares

Any general security information should include a warning to disable file and printer sharing *unless you need them enabled*. For the growing number of people who share files within their own networks, here are some precautions to take:

- Never share more than you have to. Never, ever share the root directory or the Windows directories.



**TURNING OFF FILE SHARING** To disable file sharing in Windows Vista, first head to the Network and Sharing Center in your Control Panel.

- Start shares when you're going to use them and stop sharing when you're done. You don't leave a door open when you're not walking through it.

- Create a restricted account and let other users connect using that user name and password. This prevents you from having to give out your user name and password and separates others' privileges from yours.

- Give specific users privileges to read, write, or both, on a directory-by-directory or even file-by-file basis.

- Limit the number of simultaneous users allowed to a realistically low number, like one or two.

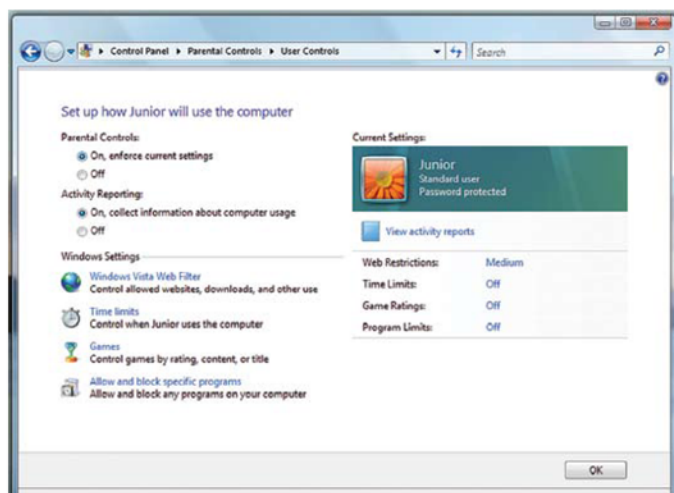
### P2P Shares

It's none of our business what you download from the Internet, but you should know that around genuine content lurks a miasma of malware. Also, just as the huge base of Windows users makes that platform particularly ripe for attack, the large "community" of file sharers makes file-sharing environments appealing for exploitation.

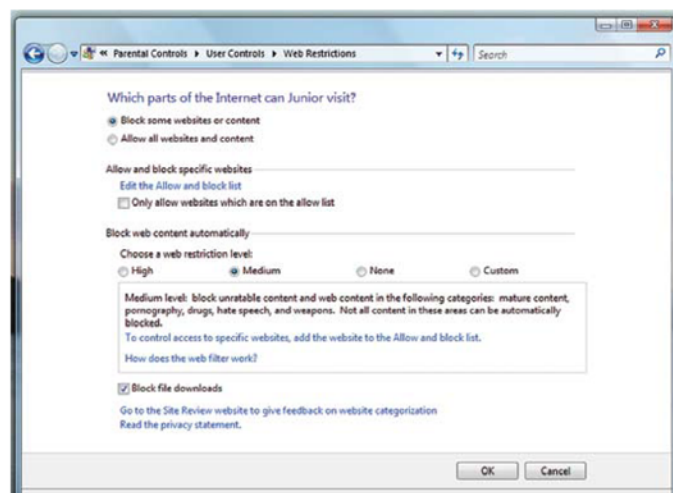
- Don't share files with people you don't know. Torrent technology is awesome for wide-scale sharing, but you can also set

up torrents for your friends' eyes only. To make a torrent, first package whatever you are sharing into a single directory or archive file. Then, in your Torrent client, click *File | Create a new torrent* (or *Make Torrent*, or something along those lines, depending on your client). Select *File or Directory* and then browse to the location of the file or directory you would like to share. From here the options should be clear. Create a private (or nonpublic, or embedded) tracker, which is intended for people wishing to share with a small group for a short period of time. The embedded tracker URL is `http://your_ip_address:port/announce` (where your IP is your computer's IP address and the port is your P2P software's listening port). Your client will have more specific information available online. You will also have to enable private trackers, which will depend on your client. For example, in uTorrent, the embedded tracker must be enabled by the following process: Click *Options | Preferences | Advanced*, then set `bt.enable_tracker` to `true`.

- If you must download from an unknown source, make sure to scan the files for malware before viewing or listening to them.



**KEEPING TABS ON JUNIOR** Vista's parental controls, included in the OS, offer activity reports you can view regularly.



**RESTRICTED BROWSING** You can choose a Web restriction level for your child—high, medium, none, or custom—in Vista.

- If you try to open a downloaded video and get a prompt that you need to download a proprietary codec from a specific site, don't do it. Delete the file.

- Keep your anti-malware and P2P software updated—especially the latter, as P2P clients tend to need frequent patches to address security vulnerabilities.

## FOR PARENTS

### Get to Know Parental Controls

If you use Vista, parental controls are included in your operating system. If not, there are a number of apps meant to help keep kids safe and focused while they're on the computer. In Vista, use the Activity Viewer feature to monitor your children's use of the Web, and to adjust parental-control settings.

### Consider Content Filtering

Although it can be daunting, don't neglect Web, e-mail, and instant-message content filtering. If filtering isn't part of your parental-control solution, try OpenDNS, which is free and lets you block sites known to have adult content. Some home broadband routers come with built-in content-filtering options. They may be found on the *Security* tab, under *Access Restrictions*, or in another section, depending on your router. If you can't find them, try your router's help file. And Vista's parental-control rudimentary Web-filtering options.

### Learn About ESRB Ratings

Ranging from EC for Early Childhood to A for Adults Only 18+, ESRB (Entertainment

Software Rating Board) ratings can be used as guidelines for purchases. Enforce those ESRB parental-control settings on Microsoft Xbox 360, Nintendo Wii, Sony PlayStation 3 and PSP, and Windows Vista. In Windows Vista use the Parental Controls dialog to set ESRB permissions. That said, ESRB ratings are not applicable to online game play. There is no way to control what people say or do in an online world, although you can at least restrict some communications.

### Console Control

Control buddy lists; each platform has its own way of doing this. Ban and report foul language. Also, the Nintendo Wii is the most locked-down console. You can set a PIN to control content and Internet access, and the Friend Code system makes it virtually impossible to communicate with anyone without exchanging long numeric codes.

## FOR MAC USERS

### Restrict Access

Restrict access to actions that require Administrator privileges. From an Administrator account, you can remove Administrator access to any other account. If you have only one account and want to restrict access, go to *System Preferences* | *Make Another Account*, make the new account an Administrator account, log out, log in using the new account, remove Administrator privileges from the original account, and log back in to the original account. Use the original account for daily duty and the second one for rare administration tasks.

### Protect System Preferences from Casual Tampering

Go to *System Preferences* | *Security*, then enable *Require password to wake this computer from sleep or screen saver* and *Disable automatic log-in*. Enable *Log out after minutes of inactivity* if your Mac is in a public place. Be aware, though, that you may lose your work if it's not saved when you've automatically logged out. Enable *Use secure virtual memory*. Otherwise, your Mac may write a password to the memory that is really just a file on your hard drive.

### Store Passwords in a Safe Place

The Keychain is a great place to store passwords. It's also the first place someone would look if they wanted your password. Open *Keychain Access*, then press *Edit* and *Change Settings for Keychain*. Set an idle timeout to protect your passwords when you walk away, and enable *Lock on sleep* so that if you suspend the machine and start it up again, your passwords will be safe. Use a password for Keychain that's different than from your account password, so if someone gets one they won't necessarily get both.

### If You're Not Using It, Turn It Off

Too many services are on by default. Go to *System Preferences* | *Sharing*. Uncheck services you're not using.—Matthew D. Sarrel

**GREAT IDEA!** Got a tip to share? Find a cool new trick in your favorite gadget or app? Send it to [tips@pcmag.com](mailto:tips@pcmag.com). We'll run it through the PCMag Labs wringer and print our favorites on this page.



# The Best Stuff



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**HP Pavilion Elite m9400t**  
\$843 list

#### BUDGET/VALUE

**Lenovo IdeaCentre K210**  
\$449 direct

#### GAMING/ MULTIMEDIA

**Velocity Micro Raptor Signature Edition**  
\$6,999 direct

#### ALL-IN-ONE

**Sony VAIO VGC LV190Y**  
\$2,799.99 list

#### BUSINESS

**Dell OptiPlex 755** \$1,183 direct

### LAPTOPS & NOTEBOOKS

#### MAINSTREAM

**Apple MacBook Pro 15-inch (Penryn)** \$2,899 direct

#### GAMING

**NEW Alienware M17**  
\$2,059 direct

#### MULTIMEDIA

**HP HDX16t** \$1,790 direct

#### MEDIA CENTER/DESKTOP REPLACEMENT

**NEW Lenovo ThinkPad W700** \$4,240 direct

**NEW Acer Aspire 6930G-6723** \$1,020 street  
**HP HDX18t** \$2,000 direct

#### NETBOOK

**MSI Wind** \$480 street

#### BUSINESS

**Lenovo ThinkPad T400**  
\$1,580 direct

#### BUDGET

**HP Pavilion dv2800t**  
\$1,049 direct

### STORAGE

#### PORTABLE

**Maxtor OneTouch 4 Mini**  
\$129.99 direct

#### DESKTOP

**Western Digital My Book Mirror Edition** \$499.99 list

#### NETWORK-ATTACHED STORAGE

**HP StorageWorks AiO400t**  
\$3,799 list

### LCD MONITORS

**Lenovo ThinkVision L200x**  
\$499.99 list

**Dell UltraSharp 2408WFP**  
\$689 direct

### PROJECTORS

#### HIGH-END XGA

**Canon Realis X700**  
\$2,500 list

#### CONSUMER/BUSINESS XGA

**NEC VT800** \$1,000 street

#### PORTABLE

**NEW Dell M109S** \$499 direct

### PRINTERS

#### MONOCHROME LASER

**Brother HL-2170W** \$300 street  
**Samsung ML-2851ND**  
\$150 street

#### COLOR LASER

**NEW Lexmark C544dn**  
\$499 direct

#### STANDARD INKJET

**Canon Pixma iP4300**  
\$99.99 direct

#### ALL-IN-ONE INKJET

**Brother MFC-6490CW**  
\$300 street

#### PHOTO PRINTER

**HP Photosmart A636 Compact Photo Printer**  
\$149.99 direct

### NETWORKING

**Netgear Powerline AV Ethernet Adapter Kit (XAVB101)** \$130 street  
**SMC SMC8P-Smart EZ Switch 10/100/1000**  
\$300 street

### HDTVs

#### PLASMA

**Pioneer KURO PDP-5020FD**  
\$4,000 direct

#### LCD

**Samsung LN52A750**  
\$3,999.99 list

#### OLED

**NEW Sony XEL-1 OLED Digital TV**  
\$2,499.99 list

### HDTV ACCESSORIES

#### UNIVERSAL REMOTE

**Logitech Harmony One**  
\$249.99 direct

#### BLU-RAY PLAYER

**Sony BDP-S350** \$399.99 list



### DIGITAL CAMERAS

#### COMPACT

**Canon PowerShot A1000 IS**  
\$349.99 list

#### HIGH-END D-SLR

**Nikon D300**  
\$1,800 street (body only)

#### ENTRY-LEVEL D-SLR

**Canon EOS Rebel XSi**  
\$699 list (body only)

#### SUPERZOOM

**Panasonic Lumix DMC-FZ18**  
\$399.95 list

### DIGITAL VIDEO CAMERAS

#### COMPACT

**NEW Creative Vado Pocket Video Cam HD** \$299.99 direct

### DIGITAL PHOTO & VIDEO

#### MULTIMEDIA SUITE

**Adobe Creative Suite 3**  
\$999 direct

#### VIDEO-EDITING SOFTWARE

**CyberLink PowerDirector 7 Ultra** \$119.95 direct

#### PHOTO EDITING

**Adobe Photoshop CS4**  
\$1,150 list

**NEW Picasa 3 (beta)** Free

### MP3 PLAYERS

#### HARD DISK

**Microsoft Zune 120GB**  
\$249.99 list

#### FLASH

**Apple iPod touch (2nd generation)**  
8GB, \$229 direct

**Apple iPod nano (4th generation)**  
16GB, \$199 direct

**Samsung YP-U3 (2GB)** \$90 list

### SPEAKERS/DOCKS

**Chestnut Hill Sound George**  
\$549 direct

**Hercules XPS 2.1 Lounge speakers** \$60 street  
**Logitech Pure-Fi Dream**  
\$200 direct

#### PC/GAMING

**Razer Mako** \$399 list

### MEDIA EXTENDERS

**Sonos Bundle 150** \$999 direct  
**Slingbox PRO-HD** \$299 list

### GAMING CONSOLES

**NEW Sony PlayStation 3 (Fall 2008)** \$399 direct

### GPS DEVICES

**Garmin nüvi 755T**

\$499.99 list

**Garmin Oregon 400t**  
\$599 list

### CELL PHONES

#### ALLTEL

**RIM BlackBerry Curve 8330**  
From \$229.99 with contract

#### AT&T

**Apple iPhone 3G**  
From \$199.99 with contract

#### SPRINT

**RIM BlackBerry Curve 8330**  
\$179.99 with contract

#### T-MOBILE

**Nokia E71** \$500 street

#### VERIZON WIRELESS

**Samsung Knack SCH-U310** \$39.99 with contract

#### UNLOCKED

**Nokia N82** \$629 direct

### HEADSETS

#### BLUETOOTH

**Aliph New Jawbone**  
\$129.99 list

### HEADPHONES

**Ultimate Ears UE 11 Pro**  
\$1,150 list

### OFFICE & PRODUCTIVITY

**Windows Live Messenger (Wave 3) beta** Free  
**Adobe Acrobat 9 Pro**  
\$449 direct

#### SPEECH RECOGNITION

**Dragon Naturally Speaking 10**  
\$99.99 direct

#### DESKTOP PUBLISHING

**NEW Adobe InDesign CS4**  
\$700 street

**NEW Adobe Illustrator CS4**  
\$599 direct

### IPHONE APPS

**NEW Ocarina** \$0.99 direct  
**Air Sharing** \$6.99 direct

### ENTERTAINMENT

**Pandora (for iPhone)** Free  
**Rhapsody** From \$12.99/month

### SECURITY

#### ANTIVIRUS

**Webroot AntiVirus with AntiSpyware 6.0** \$39.95 direct

#### SUITE

**Norton Internet Security 2009**  
\$69.99 yearly

#### PARENTAL CONTROL

**NEW Net Nanny 6.0**  
\$39.99 yearly

### BACKUP

**SOS Online Backup (beta)**  
\$19.95 direct

### FINANCIAL

**QuickBooks Accounting Pro Edition 2009** \$199.95 list  
**PayCycle Plus (Fall 2008)**  
\$42.99 monthly

### WEE HD CAM

The Creative Vado is an HD video camera that fits in your pocket.