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Simplify Your Life.



[Guaranteed]

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- » Manage Your Media
- » Take Control of Your Online Life



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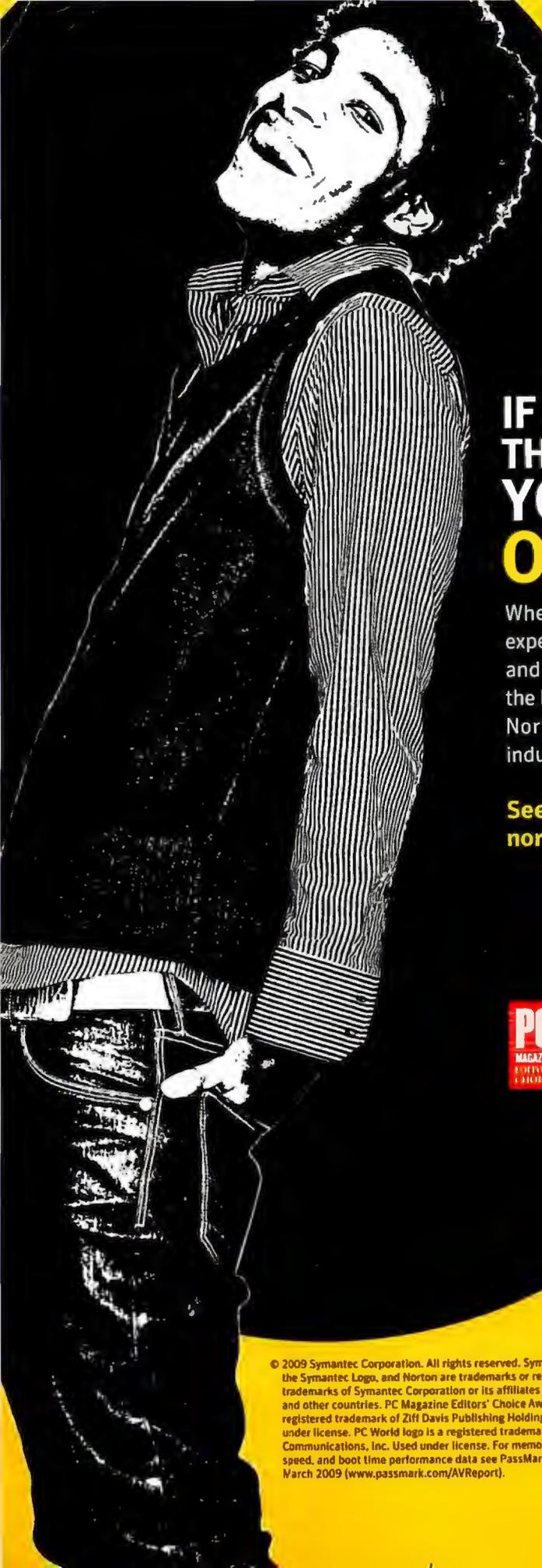
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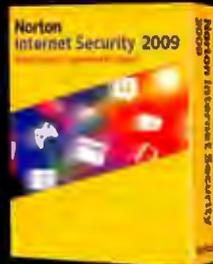
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When a Security Breach Hits Home

JOURNALISTS PREFER TO report the news from a safe distance, so as not to lose perspective on the events. But every once in a while, a reporter has a more personal connection to a story—and the experience can be eye-opening. *PC World* Assistant Editor Nick Mediati recently found himself in that unenviable position when he learned that a database for the on-campus health clinic at the University of California, Berkeley, had been breached, coughing up private data on current and former students, spouses, and parents.

Mediati graduated from UC Berkeley in 2006, meaning that he was one of the crime's victims.

He learned about the security snafu (see "University of California Hit With Major Data Theft," page 36) when a classmate, who had received an e-mail from the school, alerted him to the problem. "It's ironic," he notes. "Here I am, *PC World's* beat editor for security, getting caught in a data breach."

Then again, in this kind of attack, there's nothing that ordinary users can do, at least not to stop the initial break-in. The keepers of the data are the first and last lines of defense. They failed—spectacularly, in this case. The breach occurred back in October 2008 and ran continuously, undiscovered, until April 2009.

Problems With Notification

The university sent e-mail messages to all affected parties, but since its records listed an old e-mail address for Mediati, he could have missed the warning entirely. Once he found out, however, he quickly slapped a fraud alert on his credit report and then went online to write up the details of this data disaster.

Perhaps the most unexpected element of this sorry tale was the site of the

If a company is careless with your data, there's not much you can do. But keeping your machine well protected is still the best policy.

heist itself. We aren't surprised when criminals go after banks, credit card companies, and the like. But a school clinic? "Of all attack vectors, this seems like one of the more obscure," says Mediati. Yet health-care records can contain Social Security numbers, addresses, and parents' information, including

vide a gamut of illicit services to the bad guys. Criminals can buy or sell stolen data, for instance, or they can find a "mule" who will accept delivery of pricey consumer goods purchased with a stolen credit card number. These mule sites will even take care of reselling the goods and delivering a cut of the profits to the credit card thief.

Credit card theft, though, is becoming less profitable, according to Larkin. "So many credit card numbers are out there right now," he says, that there's more money in swiping other data, "such as a PIN, for direct cash removal from an ATM." The UC Berkeley break-in is a prime example of the new kinds of opportunities—beyond conventional financial institutions—that cybercriminals are exploiting.

Personal Security Matters

The less we can take away from all of this nefarious criminal activity: We, the end users, are no longer the weakest link in the security chain. That distinction belongs to larger institutions farther up the chain.

Even so, Larkin stresses, data breaches are merely one of many potential threats out there, which is why keeping your own computer clean and safe is still critical. Yes, it's frustrating that there's little you can do if a company that keeps your data does a shoddy job and hands over your information to someone in Estonia. But if you follow a few basic rules and keep a watchful eye on your accounts, you can drastically diminish your risk. And in security, reducing risk is the name of the game. ●

Steve Fox is editorial director of *PC World*.

Security Alert

Organized Crime Moves Into Data Theft

BY DEAN LARSON

YOU KEEP HEARD that if your PC, and you're smart enough to have a good phishing shield. You're even told to believe you need, and to know you shouldn't wear your machine. Do your financial data should be relatively safe. Right? Wrong. Recent data theft of credit card numbers and other sensitive digital data have financial institutions in a state of emergency, leading to a number of bank attempts to prevent criminals, in better than they legally could, not by organized crime groups. And individuals can't prevent a hacker from electronically using a bank or credit card pin number, leading to a large, targeted but stop-to-charge suit in the court's case work, and dropping to risk near that much credit card numbers and ATM and PINs.

"I don't worry so much about hackers, but about the data breach," says Joe Larkin, who does research on malware for business security publisher Symantec. "I've reported under the assumption that the research already has my credit card, debit card, and PIN numbers, but haven't gotten around to using them because they have so much data to work through."

Profile: Organized Crime
According to the 2008 Data Breach Investigations Report from Verizon Research (vri-research.com/2008), credit card theft is the most common type of breach. The report also notes that the 2008 data breach was the largest in the world, with 100 million records stolen. The report also notes that the 2008 data breach was the largest in the world, with 100 million records stolen. The report also notes that the 2008 data breach was the largest in the world, with 100 million records stolen.

When should you be concerned about pop-up ads? We tell you at find.pcworld.com/62811. Also, for a reality check on the privacy implications of cloud computing services, see find.pcworld.com/62910.

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a mother's maiden name on occasion. That's tasty information for an identity thief, who—according to Contributing Editor Erik Larkin, author of "Organized Crime Moves Into Data Theft" (see page 33)—is likely to be a hardcore criminal these days. "You have the traditional crime syndicates, especially Russian mafia, who have moved into cybercrime," he reports. On top of that, there are the loosely organized groups, people who meet one another only on underground "carder" Web sites that traffic in stolen information. Carder and other, similar sites pro-



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Articles on privacy and security always draw reader interest—and sometimes heated e-mail responses, as a recent *Techlog* editorial did. Visit the Spyware & Security center at pcworld.com for the latest developments, and stop in at forums.pcworld.com to add your own comments to the discussion.

Punish Spammer-Scammers

The April editorial about scams ["Sleazy Scammers Push Unrelenting Assaults," *Techlog*] hit close to home. I too am getting annoying phone calls about the expiration of my car's warranty. I don't even own a car. I am on the government's Do Not Call list. Are you?

I tried pressing 2 to remove myself from the company's list. That didn't work. I spoke to a live operator and asked her to remove me from the list. That didn't work either. I googled the name of the company. The top ten hits were all complaints about how these guys ignore the Do Not Call list.

They have so many different phone numbers that it is impractical to block them all. I called the phone company to find out whether the harassing calls might be coming from the same number all the time. The phone company replied that it would not give me that information without a court order.

The only way to get these people's attention is by a class-action lawsuit naming not only the corporation but the principals involved. After all, they are breaking federal law. I don't think there's a jury in the world that would acquit these criminals. I would just want to see the principals forced to be

tethered to a phone that can only call out to 911 but is on every spammer's list. Our felons must answer the phone every time a disgruntled claimant calls (day or night), or face jail time.

Frank Weigert, Wilmington, Delaware

Best Free Stuff

My one complaint with you comes around once a year, when the annual "Best Free Stuff" feature [May] arrives. A few years ago, when this issue came to the house, I would rush to see what your people had come up with that I could get *for free*, and I would find at least four or five neat little programs.

Today, I find that these applications are *not* free, or maybe you can get the trial version, but in the end some company wants you to buy the product.

I would like to see you go back to the place where the stuff you were pushing really *was* free.

Jack Van Scyoc, Walnut Creek, California

Editor's response: Although certain utilities may have a cost for their full version, any limited products that we included on our list had a usefulness that made our authors and editors deem them worthy of recommending. But our list generally consists of sites, services, and software that offer full, no-cost functionality.

—Anne B. McDonald

E-Book Readers

I'm sure that you published a very useful review of e-book readers ["Amazon vs. Sony: E-Book Reader Face-Off," *Reviews & Rankings*, May]. But I didn't finish it because I've already sent my Kindle 2 back. Initially, I was excited to use this cool device and to stop lugging a small suitcase full of books on each vacation (okay, I like to read).

A major limitation of these devices is the small number of titles available for them. You say that Kindle has 245,000 titles, which sounds like a lot. But Amazon currently has over 26 million real books for sale. In fact, the first subcategory on its site (Arts and Photography) alone lists some 461,000 titles.

Unless you read only best sellers (and relatively recent ones) or classics, you will need to continue dragging books around. You will not soon be able to read other books with these devices.

Andrew Doorey, Wilmington, Delaware

Hassle-Removing Software

Rick Broida's recommendation of the free program *WizMouse* (*Hassle-Free PC*, May) solved a complaint I've had with several versions of Windows. Not only can you scroll active and inactive windows, but as you select one window

Regarding "The Connected TV" [May], I'm surprised the author didn't mention Netflix on the Xbox. I can stream thousands of movies from Netflix at HD quality and still get DVDs in the mail.

publicmenace
PCWorld.com comments

to work in, the other window does not minimize. Your download link was for version 1.0.0.1. I found, though, that it doesn't hide the tray icon. I visited the developer's site (antibody-software.com) and found that version 1.0.0.2 not >>

only hides the icon but supports the left-right tilting of the mouse wheel.

Brian Vaughan, Alameda, California

Editor's response: We have updated the download for WizMouse that is available at find.pcworld.com/62539 to version 1.0.0.2.

Expiration Pop-Ups

I'm a longtime user of Symantec's Norton security software, but I'm getting frustrated by the constant pop-up messages when a subscription is within 30 days of expiration. The company's tech support folks said they would extend my subscription by 30 days, on the assumption that I would renew once I reached my actual expiration date, and as a result the pop-ups would be eliminated until the time remaining was down to 30 days again. However, no such extension has been activated.

Symantec has consistently refused to change this function in their software.

If I have to endure this every year as my subscription approaches its expiration date, I'm more likely to find a new software vendor. These aggressive marketing practices are over the top.

R. Lewis, Cary, North Carolina

Security Suites, Round 2

In the May *PCW Forum*, Evelyn Henry takes issue with your recent assessment of Symantec's Norton Internet Security 2009 [in "Top Internet Security Suites," March], but she does so for the wrong reason and thus does a disservice to your readers and herself. She bases it on the 2008 version of NIS, which I thoroughly agree was awful. However, I cautiously tried the 2009 version based on comments I had read that Symantec had rewritten the software from scratch. To my amazement, the new rendition works extremely well. I can't recall any other software upgrade

that has shown such an improvement, and I go back to 8088 days. I perceive no performance degradation and minimal intrusiveness, and would give it the nod over any of the many security packages I have tried over the years.

Steve Johnson, Columbus, Ohio

PC World welcomes your feedback. We reserve the right to edit for length and clarity. Share your thoughts in the Comments area under each story on our Web site, or visit our Forums (find.pcworld.com/55165). Send e-mail to letters@pcworld.com. ●

CORRECTIONS

IN MAY'S "FIVE Underappreciated Microsoft Web Services" (*Forward*), we should have said that Live Mesh currently has a limit on free storage of 5GB.



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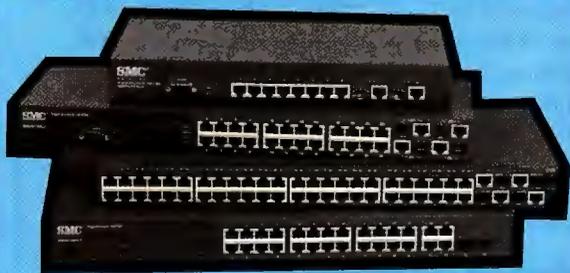
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Forward

Speed Tests: Windows 7 Versus Vista

Though Windows 7 edged out Vista in our lab tests, you may not notice much of a difference.

BY NICK MEDIATI

IMPROVING performance is one of Microsoft's design goals with Windows 7, and many early reviewers (including ours) have said that the new Windows operating system seems peppier than Vista. But tests of the Windows 7 Release Candidate in our PC World Test Center indicate that while Windows 7 was slightly faster on our WorldBench 6 performance test suite, users may barely notice the difference.

OSs Head-to-Head

We loaded the Windows 7 Release Candidate on three systems (two desktops and a laptop) and ran our WorldBench 6 tests on them. Then we compared those results with the ones we obtained from the same three systems running Windows Vista. Each PC was slightly faster when running Windows 7, but the overall improvement didn't exceed 5 percent, our thresh-



old for gauging whether a performance change will be noticeable to a typical user.

The largest difference was just 4 points—102 for Vista versus 106 for Windows 7 on an HP Pavilion a6710t desktop. Our Maingear M4A79T Deluxe desktop improved

by 1 point (from 138 with Vista to 139 with Windows 7), and our Dell Studio XPS 16 laptop improved by 2 points, from 97 with Vista to 99 with Windows 7.

The WorldBench 6 suite consists of a number of tests involving ten common appli-

cations, including Microsoft Office, Firefox, and Photoshop. On the individual tests, the benchmark results were generally within a few percentage points of each other. One notable exception, however, was Nero 7 Ultra Edition, where Win-

For a discussion of issues involved in trying to upgrade directly from Windows XP to 7, visit find.pcworld.com/62985; and for Microsoft's plans for rolling out the new OS, go to find.pcworld.com/62987.

dows 7 outran Vista significantly (between 12 percent and 26 percent faster, depending on the PC we used).

The Driver Factor

Though we have yet to confirm this observation, PC World Test Center Director Jeff Kuta notes that the difference in results on the Nero 7 test may be due to updated hard-disk drivers in Windows 7. Improvements to Windows 7's disk support will be more noticeable in an application like Nero, which uses the hard drive heavily. Similarly the results for the WorldBench 6 test involving WinZip, another hard-drive-dependent task, showed meaningfully better performance under Windows 7.

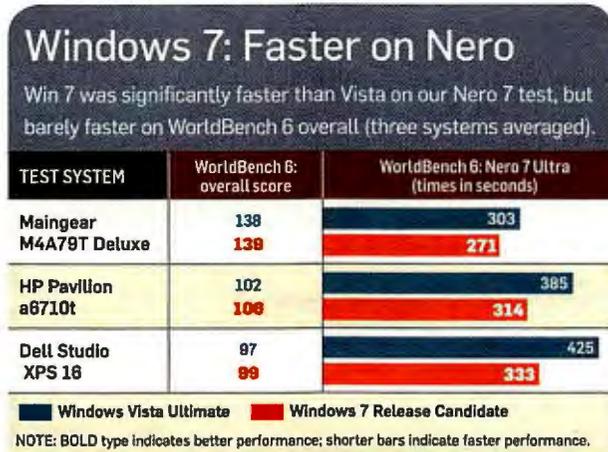
We also measured a speed increase of 7 percent in our Autodesk 3ds max 8.0 SP3 (DirectX) test on the HP Pavilion desktop, which had an nVidia GeForce 9300GE graphics board. nVidia's drivers appear to be better optimized for Windows 7 than for Windows Vista.

In contrast, however, each of the three systems took slightly longer to perform the tests in Microsoft Office and Firefox when they were running the new operating system than when they were running Windows Vista.

Windows 7 Not Final

Windows 7's features probably won't change in the final version, but it bears repeating that we were testing a release candidate of the OS; Microsoft's engineers may find ways to tweak the code to improve performance.

If future tests of the final



TEST RESULTS for Windows 7 Release Candidate (orange) and Vista (blue) on WorldBench 6 overall and on the Nero 7 Ultra component.

version of Windows 7 confirm these preliminary results, many Windows users are likely to be disappointed. A major complaint about Windows Vista has been that it is consistently slower than Windows XP. If Windows 7 doesn't markedly improve on Vista's performance, it may fail to convince people to leave Windows XP.

That said, there could be other areas we didn't cover in our testing—such as start-up times—in which Windows 7 might outperform Vista by a wider margin. The best way to get a feel for Windows 7's performance is to download the release candidate and test-drive it on your system.

How We Test

We used three PCs in our testing: a Maingear M4A79T Deluxe desktop PC, an HP Pavilion a6710t desktop, and a Dell Studio XPS 16 laptop. The powerful Maingear comes equipped with a 3.2GHz AMD Phenom II X4 955 Black Edition CPU over-clocked to 3.71GHz, 4GB of memory, and dual ATI Radeon HD 4890 graphics processors. The HP Pavilion, a mainstream desktop PC, fea-

tures a 2.6GHz dual-core Pentium E5300 processor with 3GB of memory and an nVidia GeForce 930GE graphics chip. And finally,

the Dell Studio XPS 16 laptop packs a 2.4GHz Intel Core 2 Duo processor, 4GB of memory, and an ATI Mobility Radeon HD 3670 graphics card.

On all three systems, we ran our WorldBench 6 benchmark suite on a clean installation of the 32-bit edition of Windows Vista Ultimate with SP1, repeating the process with the Windows 7 Ultimate release candidate (again, the 32-bit version). We made both operating systems current with Windows Update, and we installed the most up-to-date hardware drivers available.

PLUGGED IN STEVE FOX

CRAIGSLIST CLEANS UP: Site drops "erotic services" ads (find.pcworld.com/62961). What will happen to all of those perky co-eds who just need help with their rent money?



PRINT RULES: Amazon supersedes the new Kindle to make it suitable for displaying newspapers (find.pcworld.com/62955). Still in the works: a Kindle that you can wrap fish in.



I CAN'T HEAR YOU: Survey says one in five U.S. homes are cell-phone only. Want to avoid talking to someone? For 20 percent of you, the "you're breaking up" excuse can't be beat.



RED ALERT: Microsoft readies "all-out war" on the iPod (find.pcworld.com/62954) with possible new Zune model. In other news, Monaco plans to invade the United States.



HOLOGRAPHIC STORAGE: A breakthrough by GE uses holography to cram 100 DVDs worth of data on a single disk. Or one season of *American Idol*—whichever is shorter.



OUT WITH PRINTOUTS: Study says Feds could save \$440 million if employees cut unnecessary printing (find.pcworld.com/62960). To save twice that, stop unnecessary studies.



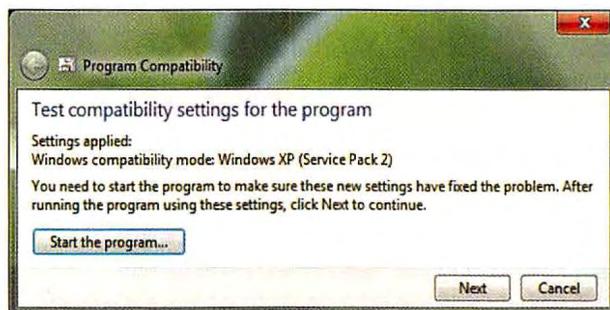
What's New in the Windows 7 Release Candidate

CHANGES IN THE Windows 7 Release Candidate consist mainly of interface tweaks and minor changes to security and networking features.

But Windows 7 RC also has two significant new features that weren't present in the beta version released in January: Remote Media Streaming, which enables users to stream media to PCs outside the home; and Windows XP Mode, a controversial add-on that runs Windows XP apps in a virtual machine.

Remote Media Streaming

For consumers and small businesses, Remote Media Streaming in Windows 7 extends the media sharing abilities of Homegroup—which links Windows 7 PCs



AFTER COMPATIBILITY TESTING, the Windows XP Mode add-on allows a business's XP-only apps to run in an XP shell within the new OS.

in a home to share media—to the outside world.

Remote Media Streaming “allows you to take media sharing on the go,” says Jeff Price, Microsoft’s senior director of Windows product management. That means making a media library full of songs and photos that people previously could access only on their home net-

work accessible anywhere there is a Wi-Fi connection.

“Whether in the home or remotely you get the same access to media. I think this feature will be a lot of fun for people,” says Price.

Windows XP Mode

This virtualization feature is a free, downloadable beta add-on to Windows 7 RC. It

lets users run older XP-only apps on Windows 7 through a Microsoft virtual machine that contains a licensed copy of Windows XP SP3.

XP Mode works only with the Enterprise, Professional, and Ultimate versions of Windows 7. It’s designed for enterprises with mission-critical apps that lack updates to work with Vista or Windows 7. Users can run the app in XP Mode until they upgrade to a newer version.

XP Mode may be aimed at enterprise IT pros who have hesitated to upgrade from XP because of compatibility worries and negative perceptions of Vista. The add-on gives IT pros a much-needed compatibility option, but it has generated some early criticism, including predictions of support headaches for IT pros, who face having to manage two versions of Windows, the virtualization process, and implementation delays as they try to ensure that all of their apps work with Windows 7.

Also, since not all Intel and AMD microprocessors support virtualization, some laptops may not be able to run Windows XP Mode.

Still, Windows XP Mode looks to be Microsoft’s best chance to ease the compatibility fears of the XP faithful.

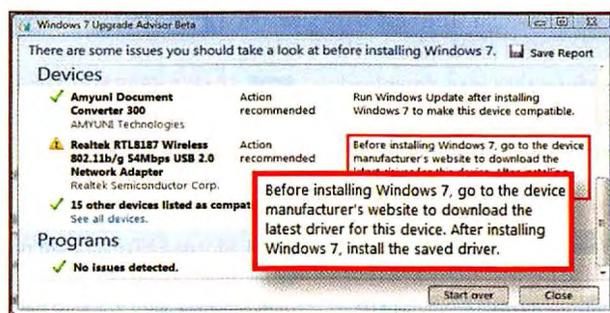
“This feature is for XP-only line of business apps that companies are planning to update but just aren’t quite ready yet,” says Price. “XP Mode gives them a good transition tool to ease the deployment of Windows 7.”

CONFIGURATION APPRAISAL TOOL

Is Your PC Ready for the New Operating System?

MICROSOFT has released the beta version of its Windows 7 Upgrade Advisor, a free utility that assesses whether your PC is ready to run Windows 7. It scans your system’s internal components, external peripherals, and programs for potential compatibility problems, and it suggests upgrade options such as drivers to replace. It’s a good idea to run Upgrade Advisor if you plan to install the free Windows 7 Release Candidate download on your PC.

I ran the Upgrade Advisor on a 2-year-old Gateway MX8734 laptop configured with a 1.6GHz Intel Pentium T2060 CPU, 1GB of RAM, and a 160GB hard drive (all of which met Windows 7’s minimum requirements). The compatibility check took about 6 minutes and found a few potential issues, but no conflicts with installed programs.



UPGRADE ADVISOR recommends downloading the latest drivers for various components and peripherals before you install Windows 7.

Upgrade Advisor also noted that Windows 7 doesn’t include Web filtering (Windows Mail and Parental Controls), and it included a link to Microsoft’s Windows Live Essentials site, where you can download the free Family Safety utility.

The Upgrade Advisor utility runs on Windows Vista and on Windows XP Service Pack 2.

—Jeff Bertolucci

—Shane O’Neill

File Sharing's Future After the Pirate Bay Verdict

IN APRIL, a Swedish court sentenced the founders of The Pirate Bay, a BitTorrent tracking site, to a year in jail each and a collective fine of \$3.6 million after finding them guilty of helping to violate copyright law.

But the verdict may have less of an impact on online file-sharing than some commentators think. Does the name Napster ring a bell?

Like the original Napster, The Pirate Bay doesn't host copyrighted files; it simply allows users to post links to material hosted on third-party servers. That's why prosecutors changed the initial charge of "assisting

copyright infringement" to a charge of "assisting making available copyrighted material."

Napster effectively shut down after its lengthy court battle, but The Pirate Bay's founders plan to appeal the trial court's decision. The final disposition of the case may be years away.

Unlike Napster, modern peer-to-peer-oriented networks like The Pirate Bay are hard to shut down because they are decentralized—and numerous. And even if BitTorrent itself ceased to exist, that would hardly mean an end to online file-sharing.



Just as more-advanced decentralized peer-to-peer networks sprang up in the wake of Napster's demise, new alternatives would surface if those networks disappeared.

In fact, The Pirate Bay team has prepared a new service called IPREDator that allows

people to surf the Net with greater anonymity, using a virtual private network. The Pirate Bay promises that, unlike other VPN services, its IPREDator will keep no logs of customer activity that authorities might subsequently obtain.

"As in all good movies, the heroes lose in the beginning but have an epic victory in the end," boasts a message on The Pirate Bay Web site. "That's the only thing Hollywood ever taught us." Certainly this story is far from finished. Brace yourself for many sequels.

—JR Raphael

BETA WATCH

EDWARD N. ALBRO

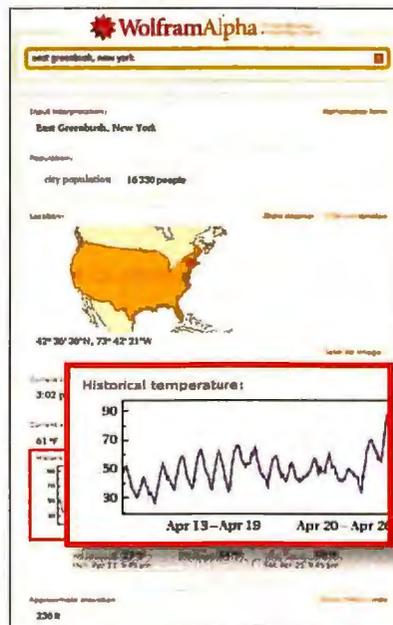


Wolfram Alpha: Don't Call It a Search Engine

Wolfram Alpha isn't your average search engine; its developers call it a "computational knowledge engine." For some common queries, Wolfram Alpha may tell you it has no information at all. But for others, it can provide deep and complicated analysis. Put in two stock symbols and Wolfram Alpha will compare their capitalization, revenue, and P/E ratios in a table created on the fly. It's also supposed to handle complex math and logic questions, but some capabilities weren't working when I tested a prerelease version. wolframalpha.com

Google Squared: Search Data Without the Links

Everybody knows what most search results look like: a list of links to Web pages where you may or may not be able to find the information you're looking for. With Google Squared, a free Google Labs service that should be available by the time you read



this, you'll search for a topic, and Google will pull information from all over the Web and present it in a table with rows and columns. Search for "dog breeds," for instance,

WOLFRAM ALPHA CAN'T answer every question that a search engine can; but on topics it has data for, such as a town's historical temperature readings, it offers deep information.

and you get a table with the name of the breed in the first column, a picture of one of the dogs in the second column, and additional columns with information like average size and height. You can specify new columns and rows to add. googlelabs.com

Backboard: Painless Group Editing

No writer likes being edited by a committee, but Backboard (from free to \$50 per month) smooths the process. You upload a document, and e-mail colleagues for feedback. If you set deadlines, the service will e-mail coworkers as it approaches. Two quibbles: All reviewers must create a free trial account; and though reviewers can add notes to the side of a document, they can't change the text. getbackboard.com

Bluetooth 3.0 Has a Wi-Fi Twist



THE BLUETOOTH Special Interest Group has launched Bluetooth 3.0 with some big claims for

the updated short-range wireless standard. The largest of these is a speed jump from the current Bluetooth version's top transfer rate of 3 megabits per second to 24 mbps in version 3.0.

Behind the faster speeds is 3.0's use of the 802.11 radio protocol, which allows the Bluetooth protocol to piggyback on a Wi-Fi signal when transferring large amounts of data (videos, music, or photos, for example).

Michael Foley, executive director of the Bluetooth SIG says that the average user will experience transfer rates of between 22 mbps and 26 mbps with 3.0. This is a great advantage for devices that use an ad hoc connection, because it permits two devices to transfer data at high speed without needing a USB cable or a formal log-on to a Wi-Fi network.

Other new Bluetooth features include Unicast Connectionless Data, for improved responsiveness and battery life; and Enhanced Power Control, which reduces the incidence of disconnects caused by movement such as placing a cell phone in a pocket or purse.

PC World will put Foley's speed claims to the test once 3.0 devices become available.

—Ian Paul

GEEKTECH

Hotspots in the Online Video Underground

ONCE UPON A time, it was easy enough to find your favorite clips and shows on YouTube. After all, the site owed its early fame in part to Lazy Sunday from *Saturday Night Live*. When media companies wised up, many folks moved to France's DailyMotion. Copyright enforcers duly followed; but on the Internet, that rabbit hole is proving to be bottomless.

Be warned, however, that when you wander the back alleys of online content distribution, you might get mugged by malware, logged by authorities, or disappointed by a junk heap of broken links and salacious come-ons—a little like shopping for pirated DVDs on Los Angeles's Santee Alley or Manhattan's Canal Street.

SideReel: Though SideReel doesn't offer any streamed TV shows itself, it provides a convenient way for you to find them online. Look up a show, and you'll discover recaps, commentary, and listings of where to find episodes online.

The site also highlights official sources, such as downloads from Apple's iTunes Store and copies on Hulu. But click 'See more results', and you'll probably end up at one of the following locations.

Megavideo: A treasure trove of shows available as instant-access, easy-to-use Flash video streams. Don't bother visiting the home page or searching the site for clandestine

content; you'll find only an innocuous collection of home movies and other safe-as-milk options. Instead, you have to search sites like SideReel or try a Google Search along the lines of "show title +megavideo" to find pages with links to shows that might be embedded in the site.

After you have watched 72 minutes of video, the service locks out nonpremium members for an hour. Of course, there are hacks.

SupernovaTube: Another site that offers higher-quality Flash video streams. Again, the search feature on the site itself is essentially disabled. In addition you're required to click a simple 'I am human' button before accessing

Savvy video hounds are grabbing TV shows and movies from the Web. Much of it is less than legal.

a video; this is used to filter out bots (and honest barnyard animals) looking to rip large swaths of content or issue automated takedown requests.

NinjaVideo.net: This popular site indexes high-quality DivX-format and Megavideo versions of shows. One requirement: you're asked to open a Java applet called the NinjaVideo Helper and extend broad permissions to it before you can watch a DivX video. It's designed to make videos playable only at the site, and the admins state that there's no malware to worry about. Full-page ads do pop up, though, meaning multiple clicks to get the actual video started.

The site has more of a community focus than most here, with message boards, a podcast, and a focus that extends beyond episodes of *Lost*.



SIDEREEL.COM provides descriptive links to streaming-video shows.

SwarmPlayer and EZTV: An effort from torrent site eztv.it may represent the next generation of sites that combine streaming ease with download quality. Its experimental SwarmPlayer lets users stream torrent files that they would normally have to wait to download.

The BBC is part of a consortium sponsoring the developers in an effort to find more-efficient methods of online video distribution. Such projects promise to deliver (eventually) all the benefits of peer-to-peer transfers, without the disadvantage of making you wait for *Ugly Betty* to finish downloading before you can view it.

—Jackson West



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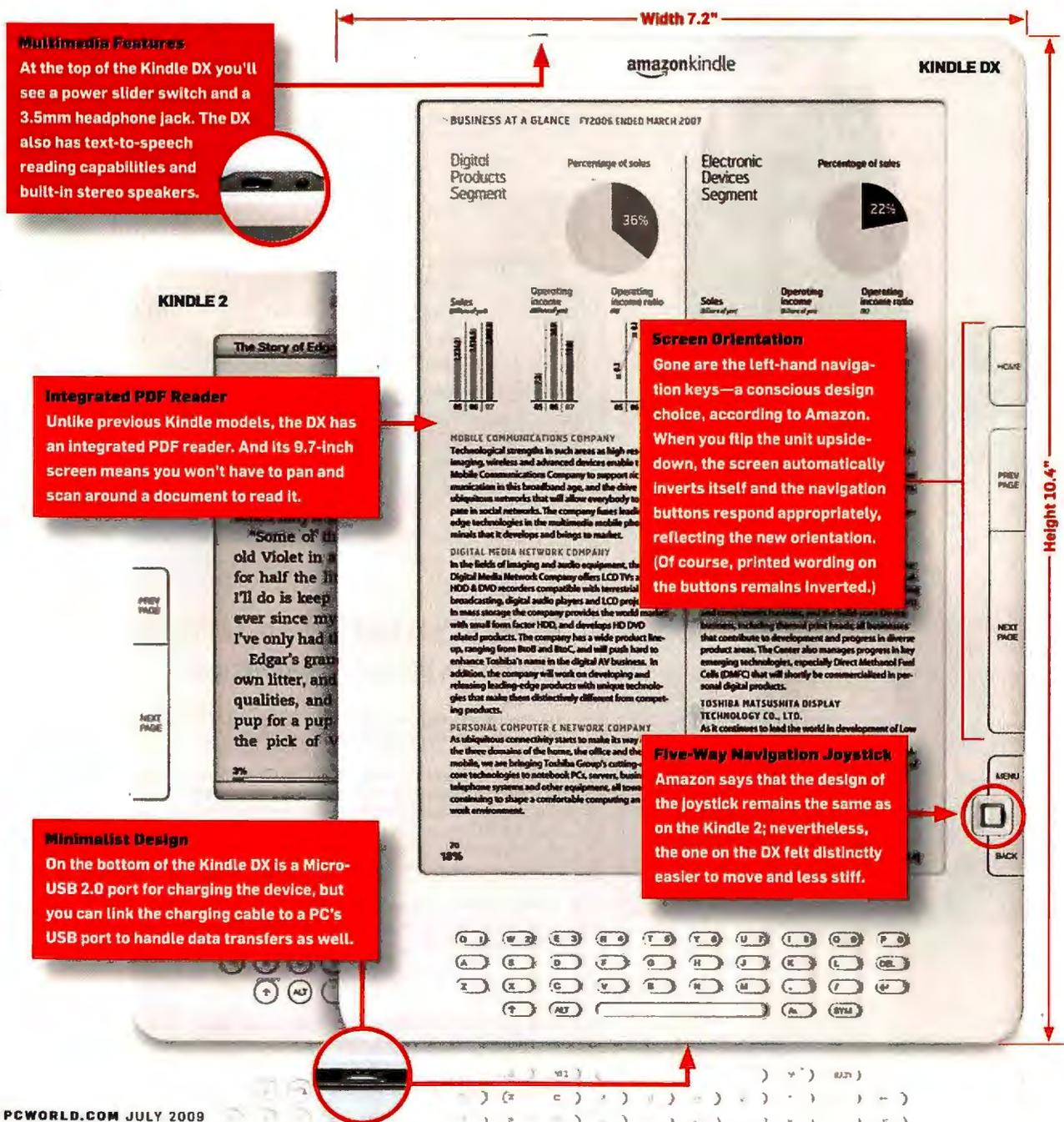
Hands-On With the Kindle DX: A Guided Tour

AMAZON'S KINDLE DX comes off as surprisingly lean and elegant. Dominating the front is its 9.7-inch-diagonal E-Ink display, which can show 16 shades of gray (as can the Kindle 2). The device measures 10.4 inches by 7.2 inches by 0.38 inch and weighs just 18.9 ounces. Like the Kindle 2, the Kindle DX has a keyboard, but it's awkward to type on because the gadget is so wide. In my hands-on with the unit, I came to appreciate much about its design. Even so, some roadblocks ahead could impede its wide adoption. The Kindle DX's cost is high (\$489, more than some full-featured laptops cost), and

Amazon's e-reader gets bigger and better with the Kindle DX. We like its lean and elegant style, but still found plenty of DX features to criticize.

newspapers on the device (at least as presented at its May 6 unveiling) lack the visual design and appeal of physical newspapers. Students may appreciate not having to lug heavy textbooks around, but the Kindle DX has limitations, too: You can't keep multiple pages open simultaneously, for example.

—Melissa J. Perenson ●



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Consumer Watch

Is a Cheap Unlimited Wireless Plan for You?

BY HARRY McCracken

IN FEBRUARY 2008, the superpowers of cell phone service—AT&T, Sprint, T-Mobile, and Verizon—engaged in a price war that left them all offering unlimited calling plans for \$100 a month. But how does paying half that amount grab you?

Unlimited wireless service for \$50 or less isn't a new concept: Cricket and MetroPCS have offered it for years, specializing in prepaid plans without contracts or credit checks. But in recent months, new players, including Boost and Virgin Mobile, have jumped in. In addition, coverage, plan options, and phone choices—all of which have been notoriously skimpy in the past for cheaper plans—are improving.

Business travelers, Internet addicts, and those who covet hot handsets all need to think carefully before signing up, however. The plans are “good for consumers if they primarily use their phones for voice and don't care whether they have the latest smartphone,” says Sue Marek, editor in chief of wireless-industry journal *FierceWireless*. In other words, they're an intriguing, affordable alternative to a landline.

To figure out whether a cheap unlimited plan is for you or a member of your family, consider the following issues.

Coverage

Until recently, the Cricket and MetroPCS “unlimited” plans were actually extremely limited, as they applied only when you called from areas where those carriers did business. And

neither company's service was anywhere near pervasive.

Cricket has tended to focus on medium-size markets—in California, for instance, it serves Fresno, Modesto, and San Diego, but not Los Angeles or the San Francisco Bay Area.

So far in 2009, however, Cricket has entered Chicago and Philadelphia, and MetroPCS has added Boston and New

York. The two carriers also signed a deal that lets each one's subscribers roam onto the other's network at no extra cost. That free roaming, though, applies only to plans costing \$50 or more a month; both companies have unlimited calling plans for as little as \$30 a month, but they're so bare-bones that they don't even include free long distance.

The combined footprints of Cricket and MetroPCS still don't blanket the country; you pay roaming charges outside of them. Boost and Virgin have far more coverage, as they piggyback on Sprint's nationwide network. (Boost, in fact, uses Sprint's Nextel network.)

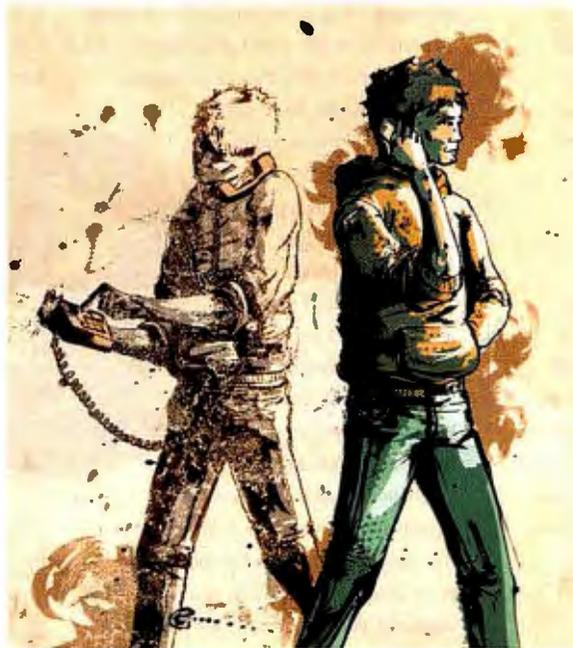
Phones

You don't need to sign a contract to get cheap unlimited wireless. That's good, but it

also means the carriers won't sell you a high-end phone for peanuts; most of the phones offered with low-cost plans are either fairly basic or relatively pricey. And as Marek notes, “these carriers don't get the hot phones, at least initially. Manufacturers reserve those for their biggest customers.”

So it was big news when MetroPCS began offering a BlackBerry in March—even though it was a model (the Curve 8330) that Sprint and Verizon Wireless had launched almost a >>

Unlimited calling can cost as little as \$30 a month. The services have drawbacks, but they're an interesting alternative to a landline.



Committed to a standard cell-phone contract and looking to cut costs? See “Reduce Your Mobile Phone Bill” at find.pcworld.com/62891 for tips on how to trim—or avoid—unnecessary expenses.



SKEPTICAL SHOPPER GINNY MIES

Members-Only Shopping: Worth the Hype?

year before, and even though MetroPCS charges \$450 for it, versus the \$100 two-year-contract price at Sprint and Verizon. The Curve is the only true smartphone available from any carrier with an unlimited prepaid plan; another MetroPCS phone, the Samsung Finesse, is the only touchscreen model.

You also don't get the dizzying array of phones that major carriers supply. Even so, the handsets you can buy from today's cheap providers are cooler than those that prepaid carriers sold in the past: I looked at Cricket's \$230 Motorola Hint (also available from MetroPCS) and Virgin's \$100 Kyocera X-tc, both of which have QWERTY keyboards and decent media and Web features. Each of Boost's models offers push-to-talk capability, and all but one have GPS.

All the carriers here also have some budget models, but they tend to lack features such as Bluetooth, a camera, and the ability to play MP3s.

Internet

By definition, all-you-can-eat calling plans are aimed at people who talk a lot, so it's not surprising that the \$50 plans remain voice-centric. Many of the Cricket, MetroPCS, and Virgin phones don't support 3G data, and none of Boost's do. Most of the handsets have only basic browsers, but IM is common, and some models can handle e-mail.

Unlimited Internet, text, and multimedia messages are included in the Boost, Cricket, and MetroPCS \$50 plans. Virgin charges \$5 a month extra for 1000 text, multimedia, or instant messages or \$10 for unlimited messaging; Web access is \$5 a month for up to 20MB, or \$10 for 50MB.

Better Internet features appear to be on the way: MetroPCS says it plans to roll out LTE (4G) data service in 2010, and a representative of Leap Wireless, Cricket's parent, told me it is formulating plans for next-gen service. Even if you stick with a big phone company for now, keeping an eye on smaller, cheaper carriers makes sense—especially if you want a phone just to make calls.

OVER THE LAST year, I've received an influx of e-mail invitations to exclusive, members-only online shop-

ping sites. These sites promise whopping discounts on normally high-priced, luxury goods in a fun and socially interactive shopping environment. What recession?

Three sites in particular—Gilt Groupe (www.gilt.com), Ideeli (www.ideeli.com), and Rue La La (www.ruelala.com)—have done quite well. Targeted at both male and female customers, these sites hold exclusive sales of various products, such as clothing, home goods, and accessories. Like a country club, they're members-only; to join, you must get a referral (a sign-up code) from a member.

But, as with every too-good-to-be-true online offer, there's a catch—actually, a few. The sales usually last only two or three days, and stock is limited. If you're on the fence about an item, you have to make up your mind quickly before it sells out. On top of that, the sites have tricky return policies (or none at all), so if the item you buy doesn't work out, you might be stuck with it. And in the end, you may not even be getting the great deal you think you are.

The Clock Is Ticking

Rue La La, for instance, alerted me that a Marc by Marc Jacobs sale was starting. By the time I got to the sale, most of the items in my size had sold out. I found a pair of cute shoes and put them in my cart, but upon checkout I hesitated. The countdown clock in the corner told me I had a few more hours, so I fought the urge to splurge. Later that day, I checked on the shoes again—they were sold out.

The ticking clock, the discounts, and the knowledge someone could grab an

Exclusive discount shopping sites are enticing, but they can be major wallet busters if you use them unwisely.

item before you do are a recipe for impulse buying. And in this economy, the temptation to buy discounted goods is especially strong—and dangerous. All three sites have seen rapid increases in membership and sales despite the downturn.

"It definitely can inspire some impulsiveness," says Paul Hurley, Ideeli CEO and one of its founders. "But the prices are so spectacular that it hurts less."

But are they? I cross-checked a few items with listings on Amazon, PriceGrabber, and Shopping.com. I found a jacket at Rue La La for \$149

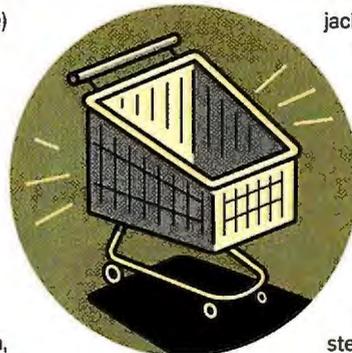
in limited sizes. At Amazon I saw the same jacket for almost \$90, in multiple colors and sizes. But these sites also score exclusive deals with merchandisers, so you really can find some steals. For example, the

Rue La La price I saw on a certain espresso machine was at least \$300 less than on any other shopping sites.

Restrictions on Returns

All three sites have some sort of return policy, but you should read the fine print. Gilt Groupe's and Ideeli's return policies apply only to certain products (clearly marked under the item's price). Ideeli refunds store credit, not cash, so if you needed that money for rent, too bad. Everything on Rue La La is returnable, but like Ideeli, it's for store credit only.

Gilt Groupe, Ideeli, and Rue La La aren't the only such sites around, and more are sure to come. If nothing else, they are excellent (and fun) shopping tools. Take claims like "exclusive" and "discount" with a chunk of salt, read the fine print, and you may log off with a great deal.



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FUJITSU

ON YOUR SIDE GINNY MIES

I PURCHASED BITDEFENDER Anti-Virus 2009 with a registration key for three PCs, but I've been unable to update my older version because the upgrade option on the main menu is grayed out. After I contacted support via e-mail, I received an automated reply and, later, instructions on running and returning a test on the program so that they could determine the problem. I sent in the test results, but never heard back (except for automatically generated responses to my two additional e-mail messages).

Priscilla A. Maine, Atoka, Oklahoma

OYS responds: Maine was one of several *PC World* readers who contacted us about problems they were experiencing with BitDefender's Anti-Virus software. Though their issues varied, they all complained about the company's unresponsive customer service. Several company executives—Vince Hwang, global product management director; Vitor Souza, global communications director; and Vali Danielescu, global technical support director—responded to our inquiries.

Souza says that BitDefender is aware of the difficulties that consumers are having with Customer Care, and is taking steps to improve its quality. He attributes the problem to an unexpectedly high surge in customers resulting in part from favorable reviews for BitDefender Anti-Virus 2009 (read *PC World's* review at find.pcworld.com/62836), and in part from the recent Conficker virus scare.

Though BitDefender was not prepared for that influx of users, shortly after the virus reemerged, the company launched a Knowledge Base (kb.bitdefender.com) to help consumers find answers to frequently asked questions and to provide access to Customer Care. In addition, to increase the number of Customer Care representatives, BitDefender is teaming up with a third-party support company. Meanwhile, Hwang says, the company is working to correct some of the software installation and activation issues (such as Maine's) that prompted people to contact support in the first place.

If you're having similar issues with BitDefender, we recommend consulting the Knowledge Base before opening a ticket. Additionally, browse the BitDefender Support Forum (forum.bitdefender.com)



for a solution, or post a new topic there if your problem isn't covered. If you open a ticket and you don't receive an answer in a timely manner, reply to the confirmation e-mail you received and restate your problem; opening a new ticket only confuses matters for customer support. As for our readers, including Maine, BitDefender resolved all of their issues.

Recall: Lenovo ThinkVision Speaker AC Adapters

The U.S. Consumer Product Safety Commission, in cooperation with Lenovo, announced a voluntary recall of ThinkVision speaker AC adapters (find.pcworld.com/62860) due to a shock hazard. Though no injuries have been reported, the plastic shell of the AC adapter can crack, posing a risk of electric shock to consumers. These AC adapters were sold as part of the ThinkVision Soundbar option. Check on the back of the adapter for FRU part number 89P8571, with the date code 200810. Lenovo encourages customers to stop using the recalled adapters and to contact the company for a free replacement; call 800/426-7378 anytime, or visit find.pcworld.com/62861.

Wet iPhone? Apple Has You Covered

THE WET IPHONE problem isn't quite as strange as it may sound: The iPhone has a reputation for being supersensitive to sweat and steam, and that has left plenty of people...well, steaming mad. Vigorous workouts have proved to produce enough perspiration to cause iPhones to shut down, keeping consumer reporters running to stay on top of complaints (find.pcworld.com/62946). Avoiding exercise doesn't help you, either: Moisture from your shower, some people say, can also cause a nearby iPhone to stop functioning (find.pcworld.com/62947).

Regardless of the reason for the water damage, Apple previously hadn't been too understanding. The company used to require affected consumers to buy a new handset and start a new service contract, putting a real (and costly) damper on the whole iPhone-owning experience.

Now, though, the company is changing its tune. Got your phone a little too damp? Don't sweat it, Apple says. Just call your local Apple Store, make an appointment with the Genius Bar, and go in for a discounted replacement.

The deal, as an Apple Store rep explained it to me: You shell out \$199, get a model of the same generation, and avoid having to sign up for a new contract. The phone could be new or refurbished, but unlike your current one, it'll work. And unlike with the old policies, you won't be signing your cellular life away for another two years.

If you'd rather keep your iPhone dry in the first place, though, you could spring for the \$350 iDive case, which will protect it under 300 feet of water.



—JR Raphael ●

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Business Center

Put NAS to Work in Your Small Business

BY ALFRED POOR

ANY BUSINESS THAT is bigger than a sidewalk lemonade stand runs on information, which makes tasks as varied as keeping track of accounting data and managing the flow of proposals and orders crucial. Over the past 25 years, computers have completely transformed the way that small businesses operate, enabling the people who run these companies to organize and manage information in ways that simply weren't possible back in the days of paper ledgers and foot-long index-card files.

Once your business grows larger than a single employee, however, you face a problem with managing that information. How do you maintain the data in an orderly way, and yet still make it accessible to the different people in the company who need to work with it? Large companies have corporate IT departments to do the heavy lifting of designing and maintaining complex computer networks, but most small businesses are hard pressed to get all of their work done on time, without attempting to care for complicated computer systems.

Twilight of the Dedicated Server

Fortunately, computer networks have become much easier to install and use in recent years than they were in the

more distant past. You don't need a dedicated server, and many companies find that a local network can be worth the investment if only to share resources such as an Internet connection or a

Network-attached storage gives you access to your business's data from anywhere. Here's how to select and configure a NAS device.



fast printer. And now, it's easier than ever to share data on a network as well.

The simplest way for you to share data is to allow other computers on your network to see a portion of your system's hard drive, but unfortunately the data is accessible to others only when your computer is running. Setting up a separate storage system that

anyone can access at any time will help you get around that problem. Such products, which are known as network-attached storage (NAS) devices, make an affordable and sophisticated option for small businesses. (They are also very handy at home, where they can make digital media such as MP3 audio files available to all of the systems linked on a home network.)

Getting Started With a NAS Device

As its name implies, a NAS device attaches directly to your network. Use an ethernet cable to plug it into any switch or router, and then plug the power cable into an outlet. If the device will be a mission-critical component of your network, consider getting a standby power supply for it.

When you turn the NAS device on, it will boot up, communicate with your network, and obtain a network address. At that point, it's ready to go.

Configuring the device is generally pretty easy. If you decide to change a default setting—such as the one defining groups or the one limiting access to certain folders—the device's utilities will step you through the process. In almost every case, the device's controller will contain a Web page that you can access through any browser. Type the IP address for this page into your browser, and you'll »

ILLUSTRATION: EMILIANO PONZI

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Looking for a network-attached storage device that perfectly meets your business needs? You can check out all the latest reviews and specs from the PC World Test Center at find.pcworld.com/62892.

see a log-in screen requesting a name and password. From there, you can set up users and groups, back up settings, and enable features such as Web access.

For easiest access, you'll want the device to treat your computer as though it were another local hard drive. Here's how to do it in Windows XP:

Open Windows Explorer, and select *Tools•Map Network Drive*. The Map Network Drive window lets you specify the drive letter to use for the new drive. You can use any letter not assigned to your PC already. We chose to call our unit Drive Y, but we might just as well have selected Drive N for "Network."

Next, click the *Browse* button to find the NAS device on your network. The 'Browse for Folder' window lets you find devices on your Windows network, and then connect them to the shared folder on the NAS device.

After you've selected the folder, click *OK* to return to the Map Network Drive window. At the bottom of that window, you'll see a check box labeled 'Reconnect at logon'. If you put a check mark here, your computer will automatically reconnect to the NAS device whenever it boots up, so you'll never have to run through these steps again.

Configuring NAS in Vista

The steps for Vista are nearly identical to those for XP. In Windows Explorer's Folders pane, select *Computer*, and then click the *Map network drive* option at the top of the window. The Map Network Drive dialog box has the same options in Vista as in XP (described above). And the 'Browse for Folder' feature works the same way as in XP, as well.

I've explained how to connect to the NAS device to show how easy it is to use. You don't need to know any fancy network stuff, or anything about IP addresses or file systems or Linux. It's just two windows and you're done. The NAS device will show up as another hard drive on your computer. I hope this introduction is inviting enough that you will want to take the plunge and install a NAS device on your network.

NET WORK DAVID STROM



Choose the Right Cellular Data Plan

WHEN YOU ARE on the road, do you find yourself wishing your wireless connection were

faster or more pervasive? Does the puny keyboard on your smartphone frustrate you and make you long for your laptop? Then it might be time to sign up for a high-speed data plan from one of the big cell phone carriers. But you'll have to do a lot of online research to get the information you need to make a rational decision.

Start with the carrier that already provides your company's voice plan, and see whether it has the right data plan for your needs. Most carriers offer \$20-per-month discounts if you

add on and sign a two-year data contract. If Apple's iPhone supported tethering (connecting a broadband modem in the phone to your laptop), that would be perfect, but it doesn't. So you'd have to jailbreak your iPhone in order to use tethering.

You have three main options to choose from in obtaining high-speed wireless:

1. If you're in the market for a new laptop, you can buy one with a built-in data card that matches your carrier, and then buy a plan that covers your usage pattern. AT&T and Verizon are the best carriers for this purpose, and any number of Dell, HP, Lenovo, and Sony laptops include these modems. The PC makers offer all sorts of rebates as enticements, too.

2. You can get an add-in PC or USB Card from the carrier when you buy your plan, if you can find the right page online. T-Mobile didn't offer any such cards on its Web site when I checked in March. The others offer four or more models. Typically, these work the way new cell phone purchases do: You get a better deal if you are willing to commit to a two-year contract. Sprint even offers a few cards that

Make sure that your business gets the best combination of services for the way your employees use their mobile phones.

cost nothing, after rebates and a contract. The key here is to check which broadband networks the card supports. Some older, cheaper models run only on the slower broadband networks. And just as important, some work only with Windows.

3. You can buy one of the newer smartphones or PDAs that come with a built-in broadband modem, and connect it to your laptop. If this is what you want, look at plans that include tethering, and note any restrictions. An alternative is to use a software tool called PDA.net—but that tool



may not always work, and the BlackBerry installation takes several steps.

Some additional considerations: All of T-Mobile's data plans include unlimited data transfers, but you may have trouble finding a PC Card or USB modem that will work with its service. The other providers have usage limitations, so you must read the fine print carefully. Verizon limits you to 5GB a month on all of their plans. Sprint has unlimited data plans for \$100 a month; its lower-cost plans have a limit of 5GB per month. AT&T has a few unlimited plans for BlackBerrys only.

Some of the major carriers offer plans that combine broadband service with Wi-Fi access (of course, you have to be within range of their Wi-Fi hotspots). If that's important to you, you can save some money when you travel by not having to pay for Wi-Fi coverage.

For online links to AT&T Data Connect, Sprint Mobile Broadband Connect Plan, T-Mobile Internet and E-mail Plans, and Verizon Broadband Access Connect—the cellular data service plans for these four carriers—go to find.pcworld.com/62903.



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Harness the Online Masses for Logo Design

I ONCE WORKED with a single designer to create logos for my business. Our back-and-forth process did work, but it was pricey and time-consuming. So for my next business, I decided to go with LogoTournament (logotournament.com). Here, instead of one designer spending many hours, a bunch of designers spend a few, and each submits ideas. The winner nets my prepaid bounty, and I get full rights to the logo.

I was a little skeptical about turning to the online community rather than relying on a single designer. But only a few days into my contest, I already have a few submissions that could work, among a dozen other attempts. As we get closer to my week-long deadline, I expect more designers to add entries. Other contests paying as little as \$250 have received 100 or



LOGOTOURNAMENT SETS UP an Internet-wide design contest that works like an extended brainstorming session for creating business logos.

more entries; if you don't get at least 30, LogoTournament offers a refund.

The process still relies on your direction, just as in traditional design work. You fill out an initial identity questionnaire describing the business or product. A dozen sliders help you decide how playful or serious and how quiet or loud the logo should be.

As designers upload their pitches, you rank the results and provide more feedback. Everyone sees this process, so if something is wrong for your needs, others will know to avoid similar pitfalls. It's surprisingly interactive while still being simple.

At the end of the contest, you pick the final winner. That person uploads an EPS file that will work great for a letterhead, Web design, or any other use. Once you've approved it, LogoTournament transfers the winning prize that it has held in escrow, minus a 15 percent fee.

The process and low cost are ideal for small businesses and startups. But medium-size companies could benefit from the brainstorming, too, even if they can afford a dedicated designer.

—Zack Stern

LINUX LINE

TIPS FOR USING LINUX IN YOUR BUSINESS

Three Useful Ubuntu Tricks

HERE ARE THREE tips to make Ubuntu Linux work better.

1. Open a superuser Run Programs dialog box. Pressing <Alt>-<F2> opens a Run Programs dialog box; typing a program name in it launches that program; I use it to run gconf-editor (which lacks a menu entry). If you type 'gksu' into a terminal window (with nothing following it), a similar dialog box appears, but this time you can run the program as root (or any other user on the system). To bind the gksu command to a keyboard shortcut (such as <Shift>-<Alt>-<F2>) and produce a superuser Run Programs dialog box, select *System*•*Preferences*•*Keyboard Shortcuts*.

2. Install packages quickly with GDebi. GDebi is a GUI app that lets you install packages you've manually downloaded. It uses Linux's repositories to try to resolve dependencies (I've always relied on the dpkg command to do this). But at the command line, GDebi also runs in a fuss-free non-GUI mode (namely, sudo gdebi package.deb), yet retains the ability to resolve dependencies. Give it a try. Once you do, you may never want to use dpkg -i again.

3. Launch OpenOffice.org faster. Tired of slow OpenOffice.org starts? Open the Sessions program (called 'Startup Manager' in

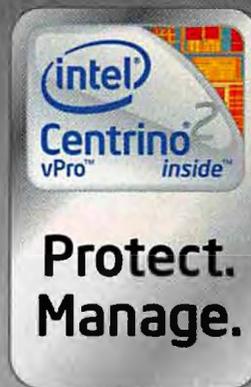


TO INSTALL A downloaded application in Ubuntu, launch the GDebi Installer and click 'Install Package'. GDebi works with any file in the .deb format.

Jaunty; to find it, click *System*•*Preferences*•*Startup Applications*) and add a new entry. Type `openoffice -nodefault -nologo` in the Command field, and reboot. OpenOffice.org will be cached when the Gnome desktop starts up, so future OO.org app startups will happen in a split second. In effect, you're moving the OpenOffice.org startup delay to initial boot-up, where you'll hardly notice it.

—Keir Thomas ●

Panasonic recommends Windows Vista® Business.



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Security Alert

Organized Crime Moves Into Data Theft

BY ERIK LARKIN

YOU KEEP MALWARE off of your PC, and you're smart enough to know how to avoid phishing attacks. You're careful in where you surf, and in how you conduct your online banking. So your financial data should be relatively safe, right?

Wrong. Record-level theft of credit card numbers and other valuable digital data from financial institutions is making a mockery of such attempts to protect ourselves, in heists that are largely carried out by organized crime groups. And individuals can't prevent a hacker from electronically casing a bank or credit card processor, breaking in through a forgotten but easy-to-target hole in the company's network, and dropping in malware that steals credit card numbers and ATM-card PINs.

"I don't worry so much about keyloggers, but about the data breach," says Joe Stewart, who does research on malware for business security provider SecureWorks. "I operate under the assumption that the criminals already have my credit card, debit card, and PIN numbers, but haven't gotten around to using them because they have so much data to work through."

Thefts Skyrocket

According to the 2009 Data Breach Investigations Report from Verizon Business (find.pcworld.com/62872), crooks nabbed 285 million records in 2008, more than Verizon Business had found to be stolen in the previous four years combined. The

company based its report on investigations of both public and undisclosed break-ins for major companies, focusing on successful attacks that made off with credit card numbers or other data. The findings square with broader reports from the Identity Theft Resource Center (idtheftcenter.org), which found

Credit card numbers and other sensitive types of customer data are being siphoned off of company networks in record numbers.



that the total number of reported data breaches, ranging from lost laptops to massive data thefts, leapt 47 percent in 2008 to 656 breaches, up from 446 breaches in 2007.

Profit-minded crooks are responsible for most thefts: "91 percent of all compromised records in 2008 was attributed to organized criminal activity," the report states. Peter Tippet, principal author of the report and vice president of innovation and technology with Verizon Business, says the report took into account IP addresses used in the thefts, as well as arrests that have been or will be made as a result of investigations. The company often coordinated investigations with law enforcement agencies such as the FBI and Scotland Yard.

Of the 90 breaches studied as the basis of the report, 68 were traced back to a particular IP address and place, and Eastern Europe was the most common source. "We do have a great deal of evidence that malicious activity from Eastern Europe is the work of organized crime," Tippet says. The next most common source was East Asia, followed by North America.

Today's online data thieves don't just run automatic scanners and jump on any network hole they find. They're more likely to first choose a target that has data they can turn into cash, and then figure out how to break in, Tippet says. >>

ILLUSTRATION: ASAF HANUKA

PCWORLD.COM

When should you be concerned about pop-up ads? We tell you at find.pcworld.com/62911. Also, for a reality check on the privacy implications of cloud computing services, see find.pcworld.com/62910.

They often find an easy point of entry, such as an Internet-accessible log-in that employs a default password.

Even in those few cases where hackers pursued a specific software hole, they weren't attacking fresh, potentially unknown flaws IT professionals hadn't yet fixed. Of the six cases Verizon Business reported that used a targeted software attack, five exploited vulnerabilities that had patches available for more than a year; the fix for the sixth attack had been around for more than six months.

Once in, the crooks usually inserted malicious, security-evading software into places that helped them dig deeper into the network, or into locations that let them steal and send data once the target of the exploit had been reached.

A successful breach can persist for months, and can raid data beyond just credit card numbers. "The big money is now in stealing personal identification number (PIN) information together with associated credit and debit accounts," according to the report. "These PIN-based attacks hit the consumer much harder...because PIN fraud typically leads to cash being withdrawn directly from the consumer's account."

Any Hope for Consumers?

Many companies have fraud-detection systems to catch, say, attempts to use a stolen credit card number. Such systems often find the first clues that trace back to a data breach, Tippetts says. But fraud detection comes in after the actual theft; individuals can do little to protect their data before that point.

Still, you can mitigate the potential damage from a breach. Catching ID theft early can make a big difference in recovering from an attack, and services such as Mint.com or Rudder (rudder.com) can pull transactions from multiple checking, savings, and credit card accounts into one place where you can look for anomalies. Most online financial accounts will also let you receive e-mail or even SMS alerts for various charges or transactions. See find.pcworld.com/62879 for more on these alerts and services.

BUGS & FIXES ERIK LARKIN

Hacker Target: Flaw-Filled Adobe Reader

IMAGINE A CARNIVAL game with a conveyer belt of hapless bull's-eye sitting

ducks passing in front of an airgun-toting player—but in this game, the bull's-eye is painted on Adobe Reader and Acrobat.

Holes in Adobe PDF apps are under near-constant assault these days, leading one antivirus researcher, Mikko Hyponen of F-Secure, to call them "the new Internet Explorer," a reference to the days when IE 6 was the target of choice. Hyponen even suggests ditching Reader for a free alternative (see pdfreaders.org).

If you continue to use Adobe Reader or Acrobat, turn off JavaScript (as Adobe recommends) to help guard against an as-yet unpatched security vulnerability affecting all supported versions of the programs: Click on *Edit•Preferences*, select *JavaScript* on the left, and uncheck *Enable Acrobat JavaScript*. Adobe hasn't yet announced when a fix might come out, but you can get details at find.pcworld.com/62870.

Office Closes Holes

Microsoft has released patches for holes in Excel and Word exploited by zero-day attacks, but the bad guys are going after another zero-day flaw in PowerPoint.

Microsoft lists the Excel fix as critical for Office 2000; it's important for 2002, 2003, and 2007, as well as for Office 2004 and 2008 for Mac and the Office Excel Viewer. Be sure to pick up the patch via Automatic Updates. For full details, see

Should you ditch Adobe PDF apps? Plus: fixes for Office, IE, and Firefox.

the bulletin at find.pcworld.com/62871.

The Word patch is likewise critical for Office 2000, and important for Office 2002 and the Office Converter Pack, and for WordPad on Windows XP, Windows 2000, and Server 2003 (find.pcworld.com/62873). A malicious download or an e-mail attachment could target the holes.

PowerPoint Attacked

Though attackers are exploiting the aforementioned hole in PowerPoint, no patch is available at this writing. Office 2000, 2002, and 2003 are all vulnerable, as is Office 2004 for Mac (information at find.pcworld.com/62874).

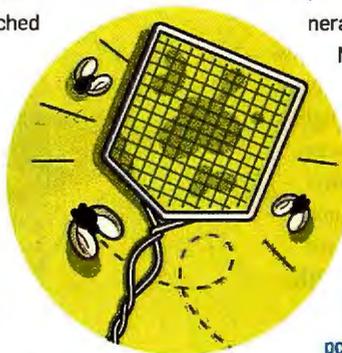
DirectX also had a patch, affecting Windows 2000, XP, and Server 2003. Malicious Motion JPEG (MJPEG) files could target the flaw. See find.pcworld.com/62875.

One other must-have patch affects Microsoft Windows HTTP Services, which could be targeted by a malicious Web site. MS09-013 (find.pcworld.com/62876) is critical for Windows 2000, XP, Server 2003, Vista, and Server 2008.

IE, Firefox Fixes

A now-plugged vulnerability in IE 6 and IE 7 could have been exploited if you viewed a poisoned Web page. For IE 6, the hole is critical on Windows XP and important on Server 2003. For IE 7, it's critical on XP and Vista, and important on Server 2003 and Server 2008 (see find.pcworld.com/62877 for details).

Meanwhile, Firefox received two updates (to versions 3.0.9 and 3.0.10) to fix critical flaws that might let a miscreant crash the browser and attack a victim computer. Click *Help•Check for Updates*.



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University of California Hit With Major Data Theft

THE UNIVERSITY of California, Berkeley, discovered in May a massive data theft affecting 160,000 current and former UC Berkeley students, parents of students, and spouses.

The theft involves records stolen from the university's on-campus health clinics database. No treatment records were stolen, but the thieves made off with important personal data including names, birth dates, student identification numbers, Social Security numbers, and some data such as immunization records. Anyone who has used the university's on-campus health services and clinic since 1999 may be at risk, along



with their parents or spouses. California state law requires that health records be kept for at least seven years, and the university's policy is to keep such records for ten years.

The data theft persisted for some six months, from early October 2008 until early April. The compromised databases

have since been taken down and will remain inaccessible until the university has identified and fixed the vulnerability. UC Berkeley has contacted those affected via e-mail and letters.

This is not the first time that the university has had data theft issues. In 2005, a laptop containing personal information for 98,000 graduate students went missing.

See page 33 for more on the growing data-theft problem, and consider mitigating any damage by placing a fraud alert or security freeze on your credit reports (start at find.pcworld.com/62904).

—Nick Mediari

PRIVACY WATCH

ERIK LARKIN



Can Facebook Be Private? If You Care, Follow These Tips

PRESERVING PRIVACY on a social network may seem like staying dry outside during a thunderstorm. But sites such as Facebook are also developing into major hubs for keeping in touch with far-flung relatives and friends. So here are some rules of thumb for using the site without letting the entire world in on your business.

Know your terms of service: Facebook's new terms of service (introduced after a major PR flap earlier this year, and approved in a user vote) say that "you own all of the content and information you post on Facebook." The full agreement is at find.pcworld.com/62867, and a new nonbinding statement of principles is at find.pcworld.com/62868.

Ditch data-snooping apps: Many privacy advocates frown on Facebook applications. The company requires that app creators obey certain rules (for example, apps can't save your data for more than 24 hours), but it doesn't vet apps. If you're concerned about privacy, you might want to resist the urge to install that 'Discover your Hippy [sic] name' app. To see apps you've currently authorized, go to *Settings*•*Application Settings*. Then choose *Authorized* from the 'Show' drop-down menu.

Limit your friends' apps: If a friend installs an app, the program will by default be able to see anything you've shared with that friend. To restrict the data available, go to *Settings*•*Privacy Settings* and click the *Applications* link. Click the *Settings* tab up top,

and deselect any check boxes on that page for info you don't want shared. (These settings affect only the apps your friends install.)

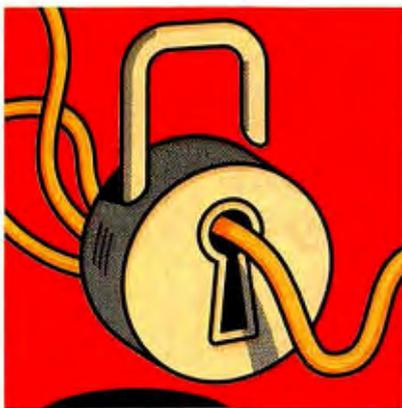
Control what certain people can see: A little-known feature lets

you create lists of friends and restrict content sharing to certain lists. For example, you can put all business acquaintances on one list and restrict their photo viewing. Another list, consisting of your closest friends, might get to see everything.

To create a list, click on the *Friends* link, and under 'Lists' on the left, click *Create*. To restrict sharing info in certain lists, go to *Settings*•*Privacy Settings* and click *Profile*. Open a Profile item's drop-down menu and choose *Customize*. Select *Some Friends* in the resulting pop-up, and then enter the name of the friends list you want to choose.

Preview profiles: A helpful tool that shows what you're sharing with whom is Facebook's profile preview tool. Go to *Settings*•*Privacy Settings*, then *Profile*, and type a friend's name in the box up top. You'll see your profile as that friend would view it, and you can then adjust your privacy settings accordingly.

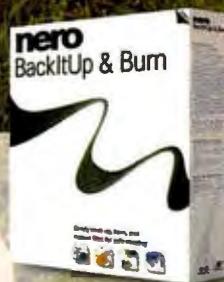
For additional helpful tips on Facebook privacy, check out a guide from AllFacebook.com at find.pcworld.com/62869. ●





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Eliminate Phantom Loads and Reduce Your Carbon Footprint

Eco-friendly UPS systems save energy, lower costs and boost efficiency.

If you've ever experienced a power outage, brownout or electrical surge while working on your computer, you know how devastating it can be. Important files such as word processing documents, financial records and digital photos can be lost. Even worse, a powerful surge could fry your hardware beyond repair—not just costly computers, but connected peripherals such as telephones, modems, fax machines, routers and printers.

The ideal solution to such problems is an uninterruptible power supply (UPS). The best UPS systems supply surge protection and reliable battery power to keep computers running during shorter blackouts, while allowing enough time to shut down safely during longer ones.

All UPS systems are not alike, however. Preferred UPS systems feature technology that protects your hardware and files in an eco-friendly way. Besides lowering your carbon footprint and protecting the earth, eco-friendly, highly efficient UPS systems can lower your electric bill enough so they end up paying for themselves.

Eliminating Phantom Loads

Eco-friendly UPS systems feature special outlet technology that cuts power completely to your connected peripherals after you power down your computer. This eliminates the "phantom loads" drawn by idle peripherals that consume electricity even when they appear to be turned off. The result? You save a considerable amount on your electric bill while reducing your carbon footprint.

High Efficiency Saves You Money

The most advanced UPS systems are highly efficient—up to 99%—far more so than run-of-the-mill models. Even if you're using only a single UPS system to

protect your desktop computer, high-efficiency will reduce your environmental impact and fatten your wallet.

Putting It All Together

You can find environmentally friendly features like these and more in more advanced UPS systems such as the Tripp Lite ECO Series UPS Systems. Besides eliminating phantom loads and operating at high efficiency, all ECO Series UPS Systems have a USB port for use with the included USB cable and PowerAlert software (a free download). This enables you to save open files and shut down unattended computers automatically during an extended blackout.

What's more, using such money-saving, high-performance systems allows you to protect more than just your computer gear—you also protect the environment. Tripp Lite is a leader in green initiatives, including early support for the Restriction of Hazardous Substances (RoHS) directive, which strictly limits hazardous substances in electronics equipment.

And most Tripp Lite UPS systems incorporate replaceable, recyclable batteries, keeping lead-acid batteries out of landfills.



Eco-friendly UPS: How Much Can You Save?

Tripp Lite's ECO Series UPS Systems are up to 99% efficient and turn off designated ECO outlets when your computer is turned off or goes into standby mode due to inactivity. This eliminates "phantom loads" from idle peripherals that waste electricity even when they appear to be turned off. ECO Series UPS Systems can save up to \$50 on your utility bill, conserve 470 kilowatt-hours of electricity, and reduce your carbon footprint by 630 pounds a year!

* Estimate assumes 5% efficiency gain and 60W total phantom load

Environmental Savings*

	Electricity Cost Savings	CO ₂ Emissions Reduced (pounds)
Year 1	\$50	630
Year 2	\$100	1260
Year 3	\$150	1890
Year 4	\$200	2520
Year 5	\$250	3180

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Want to learn more about "greener" UPS systems that protect your files and gear while saving you money? Visit www.tripplite.com/GoGreen.

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Reviews & Rankings



KODAK'S EASYSHARE W1020 is our top pick for its features and ease of use.

THE SMARTPARTS SPX8WF provides great image quality and streaming.



HP'S DF820A4 GIVES good images, but you can't change their order.

The Best Digital Photo Frames

PCW Test Center

TODAY'S DIGITAL picture frames make it easy to keep loved ones and memorable events close by and visible. They come in a multitude of shapes and sizes, but are far from equal.

Keep these important points in mind before you buy a digital photo frame.

Resolution: The higher the resolution, the better the frame will do in reproducing your images. At a minimum, we recommend a frame with 800-by-600-pixel resolution.

Aspect ratio: Some frames are 4:3, which more closely matches the image size your digital camera captures (how

These days, digital photo frames do more than showcase your memories. The best ones do everything from playing music to streaming Internet content—while looking great anywhere.

closely depends partly on the camera you use, and partly on how the frame scales your content, cropping an image so that it fills the screen).

Displays with a widescreen (16:9) aspect ratio are handy if your digital camera captures 16:9 images, and they are an attractive, nontraditional way to display photos.

Built-in connectivity: Integrated wireless has become more common on digital photo frames, and, in the

past year, more functional, too. Look for Wi-Fi capability if you want the frame to access content that lives on a PC or comes from the Internet, but also check the frame's specs to see what kind of access it supports.

Controls: Some frames have buttons that are difficult to reach while you're also trying to watch what's on the screen. Others have more convenient touchscreen controls, usually around the

outskirts of the image.

For this roundup, we surveyed the landscape of digital photo frames. We ran the frames through a test script packed with content of varying sources and resolutions, and compared the frames' performance and features against one another. The ten photo frames presented here are the best models that we've seen thus far.

Kodak EasyShare W1020

The 10-inch, wooden-framed, glass-fronted Kodak EasyShare W1020 (\$160) takes the top spot thanks to its



46 CLOUD ENGINES
Pogoplug



47 LENOVO L215P



48 MOTOROLA T305



64 NIKON D5000

SONY'S S-FRAME DPF-D80 looks sleek, but it lacks Wi-Fi support.



THE TRANSCEND PF720 is the most versatile of the frames we've seen.



PANDIGITAL'S PAN1002W02T is big and attractive but has no dongle for Wi-Fi.



ease of use, with or without Kodak's proprietary software. The 800-by-480-pixel W1020 is Wi-Fi-enabled (setup is easy) and can stream content from your Kodak EasyShare Gallery and Flickr accounts. To start a slide show, just plug in a media card.

We saw very good color accuracy in our tests, and images retained a commendable amount of detail across highlights, midtones, and shadows when compared with our original photo files. One drawback: The W1020 doesn't handle nested file

folders on a card or a USB flash drive; everything must be in the same folder.

SmartParts SPX8WF

Sporting a wooden frame, the SmartParts SPX8WF (\$160) showed images on its 800-by-600-pixel screen that looked quite similar to the originals on our test PC. The SPX8WF is integrated with Windows Live, through which you can set up photo streams and view news headlines. And if friends want to share a photo with you, they can e-mail it directly to your frame—a pretty cool feature.

Its motion sensor means you don't have to remember to turn the frame on or off, saving electricity and prolonging its life span. But its menu may respond slowly.

Hewlett-Packard df820a4

With its wooden, double-matted, and glassed frame (interchangeable mats are included), the \$150 HP df820a4 looks just like a traditional analog frame. The only giveaway is a dangling AC power cord (if the frame is hanging on a wall).

The unit's 7-inch, 800-by-600-pixel display produced excellent results in our tests, providing natural-looking, saturated, and nicely detailed pictures. The included PictBridge software allows you to print a photo without using a computer.

My biggest gripe: This frame will present your pictures *only* in the order in which you originally loaded them. In addition, only a

switch on the frame will power it on; the remote lacks this function.

Sony S-Frame DPF-D80

The \$130 Sony S-Frame DPF-D80 rocks Sony's sleek design sense. This 8-inch frame is shiny and black, the screen is matte, and the button labels and Sony logo are backlit. I tested the black 8-inch version (the S-Frame comes in 7-, 9-, and 10-inch versions, and in white and red as well). I found the menus easy to navigate, and they nested logically. Colors on the sharp 800-by-600-pixel screen popped well, looked saturated, and had no noticeable distortion.

The Sony's slide-show mode offers the usual >>

MORE ONLINE

What would an ideal digital photo frame look like? Visit find.pcworld.com/62345 to see PC World's mashup ideas.

transition effects, and lets you view images linearly or shuffled in a random order. I especially liked this frame's ability to handle large image files (up to 100MB). My only quibble is that the price seems high in view of the frame's lack of extras such as support for video and MP3 audio.

Pandigital PAN1002W02T

Pandigital's \$185, 10.4-inch PAN1002WT02T frame blends in seamlessly with your retro analog frames. The 1024-by-768-pixel display presented good detail and very little color shift. If you don't like the look of your images, you can tweak them by using the brightness, contrast, tint, and color control—a feature uncommon in digital frames.

The PAN1002W02T is advertised as Bluetooth- and Wi-Fi-compatible, but you'll need to buy a special dongle from Pandigital to stream content from photo-sharing sites or RSS feeds. Also, the remote lacks a power button.

Transcend PF720

The \$95 Transcend PF720 is not only a digital photo frame, but also an FM radio, a video player, and an MP3 player. Its built-in 2GB of memory invites amassing a big collection of files without using any cards or a PC (but you can do that, too).

The frame's 800-by-480-pixel screen looked crisp, and photos had extremely natural-looking color; I did see a bit too much contrast.



THE PRICY D-LINK DSM-210 has some annoying limitations.

The unit's remote handles everything: You can add photos to your Favorites; adjust the frame's volume; and set different modes for photo, video, music, radio, calendar, and slide-show functions. The Transcend PF720 is a great device to keep by your bed or sofa because you can use it as a personal media player for listening to the radio or to your MP3 collection as well as for viewing slide shows and videos. It can even function as an alarm clock. At slightly less than a hundred bucks, the PF720 is a good deal—even without Wi-Fi.

D-Link DSM-210

Like the Sony S-Frame DPF-D80, the \$210 D-Link DSM-210 looks far techier than a traditional frame. But some features will pose problems for technophiles and technophobes alike.

In our tests, images transferred very slowly to the frame's 1GB of internal memory because we had to copy them one by one; the only way to copy multiple images is via a downloadable Yahoo widget. Once transferred, the pictures appeared slightly desaturated and had a

THE GIINII GN-812 is inexpensive but short on memory.

cool cast. Also, the unit can't handle nested folders and can't run images from multiple cards and internal memory into a single show.

The 800-by-480-pixel DSM-210 streams photos (but not video) through FrameChannel, an RSS utility. Oddly, the default settings limit you to a meager five photos. In addition, the frame can't stream content from more than one channel at a time (meaning only Picasa, only Flickr, or whatever). These limitations, together with the sky-high price, might put consumers off.

Ipevo Kaleido R7

The \$200 Ipevo Kaleido R7 is beautifully designed—even if it doesn't particularly resemble a picture frame. The 7-inch, 800-by-480-pixel

widescreen can rotate on its solid, heavy-weight stand and orients pictures accordingly. In my tests, the Kaleido had very good detail retention in midtones, and well-exposed pictures looked dynamite on

the matte screen—a good thing since this frame offers control only for brightness, not color, tint, or contrast. You can also view metadata on screen alongside photos.

With its built-in 802.11b/g wireless connection and its EyeStage software, you can stream photos from iPhoto or RSS feeds. I liked the Kaleido's intuitive menu, and the Wi-Fi connection is simple to set up. But I wish this pricey device had audio and video support.

InTouch IT7150

The 7-inch IT7150 (\$195) looks futuristic, but it feels like today's plastic. Its responsive touchscreen, paired with an intuitive menu screen, makes for an attractive, albeit expensive, package. With an 800-by-480-pixel display, Wi-Fi, and content streaming through FrameChannel, this unit has



THE INTOUCH IT7150 looks nice but has poor audio.

THE IPEVO KALEIDO R7 lacks audio and video support.

enough features to be competitive. But its internal memory (128MB) is puny.

Slide shows looked sharp, though colors were cooler and contrast was slightly higher than in our original photos. Alas, brightness is all you can adjust. An annoying limitation is that all photos must come from one source at a time. Setting up Wi-Fi is also complicated (other frames just let you enter a network key). Once you've completed the Wi-Fi setup, you can view RSS feeds and listen to Internet radio, but audio quality was the worst in this roundup.

GiiNii GN-812

Up close, the \$50 GiiNii GN-812 looks lightweight and feels like it's made of inexpensive plastic. The unit has an 800-by-600-pixel display. One big weakness is a weird semicircular array of function buttons on its back; they're impossible to operate without scrutiny. Luckily, the GiiNii's remote works reasonably well.

The frame tended to crop images heavily unless we told it to fit (rather than fill) the screen. Color in our photos was accurate—a little on the cool side, but still vivid. The GN-812's menus were sometimes a bit tricky to navigate; but once I got the hang of the remote, I could easily adjust slide-show transitions and set the photos in random or linear order. The GN-812's 128MB of internal memory storage is unimpressive. For \$50, however, such limitations aren't too hard to live with.

—Kathleen Cullen

PC WORLD TOP 10 DIGITAL PHOTO FRAMES

MODEL	PCWRating	Performance	Features and specifications
1 BEST BUY Kodak EasyShare W1020 \$180 find.pcworld.com/62972	86 VERY GOOD	<ul style="list-style-type: none"> Image quality: Superior Design: Very Good Specifications: Very Good 	<ul style="list-style-type: none"> 512MB internal memory Plays MP3 files Wi-Fi 10 inches diagonal
BOTTOM LINE: The EasyShare W1020 earns our top nod for its combination of deep features and ease of use.			
2 SmartParts SPX8WF \$160 find.pcworld.com/62975	85 VERY GOOD	<ul style="list-style-type: none"> Image quality: Superior Design: Very Good Specifications: Very Good 	<ul style="list-style-type: none"> 512MB internal memory Plays MP3, WMA files Wi-Fi 8 inches diagonal
BOTTOM LINE: This attractive, traditional-looking digital picture frame boasts excellent image quality.			
3 HP df820a4 \$150 find.pcworld.com/62974	83 VERY GOOD	<ul style="list-style-type: none"> Image quality: Very Good Design: Superior Specifications: Very Good 	<ul style="list-style-type: none"> 512MB internal memory Plays MP3, MPEG, MOV, and AVI files 7 inches diagonal
BOTTOM LINE: HP's frame produced excellent results in our image tests, but you can't change the order of pictures.			
4 Sony S-Frame DPF-D80 \$130 find.pcworld.com/62977	82 VERY GOOD	<ul style="list-style-type: none"> Image quality: Very Good Design: Superior Specifications: Good 	<ul style="list-style-type: none"> 200MB internal memory No audio/video support 8 inches diagonal
BOTTOM LINE: Images looked great on this nicely designed frame; but it is a bit pricey, considering it lacks Wi-Fi support.			
5 Pandigital PAN1002W02T \$185 find.pcworld.com/62978	82 VERY GOOD	<ul style="list-style-type: none"> Image quality: Very Good Design: Very Good Specifications: Very Good 	<ul style="list-style-type: none"> 512MB internal memory Plays MP3 and AVI files Wi-Fi, but no dongle 10.4 inches diagonal
BOTTOM LINE: This big, attractive frame supports Wi-Fi, but it doesn't include the required dongle.			
6 Transcend PF720 \$95 find.pcworld.com/62979	82 VERY GOOD	<ul style="list-style-type: none"> Image quality: Very Good Design: Good Specifications: Very Good 	<ul style="list-style-type: none"> 2GB internal memory Plays AVI, MOV, MPG, MP4 3GP, and Motion JPEG files 7 inches diagonal
BOTTOM LINE: This frame is versatile, but it may not appeal to people looking for a straightforward picture frame.			
7 D-Link DSM-210 \$210 find.pcworld.com/62980	81 VERY GOOD	<ul style="list-style-type: none"> Image quality: Good Design: Very Good Specifications: Very Good 	<ul style="list-style-type: none"> 1GB internal memory No audio/video support Wi-Fi 10 inches diagonal
BOTTOM LINE: Some of this model's features will pose problems for technophiles as well as technophobes.			
8 Ipevo Kaleido R7 \$200 find.pcworld.com/62981	81 VERY GOOD	<ul style="list-style-type: none"> Image quality: Very Good Design: Very Good Specifications: Superior 	<ul style="list-style-type: none"> 512MB internal memory No audio/video support Wi-Fi 7 inches diagonal
BOTTOM LINE: It's hard not to wish that this beautifully designed frame had audio and video support, given its sky-high price.			
9 InTouch IT7150 \$195 find.pcworld.com/62976	81 VERY GOOD	<ul style="list-style-type: none"> Image quality: Good Design: Very Good Specifications: Superior 	<ul style="list-style-type: none"> 128MB internal memory Plays MP3 files Wi-Fi 7 inches diagonal
BOTTOM LINE: Despite its appealing and intuitive design, this frame had some of the worst audio quality we've heard.			
10 GiiNii GN-812 \$50 find.pcworld.com/62983	81 VERY GOOD	<ul style="list-style-type: none"> Image quality: Very Good Design: Very Good Specifications: Good 	<ul style="list-style-type: none"> 128MB internal memory Plays MP3, WAV, AVI, and Motion JPEG files 8 inches diagonal
BOTTOM LINE: The GiiNii skimps on internal memory, and its menu structure isn't perfect, but it costs only \$50.			

CHART NOTE: Prices and ratings are as of 5/5/09. For a slide show of all products on this chart, go to find.pcworld.com/62987.

More Inkjet MFPs Use Wi-Fi to Cut the Cord

WI-FI CONNECTIVITY is featured in nine of the ten color inkjet

PCW Test Center

multifunction printers on our chart, and on four of the five new models we tested this month. But wireless can be as complicated as it is cool. If the installation goes awry, check both your network equipment and the MFP for possible problems.

Canon MFPs dominate our tightly bunched rankings, grabbing five of the top seven slots. The fifth-place Pixma MX860 offers tons of features but meager speeds. The number seven Pixma MX330 has a low sticker



CANON'S PIXMA MX860 comes with two 150-sheet input trays.

price but costly black ink. HP's Photosmart Premium Fax All-in-One, at number ten, can print on specially coated CD/DVD media.

Off the chart, HP's OfficeJet Pro 8500 All-in-One is expensive but well equipped, with low-cost inks. Brother's MFC-6890CDW has tabloid capabilities, but it's both slow and expensive.

—Melissa Riofrio

MORE ONLINE

Visit find.pcworld.com/62965 for in-depth reviews, full test results, and detailed specs for each inkjet MFP in our chart.

PC WORLD TOP 10 INKJET MULTIFUNCTION PRINTERS

MODEL	PCWRating	Performance	Features and specifications
1 BEST BUY Canon Pixma MX700 \$180 find.pcworld.com/59701	83 VERY GOOD	<ul style="list-style-type: none"> • Text quality: Very Good • Graphics quality: Very Good • Tested speed: 9.1 ppm text/3.2 ppm graphics 	<ul style="list-style-type: none"> • 30 ppm text • 20 ppm graphics • 4800-by-1200-dpi maximum true color resolution
BOTTOM LINE: Work- and play-oriented features blend harmoniously in this unit, with just a few quality and design issues.			
2 HP Photosmart C6380 All-In-One \$200 find.pcworld.com/61979	83 VERY GOOD	<ul style="list-style-type: none"> • Text quality: Very Good • Graphics quality: Very Good • Tested speed: 11.3 ppm text/3.2 ppm graphics 	<ul style="list-style-type: none"> • 33 ppm text • 31 ppm graphics • 9600-by-2400-dpi maximum true color resolution
BOTTOM LINE: Well designed, with solid speed and print quality, the home-oriented C6380 All-In-One has what it takes.			
3 Canon Pixma MX7600 \$400 find.pcworld.com/60874	83 VERY GOOD	<ul style="list-style-type: none"> • Text quality: Superior • Graphics quality: Superior • Tested speed: 9.8 ppm text/3.7 ppm graphics 	<ul style="list-style-type: none"> • 28 ppm text • 23 ppm graphics • 4800-by-1200-dpi maximum true color resolution
BOTTOM LINE: For those who can afford it, this fast, full-featured MFP will suit any small business or home office.			
4 HP Photosmart C5280 \$100 find.pcworld.com/58163	82 VERY GOOD	<ul style="list-style-type: none"> • Text quality: Good • Graphics quality: Very Good • Tested speed: 7.3 ppm text/2.4 ppm graphics 	<ul style="list-style-type: none"> • 32 ppm text • 24 ppm graphics • 4800-by-1200-dpi maximum true color resolution
BOTTOM LINE: This versatile unit handles photo and CD/DVD printing as easily as it does everyday copies and scans.			
5 Canon Pixma MX860 \$200 NEW find.pcworld.com/62466	82 VERY GOOD	<ul style="list-style-type: none"> • Text quality: Very Good • Graphics quality: Good • Tested speed: 8.4 ppm text/2.2 ppm graphics 	<ul style="list-style-type: none"> • 8.4 ppm text • 5.6 ppm graphics • 9600-by-2400-dpi maximum true color resolution
BOTTOM LINE: You get a lot of features for a midrange price, but the Pixma MX860's performance is just average overall.			
6 Canon Pixma MP620 \$150 find.pcworld.com/61884	82 VERY GOOD	<ul style="list-style-type: none"> • Text quality: Superior • Graphics quality: Good • Tested speed: 7.6 ppm text/2.2 ppm graphics 	<ul style="list-style-type: none"> • 28 ppm text • 17 ppm graphics • 9600-by-2400-dpi maximum true color resolution
BOTTOM LINE: For home or school, the Pixma MP620 offers impressive features and connectivity at a low price.			
7 Canon Pixma MX330 \$110 NEW find.pcworld.com/62467	81 VERY GOOD	<ul style="list-style-type: none"> • Text quality: Very Good • Graphics quality: Good • Tested speed: 7.7 ppm text/2.2 ppm graphics 	<ul style="list-style-type: none"> • 7.5 ppm text • 4.5 ppm graphics • 4800-by-1200-dpi maximum true color resolution
BOTTOM LINE: The Pixma MX330 is a decent, basic MFP in most ways, but the high price to replace black ink is disappointing.			
8 Epson WorkForce 600 \$200 find.pcworld.com/61880	80 VERY GOOD	<ul style="list-style-type: none"> • Text quality: Very Good • Graphics quality: Good • Tested speed: 18.2 ppm text/5.0 ppm graphics 	<ul style="list-style-type: none"> • 27 ppm text • 19 ppm graphics • 5760-by-1440-dpi maximum true color resolution
BOTTOM LINE: Upstaged by its own blazing speed, this machine pales in every other way—especially ink costs.			
9 HP Photosmart C8180 All-in-One \$300 find.pcworld.com/59702	80 VERY GOOD	<ul style="list-style-type: none"> • Text quality: Good • Graphics quality: Good • Tested speed: 7.0 ppm text/2.7 ppm graphics 	<ul style="list-style-type: none"> • 34 ppm text • 33 ppm graphics • 4800-by-1200-dpi maximum true color resolution
BOTTOM LINE: The high initial price buys you soup-to-nuts digital photo processing, including a LightScribe drive.			
10 HP Photosmart Premium Fax All-in-One \$300 NEW find.pcworld.com/62498	80 VERY GOOD	<ul style="list-style-type: none"> • Text quality: Very Good • Graphics quality: Good • Tested speed: 11.3 ppm text/3.1 ppm graphics 	<ul style="list-style-type: none"> • 33 ppm text • 32 ppm graphics • 9600-by-2400-dpi maximum true color resolution
BOTTOM LINE: Well equipped for both photography and light office use, this MFP is capable—but quite expensive.			

CHART NOTES: Prices are as of 5/7/09. ppm = pages per minute; dpi = dots per inch.

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Simple Access to Files on the Road

POGOPLUG, a compact box from Cloud Engines, allows you to share files from a local USB hard drive via the Web, without having to set up a NAS server or router connection, or to manually upload the files. For backing up or accessing your files while on the road, you can't beat it.

The Pogoplug plugs direct-

ly into a power socket and connects to your modem or router via ethernet. It has a single USB port for attaching the drive whose content you want to share.

After plugging in and attaching the unit, you navigate to the Pogoplug site to activate it. You simply click 'My Pogoplug', enter the activation code located on the bottom of the box (and of the Pogoplug), and then click 'Next'. My Pogoplug activation e-mail got stuck in my spam filter; but with luck yours won't, and you can use the service at once.

Once everything is set up, log on to Pogoplug.com to

access all the files on the drive you attached. You can even upload files remotely, which makes the Pogoplug a perfect conduit for backing up pictures or documents accrued on the road. The Pogoplug site even has a convenient media player, so you can access your media without having to save it to your PC—though you may, of course, download files if you wish. You can share your files with others who have a Pogoplug account, and you can permit others to log on with your user name and password, if you dare. A stand-alone local



THE POGOPLUG lets you access your files without a NAS server.

client eliminating the need for a Web browser is available for PCs, Macs, and iPhones.

Many online services permit you to share files, but Pogoplug lets you leave your power-hungry PC and NAS box off and still access files while you're somewhere else.

—Jon L. Jacobi

89
VERY GOOD

Pogoplug | Cloud Engines

Nifty gadget lets you access files from a local USB drive via the Web.

Street: \$99

find.pcworld.com/62984

PHOTOGRAPHS: ROBERT CARDIN

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Lenovo LCD Offers True Widescreen Aspect Ratio

AT 21.5 INCHES diagonally, Lenovo's L215p is slightly more squat than a normal 22-inch widescreen LCD monitor. But it has a true 16:9 aspect ratio, and with its included HDMI connection and its 1920 by 1080 native resolution, the

PCW Test Center

85
VERY GOOD

L215p | Lenovo

Reasonably priced widescreen LCD monitor is primed for HD content.

Street: \$254

find.pcworld.com/62948

L215p is optimized for displaying high-def content.

In our formal image quality tests, the L215p showed sharp text and accurate colors. It handled our motion tests well, too, displaying little noticeable jittering.

Multimedia features include a Webcam, three USB ports, headphone and microphone jacks, and a built-in speaker bar that produces adequate volume. To access the on-screen controls, you must run your finger along the underside of the bezel.

Besides its HDMI connection, the L215p has a VGA



LENOVO'S L215P widescreen monitor is designed for high definition.

port, but no DVI port. We connected the monitor with a DVI-to-HDMI cable; alternatively you may use the lower-quality VGA link. The monitor can tilt and swivel fairly easily, but it can't move up or down, or pivot.

Given its plethora of extra

features, fine image quality, HD-oriented aspect ratio, and HDMI connection, the L215p should satisfy multimedia and movie fans who want a display optimized for the latest entertainment. At \$254, it's a good deal, too.

—Kalpana Ettenson



SPECIAL ADVERTISING SUPPLEMENT



No data: Two words no one wants to hear or say, knowing that for every minute, hour or day your computer is being serviced by a professional data recovery service, that means no data access for you. Time spent at a data recovery service translates into added expenses and lost productivity for you and your company.

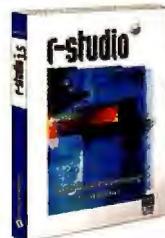
R-Tools, the leader in world-class data recovery solutions, puts professional data recovery tools into the hands of even novices. For the ultimate in recovery, R-Tools provides **R-Studio**, a family of powerful and cost-effective undelete and data recovery software for Windows and Vista, and **R-Studio for the Mac**. In addition, **R-Linux 3.0** is a **free** file recovery utility for the Ext2FS/Ext3FS file system used in the Linux OS and several varieties of Unix.

The upgraded **R-Undelete** is an inexpensive, easy-to-use and powerful file undelete solution for FAT and NTFS file systems. **R-Undelete** Version 4.0 now features file recovery from damaged and/or deleted disk partitions. An improved wizard-style interface makes it easy for even inexperienced users to recover data.

For those who need the mission-critical capability to completely restore their systems after a major crash, **R-Drive Image** allows users to quickly create a compressed disk image of a hard drive and easily back up images in various removable media such as CD-R(W), Iomega Zip or Jazz disks. **R-Drive Image** also saves time and expense by allowing you to set up one system manually, then create an image of that system for deploying the identical system on multiple computers.

Ease of use is also a highlight of **R-Crypto**, the R-Tools data encryption system utility that protects a user's confidential information and personal data against unauthorized access, whether on a desktop, notebook or removable data storage device. **R-Crypto** encrypts and decrypts data in real time and is fully transparent to the user. R-Tools also offers **R-Wipe&Clean**, which automatically keeps applications free and clear of harmful clutter.

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Bluetooth Car Kits: Convenience, Not Quality

PCW Test Center **GOING HANDS-FREE** with your phone while sitting behind the wheel of a moving vehicle is a much smarter decision than trying to negotiate traffic with one hand and half your normal level of attention.

One way to accomplish this safety measure is to wear a Bluetooth headset whenever you go cruising around in your car. But as sensible as that approach may be, we think that using a Bluetooth speakerphone designed for your car is an even better idea.

We drove many miles to test several consumer-ready Bluetooth speakerphones. Our findings? Though most

of these devices are a breeze to install and have easy-to-locate controls, we were only moderately impressed with their audio quality.

Throughout our tests, the speakerphones never came close to achieving handset-grade sound. Most of your conversation may be clear enough, but your voice may sound faint or your callers may have to endure problems ranging from interference to choppiness to echoes.

Motorola's \$70 Hands-Free Car Speakerphone T305 earns the top spot on our Top 5 speakerphone car kits chart because it's compact, it's ultraportable, and it remained securely affixed

THE MOTOROLA T305 Bluetooth car speakerphone is inexpensive and easy to use.

to the visor where we installed it. In addition, the T305's call quality was consistent and satisfactory, its buttons were intuitive, and its price is right.

We also liked the \$100 LG Electronics Solar Car Kit HFB-500. Its call quality passed muster, but we were more drawn to its environmentally oriented aspect: Aside from the very first charge (which you generate



by using a wall socket), the HFB-500 is designed to obtain the electrical power it needs from sunlight; you just have to live in an area where the sun shines regularly!

—Aoife M. McEvoy

PC WORLD TOP 5 BLUETOOTH SPEAKERPHONE CAR KITS

MODEL	PCW Rating	Performance	Features and specifications
1 BEST BUY Motorola Hands-Free Car Speakerphone T305 \$70 find.pcworld.com/62805	84 VERY GOOD	<ul style="list-style-type: none"> • Up to 14 hours talk time • Up to 14 days standby time • Ease of installation: Very Good • Secure fit: Very Good 	<ul style="list-style-type: none"> • Design: Very Good • Button placement: Good • Call quality: Good • 2.38 ounces • 1.8 by 2.9 by 1.04 inches • No included AC charger • No included USB charger
BOTTOM LINE: Motorola's affordable T305 is an intuitive, sensibly designed car speakerphone that delivers satisfactory call quality at a great price.			
2 LG Electronics Solar Car Kit HFB-500 \$100 find.pcworld.com/62806	83 VERY GOOD	<ul style="list-style-type: none"> • Up to 18 hours talk time • Up to 1100 hours standby time¹ • Ease of installation: Superior • Secure fit: Superior 	<ul style="list-style-type: none"> • Design: Good • Button placement: Fair • Call quality: Very Good • 2.54 ounces • 3.7 by 2 by 0.5 inches • No included AC charger • No included USB charger
BOTTOM LINE: LG's device delivers great-sounding calls most of the time. But to maximize the solar benefit, you must live in an area that's usually sunny.			
3 Jabra SP700 \$100 find.pcworld.com/62807	82 VERY GOOD	<ul style="list-style-type: none"> • Up to 14 hours talk time • Up to 255 hours standby time • Ease of installation: Good • Secure fit: Good 	<ul style="list-style-type: none"> • Design: Fair • Button placement: Good • Call quality: Good • 3 ounces • 5 by 2.4 by 0.7 inches • Included AC charger • Included USB charger
BOTTOM LINE: Audio quality is fairly dependable (though not outstanding)—and the unit's music streaming and integration with the car stereo are a bonus.			
4 Parrot Minikit Chic \$100 find.pcworld.com/62808	82 VERY GOOD	<ul style="list-style-type: none"> • Up to 15 hours talk time • Over 20 days standby time • Ease of installation: Good • Secure fit: Fair 	<ul style="list-style-type: none"> • Design: Good • Button placement: Very Good • Call quality: Good • 2.83 ounces • 4.33 by 2.38 by 1.14 inches • No included AC charger • Included USB charger
BOTTOM LINE: Parrot's unit does a great job on calls, and its phone-book downloading works as advertised, but callers noted muffled or distant voice quality.			
5 Iqua Vizer Sun \$100 find.pcworld.com/62809	81 VERY GOOD	<ul style="list-style-type: none"> • Up to 20 hours talk time • Up to 500 hours standby time¹ • Ease of installation: Good • Secure fit: Good 	<ul style="list-style-type: none"> • Design: Very Good • Button placement: Good • Call quality: Fair • 5.64 ounces • 0.87 by 5.24 by 3.62 inches • No included AC charger • Included USB charger
BOTTOM LINE: This solar-based unit can support endless hours of talk time, but the speakerphone's audio quality is nothing to write home about.			

CHART NOTES: All prices and ratings are as of 4/17/09. FOOTNOTE: ¹With regular exposure of the device to sunlight, talk hours and standby hours are effectively unlimited.

MORE ONLINE Visit find.pcworld.com/62970 for detailed reviews, test results, and specs for all speakerphone Bluetooth car kits.

Buying Guide: Today's Hard Drives Hold Tons of Data

YOUR PC'S HARD drive—the hub where your operating system, programs, and data reside—is the most critical component of your system after the CPU and RAM.

If you edit movies, take lots of digital photos, play games, or listen to music on your PC, a large, fast Serial ATA hard drive can dramatically improve your overall experience. If you need even more storage or a means to back up a PC's internal drives, you can add an external hard drive. And if you want centralized storage for the PCs on your network, consider a network-attached device.

Today, 2TB is the maximum capacity for a 3.5-inch drive (typically found in desktop PCs), and 500GB is the max for a 2.5-inch model (usually seen in laptops).

Internal or External

An internal drive goes inside your PC and attaches to the motherboard or interface card. An external, direct-attached drive uses the same basic mechanism but sits in an enclosure that connects to your PC via a cable.

With an internal drive, you can either replace the primary C: drive outright or introduce additional drives to your PC, depending on how many drive bays it has free (most desktops have at least one spare internal drive bay). Typical, standard drives spin at 7200 rotations per minute and come in capacities of up to 1TB; high-performance units spin at 10,000 rpm and

come in sizes of up to 150GB.

Internal drives are primarily Serial ATA 300 models; the designation refers to the data throughput speed (300MB per second). SATA, which



THE WIEBETECH RTX400-QR offers RAID in a multidrive, direct-attached USB enclosure.

replaced Parallel ATA, provides benefits such as faster throughput, no jumper configuration requirements, and thin cables that promote airflow inside the PC.

SATA internal drives now make up nearly 100 percent of the desktop and laptop PC markets, but the external connector is still catching on among retail computers (now at over 25 percent).

You can use a SATA 300 drive with motherboards that support SATA 150; the performance will step down a notch, but the connectors are the same. The motherboard of any PC you buy in the foreseeable future will support SATA, whereas it may not support PATA.

Direct-attached external drives let you add storage to a PC whose internal bays or connections are maxed out. You can share an external drive among multiple PCs and store it in a safe place

for backup, too. External drives connect primarily via USB 2.0, although many models also connect by eSATA (external SATA), or FireWire 400 or 800.

eSATA penetration on motherboards is up to 60 percent. Meanwhile, as of the second half of 2008, fully 85 percent of new laptops supported eSATA, mostly in the form of a cleverly designed two-in-one USB 2.0/eSATA port.

External models are most commonly single-drive designs; some products offer RAID (Redundant Array of Independent Disks) across two drives for data mirroring or striping, and a few manufacturers make multidrive direct-attached boxes.

Network Storage

A network-attached storage (NAS) device connects to your router via gigabit ethernet. NAS devices come in single-drive and multidrive flavors. Many of the multidrive, high-capacity models offer perks such as printer and Internet file access; they also support RAID and other software-based variations on data redundancy. A NAS unit's biggest drawback is that you must transfer data to it via ethernet, typically over the TCP/IP protocol, which generally makes NAS the slowest option for moving data from one location to another.

However, NAS is the most elegant way to share audio, photos, and video between

your PC and your television set. You do so by using the NAS with a digital media adapter. (For more details, see find.pcworld.com/62982.)

Space or Speed?

Our tests show that all of today's hard drives perform adequately when running regular business apps. For people who process large files, images, and video, though, capacious and speedy drives are beneficial.

As you might expect, the fastest units and the largest-capacity drives carry a price premium. But you'll probably be able to find today's high-capacity model at a lower price in the near future,



SEAGATE'S BLACK ARMOR NAS 440 provides data-redundancy options over a network.

whereas high-performance drives tend to stay expensive for a longer duration—that is, until the next capacity increase comes along.

—Melissa J. Perenson

MORE ONLINE

For hard-drive and NAS news, reviews, and how-to articles, see our Storage Product Center at find.pcworld.com/62973.

The Best Smartphone Around Is Still a Pearl

THE APPLE IPHONE 3G

PCW Test Center and T-Mobile's Android-based G1

are among the hottest smartphones on the market, but Research In Motion's various BlackBerry models continue to dominate our Top 10 list. Altogether, BlackBerry smartphones captured half of the available slots—including first place, which goes to the handsome and versatile Pearl 8120.

Still, competition is lively. In second place this month is the Motorola Motozine ZN5, which comes equipped



UNSTOPPABLE ANDROID: The very popular G1 from T-Mobile.

with one of the best cameras we've ever seen on a mobile phone. The Samsung Omnia follows the ZN5 in third place. Though the Omnia's gorgeous 3.2-inch touchscreen and sophisticated design impressed us, this model is encumbered by a slow user interface.

—Ginny Mies

MORE ONLINE

Visit find.pcworld.com/62966 for in-depth reviews, full test results, and detailed specs for each cell phone in our chart.

PC WORLD TOP 10 CELL PHONES

MODEL	PCWRating	Performance ¹	Features and specifications
1 BEST BUY RIM BlackBerry Pearl 8120 (T-Mobile) \$200 find.pcworld.com/61681	89 VERY GOOD	<ul style="list-style-type: none"> Battery life: 10:00 Battery life score: Superior Overall design: Superior 	<ul style="list-style-type: none"> Carrier: T-Mobile Form factor: Candy bar Weight: 3.2 ounces Camera resolution: 2.0 megapixels
BOTTOM LINE: BlackBerry's sleek Pearl lets consumers use Wi-Fi to boost call quality in locales where cell signals falter.			
2 Motorola Motozine ZN5 \$200 find.pcworld.com/62100	86 VERY GOOD	<ul style="list-style-type: none"> Battery life: 10:00 Battery life score: Superior Overall design: Very Good 	<ul style="list-style-type: none"> Carrier: T-Mobile Form factor: Candy bar Weight: 3.9 ounces Camera resolution: 5.0 megapixels
BOTTOM LINE: Motorola's inexpensive phone has a high-quality camera, but its speed and design reflect compromises.			
3 Samsung Omnia \$200 find.pcworld.com/62028	85 VERY GOOD	<ul style="list-style-type: none"> Battery life: 10:00 Battery life score: Superior Overall design: Very Good 	<ul style="list-style-type: none"> Carrier: Verizon Form factor: Candy bar Weight: 4.3 ounces Camera resolution: 5.0 megapixels
BOTTOM LINE: This versatile, stylish, and long-lived phone from Samsung is hindered by a sluggish interface.			
4 RIM BlackBerry Curve 8320 \$200 find.pcworld.com/58957	84 VERY GOOD	<ul style="list-style-type: none"> Battery life: 10:00 Battery life score: Superior Overall design: Very Good 	<ul style="list-style-type: none"> Carrier: T-Mobile Form factor: Candy bar Weight: 3.9 ounces Camera resolution: 2.0 megapixels
BOTTOM LINE: The BlackBerry Curve 8320's Voice-over-Wi-Fi feature makes an excellent phone even better.			
5 T-Mobile G1 \$180 find.pcworld.com/61827	84 VERY GOOD	<ul style="list-style-type: none"> Battery life: 5:51 Battery life score: Fair Overall design: Very Good 	<ul style="list-style-type: none"> Carrier: T-Mobile Form factor: Candy bar Weight: 5.6 ounces Camera resolution: 3.0 megapixels
BOTTOM LINE: The G1 delivers great call quality and does a good job of melding hardware with the Android operating system.			
6 Apple iPhone 3G \$200 find.pcworld.com/62034	82 VERY GOOD	<ul style="list-style-type: none"> Battery life: 5:38 Battery life score: Fair Overall design: Superior 	<ul style="list-style-type: none"> Carrier: AT&T Form factor: Candy bar Weight: 4.7 ounces Camera resolution: 2.0 megapixels
BOTTOM LINE: With a lower price, 3G radio capability, and built-in GPS, this smartphone is in a class by itself.			
7 RIM BlackBerry Bold \$400 find.pcworld.com/61894	82 VERY GOOD	<ul style="list-style-type: none"> Battery life: 7:56 Battery life score: Very Good Overall design: Very Good 	<ul style="list-style-type: none"> Carrier: AT&T Form factor: Candy bar Weight: 4.8 ounces Camera resolution: 2.0 megapixels
BOTTOM LINE: The BlackBerry Bold sports a stunning design, but its mediocre call quality and camera hold it back.			
8 T-Mobile Shadow \$200 find.pcworld.com/62964	82 VERY GOOD	<ul style="list-style-type: none"> Battery life: 10:00 Battery life score: Superior Overall design: Very Good 	<ul style="list-style-type: none"> Carrier: T-Mobile Form factor: Candy bar Weight: 5.3 ounces Camera resolution: 2.0 megapixels
BOTTOM LINE: The second-generation T-Mobile Shadow adds features and cosmetic tweaks, but is expensive for what it offers.			
9 RIM BlackBerry Storm \$200 find.pcworld.com/62029	81 VERY GOOD	<ul style="list-style-type: none"> Battery life: 7:39 Battery life score: Very Good Overall design: Very Good 	<ul style="list-style-type: none"> Carrier: Verizon Form factor: Candy bar Weight: 5.5 ounces Camera resolution: 3.2 megapixels
BOTTOM LINE: Though the phone looks handsome, the Storm's touchscreen interface is awkward and disappointing.			
10 RIM BlackBerry Pearl Flip 8220 \$200 find.pcworld.com/61917	81 VERY GOOD	<ul style="list-style-type: none"> Battery life: 8:12 Battery life score: Very Good Overall design: Good 	<ul style="list-style-type: none"> Carrier: T-Mobile Form factor: Clamshell Weight: 3.6 ounces Camera resolution: 2.0 megapixels
BOTTOM LINE: The first BlackBerry clamshell is stylish, but its keyboard and other features fall short.			

CHART NOTE: Prices and ratings are as of 5/8/09. FOOTNOTE: ¹ Battery life is expressed in hours:minutes, with a maximum test time of 10 hours.

Signal Problems ?



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IF YOU PURCHASED A NEW TREO 600 SMARTPHONE BEFORE OCTOBER 27, 2004 FOR USE ON THE SPRINT CELLULAR TELEPHONE NETWORK, YOU COULD BE ENTITLED TO BENEFITS UNDER A CLASS ACTION SETTLEMENT.

A settlement of a class action lawsuit affects you if you purchased, in the United States, a new Treo 600 smartphone before October 27, 2004, for use on the Sprint cellular network and not for resale. The San Francisco Superior Court authorized this notice. The Court will have a hearing to consider whether to approve the settlement, so that the benefits may be paid.

Under the terms of the proposed settlement, class members who are current Sprint cellular telephone subscribers are eligible to receive a credit of \$20 toward their Sprint cellular telephone bill. Class members who are not current Sprint cellular telephone subscribers are eligible for a credit of \$27.50 toward any purchase at Palm's online store (<http://store.palm.com>).

In order to receive either benefit, you must send in a claim form. Please visit www.sprinttreo600settlement.com for details. You can also object to the settlement or exclude yourself. If you exclude yourself from the settlement, you cannot obtain a credit.

WHO'S AFFECTED?

You're a "Class Member" if you are a person or entity in the United States who was the original purchaser of at least one new Treo 600 model cellular phone for use on the Sprint PCS cellular telephone network at any time prior to October 27, 2004. You are not a "Class Member" if you are a judicial officer assigned to the class action lawsuit or are a state, local or federal government entity or purchased the Treo 600 for distribution or resale.

WHAT'S THIS ABOUT?

On October 27, 2004, plaintiffs James Casaburi and Robert Werksman filed a lawsuit against palmOne, Inc. (now Palm, Inc) and Sprint Spectrum, L.P. alleging that certain statements regarding the availability of WiFi and Bluetooth expansion cards for Treo 600 smartphones were false because no such cards had been developed that are compatible with the Treo 600. Defendants have denied plaintiffs' allegations and asserted several defenses in the litigation. After several years of litigation, the parties each believe that settling these claims is in their best interest and have agreed to the terms of the settlement described below. The settlement is not an admission of wrongdoing or an indication that any law was violated.

WHAT CAN YOU GET FROM THE SETTLEMENT?

Class members who are current Sprint subscribers are eligible to receive a \$20 bill credit toward their Sprint cellular telephone bill. Class members who are no longer Sprint subscribers are eligible to receive a \$27.50 credit that may be used for a single purchase at Palm's online store (<http://store.palm.com>). The Palm store credit must be redeemed within 180 days. Class Members must timely send in a valid claim form in order to obtain either of these benefits.

HOW DO YOU GET A CREDIT?

The claim form contains everything you need. Just go to www.sprinttreo600settlement.com to fill out and submit the form online. You can also print out a claim form from the website or call toll free at 1-866-459-3074 and request a claim form to be mailed to you. Claim forms sent by mail must be mailed Sprint Treo 600 Settlement, c/o Gilardi & Co., P.O. Box 808054, Petaluma, CA 94975-8054. You will be required to sign a declaration under penalty of perjury that you saw or heard a representation made by Palm or Sprint regarding the availability of Bluetooth or WiFi expansion cards that were compatible with the Treo 600 and that such representation was material to your decision to purchase the Treo 600. The deadline to submit a claim is September 15, 2009.

WHAT ARE YOUR OPTIONS?

If you don't want a credit, and you don't want to be legally bound by the settlement, you must submit a request for exclusion to Plaintiffs' Counsel, Robert C. Schubert, Schubert Jonckheer Kolbe & Kralowac LLP, Three Embarcadero Center, Suite 1650, San Francisco, CA 94111, postmarked by July 16, 2009. If you do not request exclusion in the manner set forth above, you will be bound by the Judgment of the Court and you won't be able to sue, or continue to sue Palm and/or Sprint about the legal claims in this case. If you exclude yourself, you can't get a credit from this settlement.

If you stay in the Class, you may object to the settlement. For information on how to object to the settlement, visit www.sprinttreo600settlement.com. The Court will hold a hearing in this case (*Casaburi v. palmOne, Inc.*, Case No. 04-435844) on July 31, 2009, at 1:30 p.m. to consider whether to approve the settlement and attorneys' fees totaling no more than \$1,235,000 and expenses of no more than \$100,000, as well as incentive payments to each of the two Class Representatives of \$7,500. You may appear at the hearing, but you don't have to. To obtain a full notice and claim form, and for more details, go to www.sprinttreo600settlement.com, send an e-mail to info@sprinttreo600settlement.com or write to Sprint Treo 600 Settlement, c/o Gilardi & Co., P.O. Box 808054, Petaluma, CA 94975-8054.

IMPORTANT DEADLINES

Any objection to or request for exclusion from the settlement must be postmarked on or before July 16, 2009. The deadline to submit a claim form is September 15, 2009. Once that approval becomes final (i.e., after any appeals are resolved) class members who submitted valid claims and are eligible for the Sprint credit will have the credit applied to their Sprint PCS bill within sixty (60) days of the Effective Date. All other class members who submitted valid claims will receive a credit for the Palm store within thirty (30) days of the Effective Date, which must be redeemed within 180 days after the Effective Date.

Reviews



THE CASIO EX-FC100 offers a burst mode and several video options.

Casio's EX-FC100 Takes Pics, Video at High Speed

AS A POINT-AND-SHOOT, the 9-megapixel Casio Exilim

PCW Test Center EX-FC100 is unexceptional, with a 5X optical zoom and a stabilized sensor. It stands apart for its ability to shoot up to 30 full-resolution images per second, and video at up to 1000 frames per second.

The 2.7-inch LCD is bright and clear with nice color and good detail, but its images appear a little soft. The stabilization works well. Auto-focus and metering are both very good, and the camera provides several focusing and metering modes.

A dedicated button toggles the high-speed burst. Obviously, 30 full-res frames fill up storage, so after the camera has taken the shots, it lets you choose frames to save.

The rechargeable lithium ion battery handles the burst features well. In PC World Test Center battery evaluations, this Exilim shot 317 photos on a charge, for a rating of Very Good. The EX-FC100 can shoot video (standard- or high-def) with sound. The video quality is very good. A separate high-speed mode lets you shoot in three different video frame sizes and rates to record slow motion (the video plays at a normal 30 fps). In our tests, though, the camera could not focus accurately when zoomed in all the way with the optical zoom. And when shooting HD zoomed in all the way, it yielded a weird, shaky image. The camera worked fine for us when not zoomed fully.

In the PC World Test Center, the EX-FC100 received an overall image-quality rating of Good, with low levels of distortion and accurate colors. At high ISOs it was very good; but above ISO 400, as you might expect, images become noticeably noisy.

—Ben Long

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Beauty & Nail Salons

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Cafe / Bar

Carpentry

Casual Dining

Catering Services

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Chiropractor

Civil Engineering

Cleaning Services

Clubs / Associations

Computer Store

Consulting Services

Contractor / Home
Repairs

Cosmetics / Beauty
Supplies

Courier Services

Dentist

Developer /
Construction Company

Doctor

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Appliances

Engineering
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Faith-based
Organizations

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Funeral Services

Furniture Store

Gardening /
Landscaping

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First Name:

Company Name:

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City, State:

Zip Code:

Telephone:

Fax:

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Hours:

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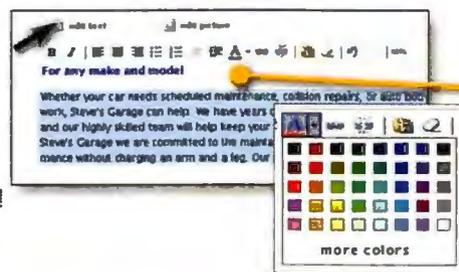
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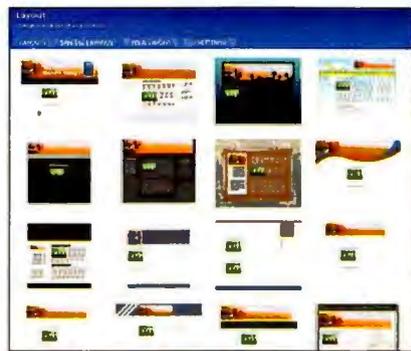
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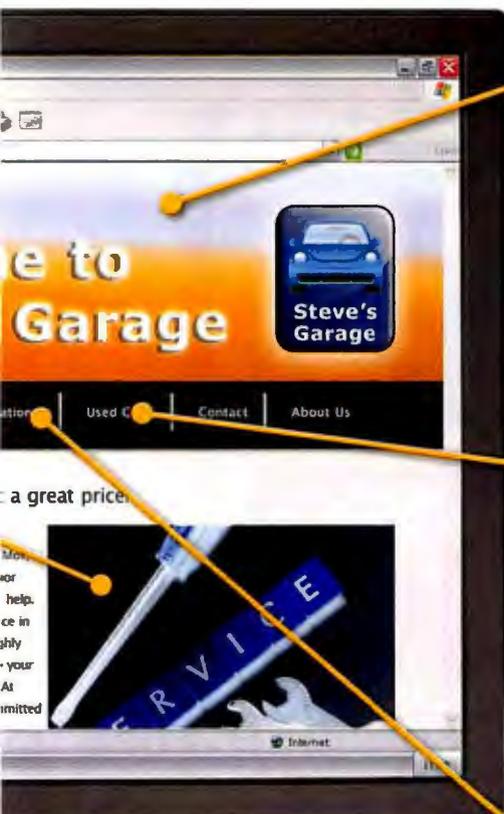
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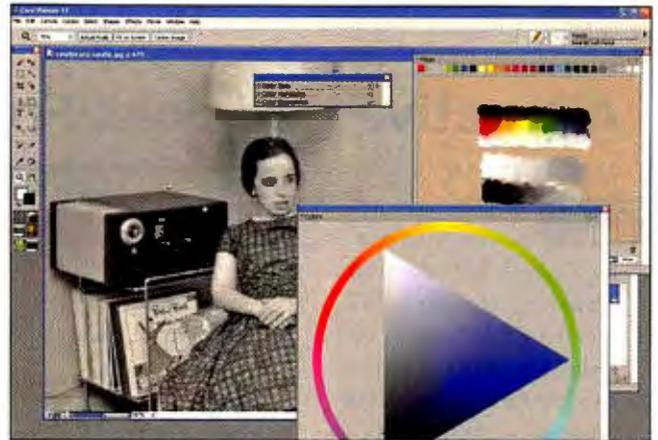
Painter 11 Offers Realistic Hard-Media Tools

COREL PAINTER MAY owe its name to oils and watercolors, but in version 11, art media other than paint and brushes enjoy the spotlight. The 30 new Real Hard Media tools give the Windows/OS X program its most uncanny re-creations yet of pencils,

pens, pastels, chalk, and other drawing implements.

If you have a Wacom Intuos or Cintiq graphics tablet, the tools react to the angle at which you hold the pen—so you can draw with the point of a 2B pencil, say, and then scribble with its edge. Painter's markers let you build up color by layering strokes.

New Photoshop-like features include support for PNG files, a polygonal selection tool, and improved ways to rotate, scale, and skew elements. This version also has better support for shuttling images between Painter



PAINTER 11 LETS you resize its color wheel and paint-mixing palette.

and Photoshop with colors and layers intact. In general, colors remain accurate as you save images in different formats and print them out on various media.

If you want to do realistic traditional art on a computer, you need Painter. And if you are a Painter user who is

as likely to grab a pen or pencil as you are a brush, you need this upgrade.

Note: Some Windows XP users have reported crashes with 11; I did not encounter any myself. Corel says that it's aware of the issue and is working on an update.

—Harry McCracken



Painter 11 | Corel

A solid upgrade; the nonpaint tools work great with Wacom tablets.

List: \$399; \$199 upgrade
find.pcworld.com/62901

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Say Hello to Search 2.0

Attractive Netbooks From Asus, Samsung

AMONG THE MOVERS and shakers in the netbook world right now is Asus. With the new HE model, the company further refines its EeePC 1000 series. Streamlined and a good performer, the 1000HE tops our chart this month.

Samsung made some smart nips and tucks with its \$470 N110, which ranks second. Only a few months ago, the company unveiled its first netbook, the NC10. That machine performed admirably in most cases (earning an average score of 35 in WorldBench 6), but it had design



THE SAMSUNG N110 fixes the few quirks we saw in the NC10.

quirks—namely, a frustrating touchpad with hard-to-press buttons. The N110, however, slims down the lines a little and makes the mouse buttons work well. Add to that a meaty battery that lasts 8 hours, 23 minutes and a fairly sweet software suite (for a regular laptop, let alone a netbook), and the N110 is a real road-ready PC.

—Darren Gladstone

MORE ONLINE

Visit find.pcworld.com/62944 to see in-depth reviews, full test results, and detailed specs for each netbook in our chart.

PC WORLD TOP 10 NETBOOKS

MODEL	PCWRating	Performance	Features and specifications
1 BEST BUY Asus EeePC 1000HE \$399 find.pcworld.com/62538	86 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 score: 35 Good Overall design: Very Good Tested battery life: 7:08 	<ul style="list-style-type: none"> 1.66-GHz Intel Atom N280 10-inch wide screen 3.2 pounds
BOTTOM LINE: Asus delivers a more refined take on its Eee PC—and manages to do so for less than \$400.			
2 Samsung N110 \$470 NEW find.pcworld.com/62937	84 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 score: 38 Very Good Overall design: Very Good Tested battery life: 8:23 	<ul style="list-style-type: none"> 1.6-GHz Intel Atom N270 10.1-inch wide screen 2.7 pounds
BOTTOM LINE: Take everything we liked on the Samsung NC10 and fix the mouse buttons, and that's what the N110 is all about.			
3 Acer Aspire One AOD150 \$349 find.pcworld.com/62938	83 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 score: 35 Good Overall design: Good Tested battery life: 6:38 	<ul style="list-style-type: none"> 1.6-GHz Intel Atom N270 10-inch wide screen 2.8 pounds
BOTTOM LINE: This bigger Aspire One improves on the original, most notably with a larger screen and a longer battery life.			
4 Lenovo IdeaPad S10 \$449 find.pcworld.com/62406	81 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 score: 41 Superior Overall design: Very Good Tested battery life: 2:35 	<ul style="list-style-type: none"> 1.6-GHz Intel Atom N270 10.2-inch wide screen 2.7 pounds
BOTTOM LINE: Faster than its netbook brethren, the S10 offers enough perks to make it a top pick for serious mobility.			
5 Samsung NC10 \$440 find.pcworld.com/62939	81 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 score: 35 Good Overall design: Good Tested battery life: 6:54 	<ul style="list-style-type: none"> 1.6-GHz Intel Atom N270 10.1-inch wide screen 2.8 pounds
BOTTOM LINE: This boxy Samsung netbook is a good first try, but a few design flaws in the mouse buttons might annoy you.			
6 Acer Aspire One \$349 find.pcworld.com/61821	81 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 score: 34 Good Overall design: Very Good Tested battery life: 2:16 	<ul style="list-style-type: none"> 1.6-GHz Intel Atom N270 8.9-inch wide screen 2.3 pounds
BOTTOM LINE: Considering its bargain price, the Aspire One is a steal—that is, until you realize you need the six-cell battery.			
7 HP Mini 2140 \$529 find.pcworld.com/62407	80 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 score: 26 Poor Overall design: Very Good Tested battery life: 6:50 	<ul style="list-style-type: none"> 1.6-GHz Intel Atom N270 10.1-inch wide screen 2.6 pounds
BOTTOM LINE: The HP Mini 2140 improves on the earlier Mini 2133 but retains the awkwardly positioned mouse buttons.			
8 Asus N10Jc \$849 find.pcworld.com/62408	77 GOOD	<ul style="list-style-type: none"> WorldBench 6 score: 36 Very Good Overall design: Very Good Tested battery life: 5:03 	<ul style="list-style-type: none"> 1.6-GHz Intel Atom N270 10.2-inch wide screen 3.5 pounds
BOTTOM LINE: As a mobile business machine, the N10Jc is a fantastic choice. As a netbook, however, it's a little pricey.			
9 HP Pavilion dv2 \$749 find.pcworld.com/62831	77 GOOD	<ul style="list-style-type: none"> WorldBench 6 score: 45 Superior Overall design: Very Good Tested battery life: 2:58 	<ul style="list-style-type: none"> 1.6-GHz Athlon Neo MV-40 12.1-inch wide screen 3.6 pounds
BOTTOM LINE: The dv2 carves out a solid niche between netbook and laptop, delivering good performance at a fair price.			
10 HP Mini 1000 \$540 find.pcworld.com/62940	75 GOOD	<ul style="list-style-type: none"> WorldBench 6 score: 30 Fair Overall design: Very Good Tested battery life: 2:47 	<ul style="list-style-type: none"> 1.6-GHz Intel Atom N270 10.2-inch wide screen 2.25 pounds
BOTTOM LINE: HP's consumer netbook features sleek lines, but some problems still hold the Mini 1000 back.			

CHART NOTE: Prices and ratings are as of 4/21/09. Battery life is expressed in hours:minutes.

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Compact Nikon SLR Packs a Swivel Screen

THE NIKON D5000 (\$850 with an 18mm-to-55mm f3.5-5.6G

VR lens) deviates from the nomenclature of its closest siblings, the D60 and the D90, but no matter: It combines many of the best aspects of both while adding its own extras to the mix.

The D5000's most distinctive feature is its 2.7-inch, 230,000-dot, tilt-and-swivel LCD screen—a first among Nikon cameras. The display provides surprising clarity given its image depth. It doesn't articulate and swing out; but it does flip out and down, and it can turn around and inward for protection. The camera's compact size

and light weight also enable users to make the most of unusual camera angles.

This sub-\$1000 model brings many of the features found in the \$1150 D90 to people who want a smaller, lighter, and less costly SLR. The D5000 isn't as rugged as the D90, and it's slightly larger and heavier than the D60. The camera has a pleasing balance to it, though, with logical button placement. I especially liked the five-way directional pad and the Live View button just above it. The D5000 has an 11-point autofocus system, same as the D90.

However, initially I was puzzled by the presence of



THE SUB-\$1000 NIKON D5000 is an appealing entry-level SLR.

two similarly labeled information buttons; I had to read the manual to tell them apart (one invokes the detailed on-screen settings and status display while the other changes the options within the status display). At least the manual is clearly presented and written.

Like the D60, this model lacks an integrated autofocus motor; that means you can use only AF-S mount lenses. Its battery is rated for about 500 shots, and that's about what I achieved in real-world use.

In the PC World Test Center's evaluation of image quality, photos looked a bit dark and muddied at automatic settings, but improved at manual settings. In my casual shooting outdoors, the manual settings were more consistent, but the Program mode setting often overexposed my images.

Live View worked well, but only after I set it to single-point focus. At the default focus, the camera frequently caught a blurry image.

The 12.3-megapixel D5000

uses an APS-C (DX)-size sensor. It has 19 automatic-exposure scene modes, and a maximum burst mode of 4 frames per second. It can take 5 minutes or 2GB of Motion JPEG video at 24 fps and up to 720p resolution, but regrettably it can't autofocus while shooting video.

Overall, the D5000 is well positioned to stand up to competitors. Its price should appeal to digital-SLR novices, and it offers a large enough boost in features over the D40 and D60 to entice users of those models who wish to improve on what they own now but still want to have a compact digital SLR. Just be aware that to maximize your results, you'll have to learn your way around the settings.

—Melissa J. Perenson

Eye-Fi SD Cards Enable Video Uploads, Too

LIKE OTHER EYE-FI cards, the newest versions can send photos to the Web—but now they can send video as well.

At 4GB, the \$100 Eye-Fi Explore Video (which inserts geotagging information) and the \$80 Eye-Fi Share Video

have double

their predecessors' capacity. I found the Explore easy to use, and its geotagging worked well in metro areas. But the Eye-Fi Manager software wouldn't display properly on my MSI Wind U100 netbook's small screen. And I didn't like how uploads start

instantly by default: Images not meant for public viewing could end up on the Web.

I appreciated the software's upload options (including SMS text alerts for upload progress), as well as the ability to copy to the PC and to the Web simultaneously.

—Melissa J. Perenson

73
GOOD

Explore Video/Share Video Eye-Fi

SD Cards make sending images and video to the Web simple and quick. List: \$100 (Explore), \$80 (Share) find.pcworld.com/62971



82
VERY GOOD

D5000 | Nikon

Feature-laden entry-level SLR takes better pictures at manual settings. Street: \$850

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PC Connection

"The price tag on the new UPS is \$99. While I'm not in the habit of endorsing products in this blog, if you're in the market for a workstation-class UPS, why not opt for the greener option?"

- Heather Clancy, ZDNet.com

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*Average savings are based on comparable competitive models, and are composed of two energy-saving features: An ultra-efficient electrical design, and the master/controlled outlets feature.

WebConnect Stick Offers Good Mobile Broadband

THE WEBCONNECT USB Laptop Stick is the first data device for T-Mobile's nascent 3G HSDPA network. The unit is slim and light—and with 8GB of storage space, it can transport data, too.

My experience with the software was mixed. Often I had to manually select the Broadband setting to override the Wi-Fi default, and I frequently saw a delay before it would connect to the 3G



T-MOBILE'S USB STICK promises wireless access everywhere.

network. And when I wandered from a major metropolitan area, it failed to connect to either 3G or EDGE.

In San Francisco, I enjoyed decent speeds of roughly 550 kilobits per second with downloads and 330 kbps on uploads. I also liked how the software resumed the broadband connection I last used.

—Melissa J. Perenson

78
GOOD

WebConnect USB Laptop Stick
T-Mobile

Slim wireless device travels easily, but its software is a mixed bag. List: \$50 with two-year contract; \$60 monthly service
find.pcworld.com/62942

DOWNLOAD THIS

Keep Safe While You Pursue Adventure

AT HOME AND on the road, you can be adventurous and still stay safe. One no-cost utility we found encrypts your data on USB drives, so the data remains secure wherever you go. A free GPS program helps you plan your exploits on your PC, allowing you to focus on the directions and the scenery during your trip. Finally, in a hilarious game demo, you can aim a gardening arsenal at invading zombies.

SafeHouse Explorer

The great thing about today's nearly universal connectivity is how easily you can share information, pictures, and other material with your family, business associates, and friends. The bad thing about it is how easily strangers can gain access to your data. That's especially true when you carry a lot on your USB flash drives, DVDs, laptops, and other portable media and devices. The free SafeHouse Explorer can secure your data on all media, protecting it from uninvited, prying eyes.

SafeHouse installs its own Explorer on any drive or media you indicate. The SafeHouse Explorer uses Windows Explorer's familiar branching tree structure and drag-and-drop functionality; the difference is that the folders (aka volumes) you create in SafeHouse Explorer are password-protected and use 256-bit Twofish encryption. (For stronger 448-bit encryption, purchase the \$60 Professional Edition.) find.pcworld.com/62949

—Sally Wiener Grotta and Daniel Grotta

EasyGPS

Ah, trip planning. If you'd like to set your itinerary (including points of interest, landmarks, and destinations) on your PC rather than struggling with your GPS device's touchscreen during the journey, consider EasyGPS—a friendly, free program. It works with numerous Eagle, Garmin, Lowrance, and Magellan GPS receiver models; unfortunately, it doesn't work with

TomTom devices, nor with the GPS receivers embedded in many popular cell phones.

EasyGPS did fine with the Garmin Nuvi 200 stand-alone GPS I used for testing; I successfully entered the model into the program and then simply plugged it into a USB port. Hikers and other on-foot travelers will love planning out their routes with EasyGPS, but it's also useful (and free) for anyone who uses GPS to drive from place to place. find.pcworld.com/62950

—Steve Horton

Plants vs. Zombies

The walking dead are coming for you—by way of your lawn. In *Plants vs. Zombies*, you defend your suburban homestead (and your delicious brains) by planting Peashooters, Potato Mines, Fume-Shrooms, and more. A cross between



DEFEND AGAINST THE undead in the kooky *Plants vs. Zombies*.

Resident Evil and Alice Greenfingers, this gleefully goofy game combines horticulture with pop culture—and gives you a healthy dose of humor with your zombie-shooting action.

Plants vs. Zombies starts you out with a strip of turf that you man with Peashooters. As the zombies advance into the ballistic vegetation, they fall apart amusingly. Should one penetrate your lines of defense, a lawnmower will mow it down, but even in the suburbs, the supply of lawnmowers is limited—and if the zombies ever reach your front door, you become an off-screen brain buffet. find.pcworld.com/62951

—Laura Blackwell ●

The Bose® QuietComfort® 2 Acoustic Noise Cancelling® Headphones.

Think of them as a peaceful getaway from the world around you. Whether it's the engine roar inside an airplane



cabin, the bustle of the city or the distractions in the office, Bose QuietComfort 2 headphones help them fade softly into the background with the flick of a switch. You can savor delicate musical

nuances without disturbing others. And when you're not listening to music, you can slip into a tranquil haven – where you can relax and enjoy peace and solitude. Clearly, these are no ordinary headphones. It's no exaggeration to say they're one of those things you have to experience to believe.

"It's as if someone behind your back reached out, found the volume control for the world, and turned it way, way, down," reports

TechnologyReview.com. Bose QC®2 headphones incorporate patented technology that electronically

identifies and dramatically reduces noise, while faithfully preserving the music, movie dialogue or tranquility you desire. We designed these headphones primarily for airplane travelers. But owners soon started telling us how much they enjoy using them in other places to reduce distractions around them. They're excellent for listening to music whether you're on the go, at home or in the office.

"Forget 'concertlike' comparisons; you'll think you're onstage with the band." That's what *Travel + Leisure Golf*



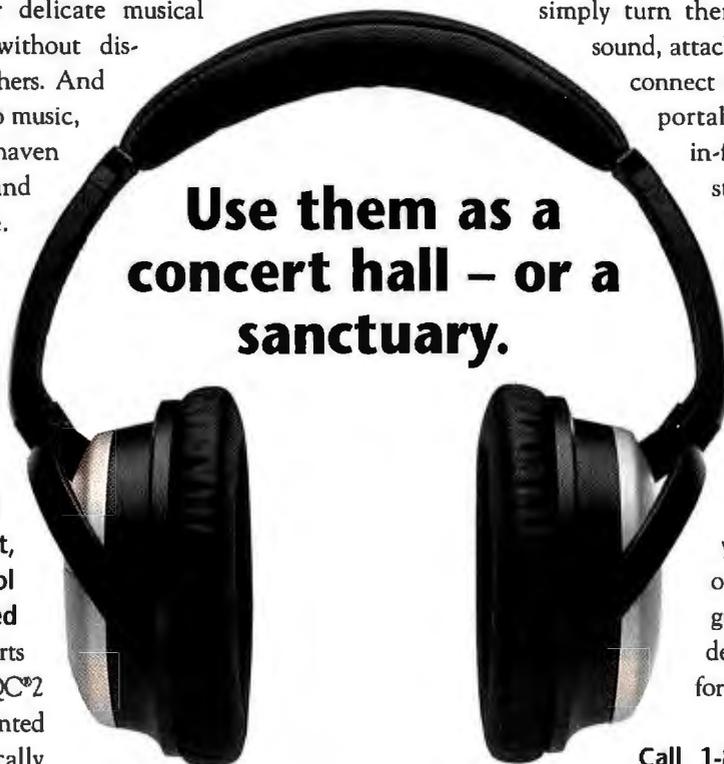
said when these headphones were first introduced. You'll relish the sound of a bass guitar. Or a flute. Or the delicate inflections of a singing voice. The audio is so clear you may find yourself discovering new subtleties in even your favorite music.

"The QuietComfort 2 lives up to its name, enveloping you in blissful sound in the utmost comfort. It's easy to forget they are on your head." That's what respected



columnist Rich Warren reports. To enjoy peace and tranquility, simply turn them on. To add Bose quality sound, attach the included audio cord and connect them to a laptop computer, portable CD/DVD/MP3 player, in-flight audio system or home stereo. They also offer a fold-flat design for easy storage in the slim carrying case.

Use them as a concert hall – or a sanctuary.



Try the QC2 headphones for yourself, risk free.

You really must experience them to believe it. Call toll free to try these headphones for 30 days. Use them on your next trip, in your home or at the office – satisfaction guaranteed. If you aren't delighted, simply return them for a full refund.

Call 1-800-901-0256, ext. Q7234 today. The QC2 headphones are available

directly from Bose – the most respected name in sound. When you call, ask about making 12 easy payments, with no interest charges from Bose.* And discover a very different kind of headphone – QuietComfort 2 Acoustic Noise Cancelling headphones.

**FREE
shipping
with your
order.**

To order or learn more:

1-800-901-0256, ext. Q7234
www.Bose.com/QC

BOSE®
Better sound through research®

*Bose payment plan available on orders of \$299-\$1500 paid by major credit card. Separate financing offers may be available for select products. See website for details. Down payment is 1/12 the product price plus applicable tax and shipping charges, charged when your order is shipped. Then, your credit card will be billed for 11 equal monthly installments beginning approximately one month from the date your order is shipped, with 0% APR and no interest charges from Bose. Credit card rules and interest may apply. U.S. residents only. Limit one active financing program per customer. ©2009 Bose Corporation. Patent rights issued and/or pending. The distinctive design of the headphone oval ring is a trademark of Bose Corporation. Financing and free shipping offers not to be combined with other offers or applied to previous purchases, and subject to change without notice. Risk free refers to 30-day trial only and does not include return shipping. Delivery is subject to product availability. Quotes reprinted with permission: Simson Garfinkel, *TechnologyReview.com*, 7/9/03; *Travel + Leisure Golf*, 7/03; Rich Warren, *News-Gazette*, 5/19/03.

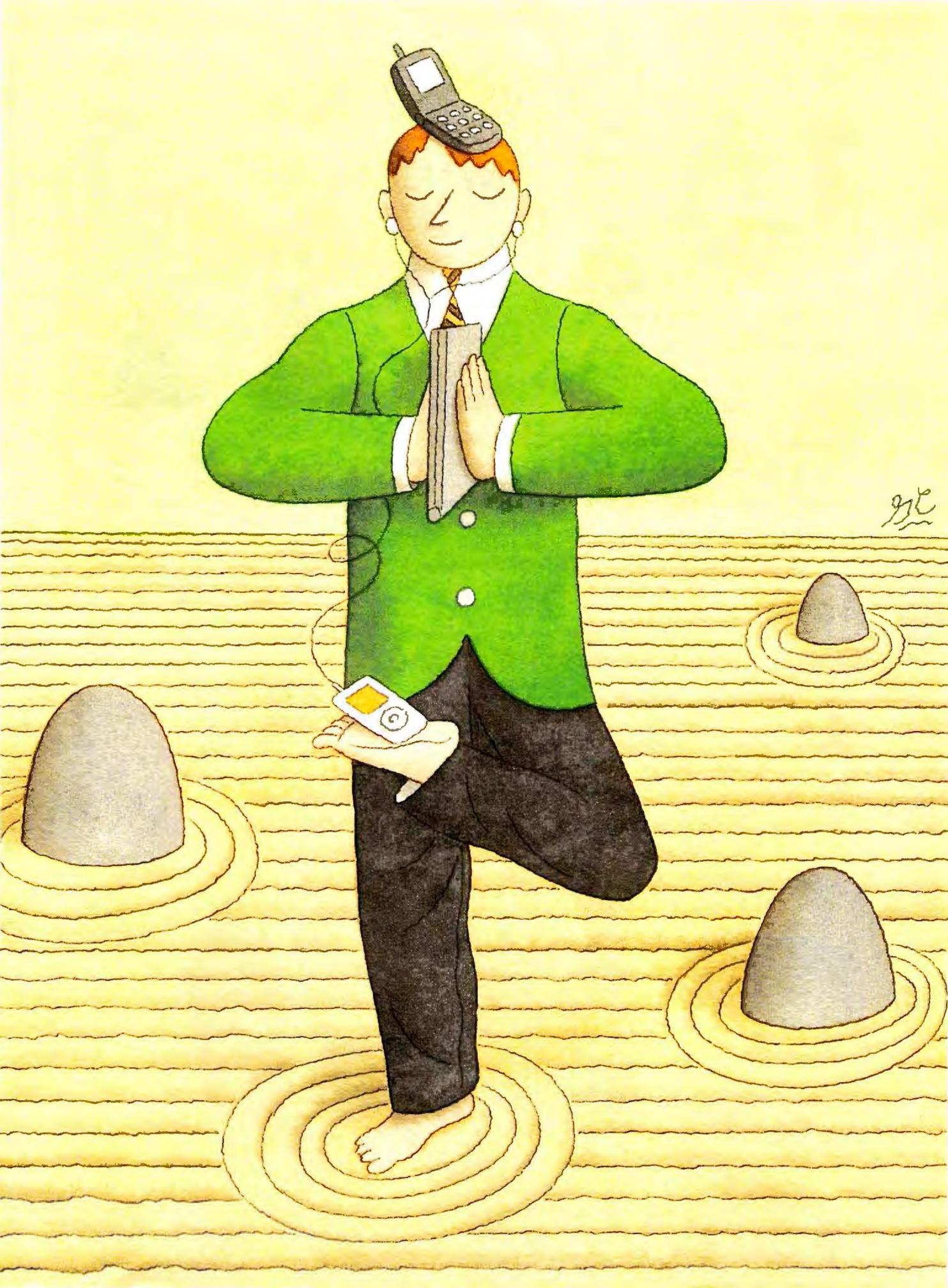
Simplify Your Life

(((BY ADAM PASH • ILLUSTRATIONS BY GREG CLARKE)))

**38 sanity-saving ways
to improve how you work and play—
and to make your whole life better.**

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TECHNOLOGY was supposed to make our lives easier—so why does it seem to do the opposite? If living in a perpetual state of tech overload has you frazzled, we have some solutions for you. These enlightening tips will show you how to travel smarter, save money on the things you need, conserve time and effort, eliminate PC headaches, clean up your workspace, secure your PC and your data, and manage your media. The path to the ultimate state of 21st-century Zen starts right here, right now.

Key to Tranquility

How profoundly will our tips simplify your life? Look for these icons throughout this guide to choose your calmness level, from 'relaxed' to 'transcendent.'



Relaxed

Make your worries melt away so you can focus clearly on important things.



Serene

Free yourself from distracting drudgery and gain a sense of abiding inner calm.



Transcendent

Achieve a higher level of tranquility, well on your way to modern nirvana.

Find the Best Seat on Any Plane



Effort: Minimal • **Cost:** Free

Even for seasoned travelers, long plane trips are a bear. The simple key to toughing one out is to get a good seat. SeatGuru (www.seatguru.com) is a free service that provides you with a detailed, color-coded layout of virtually any plane to help you find the seat with the best legroom and most convenient nearby power outlets while avoiding nonreclining seats stuck right next to the john. ***Bonus tip:** Not that we're advocating messing with your airline seat (or with other passengers), but if you're desperate to prevent the person in front from reclining into your precious space, try wedging a water bottle between your open tray and the seat in front of you.



Get Out of a Cell Phone Agreement



Effort: Moderate • **Cost:** Free

Not getting what you want from your current cell phone but reluctant to fork over the cash for the cancellation fee? Point your Web browser to Cellswapper (www.cellswapper.com), a site where you can pass your cell phone contract along to someone who wants it. Say, for example, that you get terrible service in your neck of the woods, but you have five months left on your contract. With Cellswapper, you can list your plan and reach someone who enjoys great service from that provider and would be happy to assume your contract for the remaining time. You get your freedom back, and the other person gets a good deal with no activation fees.



Travel Smart

Endure a Long Flight



Effort: Moderate

Cost: Free

All you want to do is sit back and watch a couple of movies on your 6-hour cross-country flight—but playing a DVD will drain your laptop battery before the second flick's final car chase even starts. The solution? Copy the movies to your hard drive to play them with less drain on your battery. Download HandBrake (find.pcworld.com/62914), use it to rip the DVD to the hard drive of your other computer, and then transfer that file to your portable for a little cinema on the go. If you have no interest in tweaking the file settings of your DVD rips, give bitRipper (www.bitripper.com) a try for simple, one-click rips.

Lighten Your Travel Bag



Effort: Moderate

Cost: Free

As if the long wait at baggage claim weren't reason enough to reduce your luggage to carry-on only, the extra fees for checking large bags (\$25 or so each) have most travelers strategically planning their necessities. If you struggle to achieve single-suitcase bliss, let One Bag (www.onebag.com) give you a hand. This site offers lots of useful packing tips, including suggestions for what to bring, tips on what you should pack it in, and methods for folding, rolling, and arranging your stuff so everything fits.

Stay Connected Everywhere



Effort: Moderate

Cost: \$29 (free trial available)

Sometimes getting work (or play) done when you're away from home hinges entirely on whether you can find a Wi-Fi hotspot. Fortunately you have a lot of options for finding Wi-Fi quickly. First, if you're sufficiently foresighted to check before you find yourself without a connection, JiWire's Wi-Fi Finder (find.pcworld.com/62920) indexes both free and for-a-fee hotspots all over the globe. If you're in more of a pinch, turn to your Wi-Fi-equipped smartphone and scout the neighborhood for a promising hotspot.

The best choice, though, may be to let your smartphone make the connection. PdaNet (www.junefabrics.com) is a \$29 app that works with Android, BlackBerry, iPhone, Palm OS, and Windows Mobile handsets to get your laptop online through either a USB or Bluetooth connection. Just make sure you have a high-usage data plan to avoid overage charges from your carrier.

Collaborate With a Group



Effort: Moderate

Cost: Free

Collaborating with colleagues can make your life simpler, but the setup and coordination involved can add complexity to your workflow. A few no-cost, online tools have stress-free collaboration options built right in, so you can get down to business. Google Apps (find.pcworld.com/62921) provides

tools for centralized e-mail (Gmail), calendar (Google Calendar), and document (Google Docs) collaboration with minimal setup. If you're looking for something that's a little more meeting-centric, check out Vyew (vyew.com/site), a free service (with upgrade options) that provides live online Web conferencing, whiteboards, file sharing, and more, inside its virtual meeting rooms.

Access Your Data From the Road



Effort: Moderate

Cost: Free

On trips, you might have a laptop with you at all times, but if you forget an important file or if you need to access anything else on your desktop computer while you're traveling, give the tried-and-true favorite LogMeIn (find.pcworld.com/62922) a try. With a free account, you can control your home computer remotely, from the comfort of any Web browser. With a LogMeIn Pro account, you get drag-and-drop file transfer for retrieving important items, file sync for ensuring unfettered access to critical data in the future, and a ton of other practical features.

Find a Good Restaurant on the Road



Effort: Minimal

Cost: Free

You already check the Yelp Web site when you're looking for good grub in your hometown. Get the same benefits on the road with the free »

Yelp application for the iPhone or iPod Touch (find.pcworld.com/62923). It will determine your current location and automatically tailor your results based on what's nearest to you. If you don't have access to the Internet, whip out your phone and text **Coffee** to Google (466453), including your location if necessary. You'll receive fewer options, but it's better than nothing.

Easy Ways to Save a Buck

Buy Event Tickets on the Cheap



Effort: Minimal

Cost: Varies by event

Ticketmaster may be the king of event tickets, but when Ticketmaster can't deliver the results you want, you still have plenty of options. Apart from the usual suspects like Craigslist and eBay, you would do well to check out Seat Karma (www.seatkarma.com),

a search site that scours all the popular ticket sellers and helps you find the best seats for the price at any venue for sporting events, concerts, and other shows, complete with seat maps.

Reduce Recurring Bills



Effort: Minimal

Cost: Free

If this bearish economy has you worried about your finances, it may ease your mind to remember one thing: The companies that provide your cable, Internet, and other monthly services are just as concerned as you are. That's good news for you.

The easiest way to reduce your monthly bills? Just ask. Give your cable company a call, explain that the service is too expensive for you right now, and listen as the reps fall all over themselves to keep your business. Do your homework, too: If a competing company has a better deal, tell your current provider so. Don't worry if you have no luck the first time. Try again later, and the next person you talk to may be more ready

to compromise. And if your current provider still won't play ball, you may be better off going with that other company's promotional offer after all.

While you're at it, try the same approach with your credit card debt. Just as telecom service providers are struggling to retain their customers, credit card companies are bending over backward to keep their debtors from going into bankruptcy. If excessive credit card balances have your back up against a wall, phone your creditors and tell them so. In the end, you could walk away with as much as 70 percent forgiveness on your debt, for the low, low price of leveling with the credit card company about your financial situation.

Find Out If a Company Is in Financial Trouble



Effort: Minimal

Cost: Free

Whether you're already heavily invested in the market or you're interested in riding undervalued stocks up from the bottom, these are volatile

Consolidate Your Online Identities



Effort: Moderate • **Cost:** Free

Between your blog, Facebook, Twitter, and—if you're really popular—your Wikipedia page, you probably find it tough to give someone a single URL that says "Here's me." Web site UnHub (unhub.com) helps to solve that problem. The service allows you to create a very simple home page with a persistent profile bar that links to every site that defines you on the Web. No matter which of your pages your buddies visit, your UnHub profile bar stays on top so that your visitors can easily move on to your next online hangout. Best of all, you don't have to update each of your sites every time you add a new social network to your list.



THROUGH THE CONVENIENT UnHub bar, online friends and visitors can easily jump from one to another of your Web site profiles and social network pages.

times, and hardly any company is out of trouble yet. Before investing, use the power of the Internet to get a sense of which companies are near collapse. Set up a Google Alert (google.com/alerts) for any company you're interested in, and you will receive automatic notifications whenever Google spots a news story or blog post about that company. That way you'll never be the last to know when your stock values are in trouble.

In addition, you might keep your eye on advocacy blogs like The Consumerist (consumerist.com) to get a sense of how customers feel about the company.

Save Money With Online Banking



Effort: Minimal
Cost: Nominal fee
(depends on bank)

If you haven't done so already, set up automatic bill payment through your bank online—and while you're there, be sure to take advantage of any rewards programs or money-saving tools that your bank makes available, such as Bank of America's Keep the Change savings program (find.pcworld.com/62918).

Some of the businesses you deal with might not support online payments through your bank, but most banks offer the option of automatically mailing a check to anyone on a recurring schedule. So even small monthly payments for local services can become a stress-free, automated affair.

Find Free Drinks



Effort: Minimal
Cost: Free
(plus the cost of drinks)

Shelling out \$10 for a cocktail in any major urban center makes a night out more hassle than it's worth. But you can find good, cheap drinks without scouring every dive in town: MyOpenBar (myopenbar.com) rounds up free-drink promotions in major cities across the United States. It even gives reviews of the watering hole in question and what drinks it offers, so you can tailor your visits to your libation of choice. >>

Safeguard Your Children

Parents need all the peace of mind they can get. Here are two simple ways to banish some of the worries you might have about your computer-addicted kids.

Protect Your Children Online



Effort: Moderate • **Cost:** Free

You can't spend your days and nights staring over your son's or daughter's shoulders, so let some simple software do the job for you. The Internet is loaded with search engines designed to provide a child-friendly interface along with—more important—child-friendly search results. Search site KidRex (www.kidrex.org), for example, employs both Google SafeSearch and its own database of inappropriate content and keywords to keep things clean. Free Web browser KidZui (find.pcworld.com/62919), in contrast, is a complete kid-oriented browser, engaging children with a fun interface and protecting them with all sorts of built-in safeguards.



THE KIDZUI BROWSER offers a friendly interface and child-safe searches.

Limit Your Kids' Game Time



Effort: Moderate • **Cost:** \$40

Protecting your kids from the dark corners of the Internet may seem like a breeze compared with the daunting task of limiting their time racking up achievement after achievement on their Xbox 360. To

that end, we suggest looking for a little assistance from Time Machine (find.pcworld.com/62917), a handy gadget that serves as a vigilant sentry over your children's time in front of the television. Time Machine transforms the video game console into an arcade-style machine, requiring tokens that allow kids to play for a predefined length of time.



WANT TO PLAY more? Insert one token, please.

When the allotment runs out, Time Machine shuts off the game. How's that for effective?



Unify Your Phone Numbers



Effort: Minimal • **Cost:** Free (at press time)

Remember the simple days when landlines reigned supreme, and anyone who wanted to get ahold of you had just one number to dial? Today you likely have a personal cell phone, your work cell, and an additional landline at each location. Suddenly, getting in touch has become much more complicated. With Google's latest offering, Google Voice (www.google.com/voice), that's about to change. The service eliminates the multiple-phone problem by creating one central number that rings all of your phones—and that's just the tip of the iceberg. Google Voice also supports advanced call-routing rules, transcribes your voicemail, and even forwards a copy of it to your e-mail inbox.

We've been using Google Voice for more than a year (since it was known as Grand Central), but it's currently in closed beta. If you don't want to wait for the Google Voice beta to open, you can significantly boost your voicemail prowess in the meantime with YouMail (www.youmail.com).

Simplify Your Online Life

Reduce Your Online Profile to Safeguard Your Privacy



Effort: Moderate

Cost: Free

The Internet is an amazing venue for sharing your life with family and friends, but if you don't pay attention to what you're sharing, it can turn into a privacy nightmare. You can do a lot to protect yourself. If you're on Facebook, for example, get to know the privacy settings. You can determine what you broadcast to the world; and when used wisely, the settings provide serious control over what details the site exposes. One great setting to tweak is the Search setting, which lets you restrict how much information people can see about you before you add them as friends. (For more on Facebook set-

tings, see *Privacy Watch*, page 36.)

If you've tried your hand at a lot of social networks over the years, it's a good idea to go back and delete old, neglected accounts that still show up in your Google results but don't satisfactorily portray the professional demeanor you've worked so hard to cultivate.

Finally, set up a simple nameplate site to take an active role in determining what people see when they dig for dirt on you. One worthy option is a Google Profile (google.com/profiles), which can give you a leg up in shaping how others perceive you on the Web (though in our tests, it didn't rank as highly in our search results as we had hoped).

Update Your Blog



Effort: Minimal

Cost: Free

It's rare to find a piece of Microsoft software that outperforms the competition where the Internet is

involved, but if you love to blog, you can't find a better companion than Windows Live Writer (find.pcworld.com/62925). The handy application plugs into popular blogging platforms such as Blogger and WordPress, streamlining your writing process with a built-in spelling checker, image editing tools, post previews, and more. It also boasts plug-in support for integrating with your Flickr account, with Twitter, and with the popular social news site Digg.

Secure Your Passwords



Effort: Moderate

Cost: Free

If you use a different password for every online account you own (as well you should), your head is probably about to explode. More likely, though, you use the same one or two passwords for all those sites, which is a security horror story waiting to happen. To calm your mind and to main-

tain security, use a password manager.

KeePass Password Safe (find.pcworld.com/62926) is a free, open-source password manager that tracks all your Web site passwords, credit card numbers, ID numbers, software registration codes, and other details. It can autofill your user name and password through your browser whenever you visit a site where you have an account. Perhaps best of all, the tool can autogenerate highly secure random passwords for new accounts, and then remember them for you. All you need to recall is the one password that unlocks KeePass's power.

Make Twitter More Manageable



Effort: Minimal
Cost: Free

Everyone is talking about Twitter these days, but despite the service's insane popularity, its chaotic default Web interface doesn't do much to simplify working with it. If you'd like to manage your Twitter experience better, try the free Twitter client **TweetDeck** (find.pcworld.com/62924). It displays your friends' tweets, corrals your mentions, tracks searches, and has tools for shortening links, posting pictures, and more.

If you want to keep an eye on what the Twittosphere has to say but you don't want to check it constantly, consider signing up with **TweetBeep** (tweetbeep.com),



THE FREE BELVEDERE utility sorts files into folders by their extension, automatically.

a service that sends you a daily digest of Twitter posts matching any number of search criteria you select. It's all the tweets without all the distraction.

Quiet Facebook's Alerts



Effort: Minimal
Cost: Free

Apart from recent redesign complaints, Facebook is more popular than ever, boasting over 100 million users active at the site every day. That's great news for Facebook, but it also means that the social networking site is more of a productivity sink than ever. If your inbox is full of tagged photo notifications, friend requests, and status replies, head over to Facebook's Notifications settings to set a more manageable flow. If you still want to receive all the

alerts but you don't want them cluttering your inbox, check out **NutshellMail** (nutshellmail.com), a free service that sends you a digest of your Facebook activity on a schedule you determine.

Make an Announcement to a Group



Effort: Minimal
Cost: Free

E-mail, Facebook, and Twitter work wonders when you simply need to send out a quick announcement to your friends, but for instantly getting the message out to other groups, they're not always the best. The free service **Tatango** (tatango.com) is a great alternative that enables you to send mass SMS or voice messages for instant group communication where you know your contacts will get it—on their phones.

Get Organized

Clean Up Windows



Effort: Minimal
Cost: Free

Admit it: You really have to get serious about organizing your PC. Let's start with your browser's download folder. For Firefox users, the **Automatic Save Folder** extension (find.pcworld.com/62931) is a free add-on that auto- >>

Take Terrific Pics, Easily



Effort: Moderate • **Cost:** Free

You don't need a \$1000 camera to get killer results. With a few tried-and-true tricks up your sleeve, you'll notice a dramatic improvement in the quality of your pictures. For starters, if you like snapping photos of your friends, try taking candid photos for a more natural outcome rather than posing your subjects. While you're at it, consider applying the rule of thirds when composing your photographs. Imagine drawing two lines horizontally and vertically over your photograph so that you have nine equal boxes, and then try placing your subject or focal point at an intersection of those lines. You're not limited to this rule, of course, and the great thing about digital cameras is that all your experimentation costs you nothing, so go nuts!





Unclutter Your Home Office



Effort: Initially high, minimal over time • **Cost:** \$350 (at press time)

Your home office is a haven for all your pet projects and personal finances, but it's useless if you can't find anything under a giant stack of papers. To remedy that, take a two-step approach: Toss out all the junk, and then scan and file or shred the rest.

An intelligent sheet-fed scanner such as the Fujitsu ScanSnap S1500 can handle large stacks of paper in a range of sizes and turn any text on a page into a searchable PDF file on your PC. Just gather up all the papers that are multiplying on your desk, toss them into the scanner, and press the scan button. The next time you need to find a particular receipt or invoice, for instance, simply search your computer (see "Find Any File on Your PC," below). You get the surface of your desk back, and you may never have to rummage through a creaky file cabinet again.

matically saves downloads into user-specified folders based on file extension or on the site the file came from. To obtain similar functionality for your entire Windows PC, try Belvedere (lifehacker.com/341950), a free app that I personally created to bring the same automatic file sorting to any folder. And since you're cleaning, here's one more tip: You can dramatically speed your PC's boot time by removing any unneeded startup apps.

Find Any File on Your PC



Effort: Moderate

Cost: Free

Even if you have organized every last file on your PC, you're still bound to lose something in the digital haystack every now and again. You could go the obvious desktop-search route with Google Desktop (desktop.google.com), or if you're running Vista you can just use the built-in Instant

Search functionality. But we're going to stray from the beaten path a little and suggest Everything (find.pcworld.com/62932), a free, no-nonsense desktop search app that finds files on your desktop as you type, with lightning speed.

Untangle Your Cables



Effort: Moderate

Cost: \$10

Have you followed the tip above to clear away paper clutter? Great. Your desk would look perfect now if not for the ugly cables running from every gadget you own to its respective power supply. IKEA sells an inexpensive cord basket that's ideal for hiding your cables (find.pcworld.com/62929). Just screw it in, unplug your gear, and put everything back together one cord at a time, tucking each cable into the basket.

Similarly, you can set up a charging station for your cell phone, MP3 player,

and other gadgets, either by using your own ingenuity or by purchasing a dedicated product like the Kingston Charging Valet (find.pcworld.com/62930).

Simplify and Secure Your Technology

Manage All Your E-Mail From One Interface



Effort: Minimal

Cost: Free

Most folks have accumulated a handful of e-mail addresses that they are not prepared to stop checking altogether. If you're a Gmail user, Google's e-mail app is particularly adept at consolidating several e-mail addresses so that you don't have to log in to five >>

A hand is shown pointing at a glowing green button on the lid of a laptop. The button has the words 'My PC' written on it in a stylized font. The background is a blurred image of a computer screen.

GoToMyPC:
It's this easy.

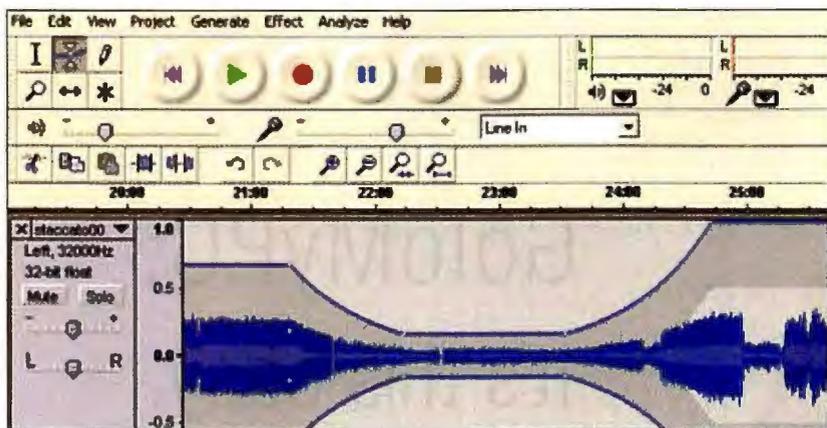
GoToMyPC lets you instantly access your home or office computer from any Internet connection. It sets up automatically, is as secure as online banking and comes with free U.S.-based customer service available 24/7. There's no hardware needed, so just click and take your office with you wherever you go.

FREE 30-Day Trial

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by **CITRIX**



THE FREE BUT powerful Audacity program can help convert your analog audio into digital files.

different accounts every day. You can either set up your other accounts to forward all incoming mail to your Gmail account or use Gmail's "Get mail from other accounts" feature to automatically import every message you receive to your centralized inbox. Gmail even permits you to use it to send e-mail on behalf of your other, non-Gmail addresses.

If you prefer to do things the Microsoft way, Microsoft Windows Live Hotmail offers much of the same functionality as Gmail, but in an interface that's the spitting image of Outlook.

Sync Multiple PCs and Phones



Effort: Moderate

Cost: Free

If you have a smartphone, a desktop PC, and a laptop or netbook, that amounts to at least three different places where you might want to add an appointment to your calendar, edit your contacts, or access an important file without worrying about keeping all your data in sync. Google to the rescue again! If you're managing your days in Google Calendar and keeping track of your contacts in Google's Contacts application, Google Mobile Sync (find.pcworld.com/62927) provides two-way, wireless synchronization of your calendar and contacts. Microsoft Outlook users should check out Google Calendar Sync (find.pcworld.com/62928) for the same two-way calendar sync. Finally, if syncing up a folder's worth of files is important to you, look at Dropbox (www.getdropbox.com), a free service that

syncs up to 2GB of data between any number of computers, the Internet, and even your iPhone or iPod Touch.

Wipe an Old Hard Drive



Effort: Moderate

Cost: Free

Nothing can complicate your life quite as thoroughly as identity theft. So before you sell your old PC or return a bum hard drive, keep one important fact in mind: Deleting files doesn't guarantee they're gone for good. To erase your hard drive properly, you can't just toss the files into the Recycle Bin and empty it—you need to overwrite the data on the disks as well. We could get all technical at this point, but instead we'll just point you to Darik's Boot and Nuke (www.dban.org), a free boot-disk

utility that securely wipes any hard drive using any one of several tried-and-true methods. Once DBAN is done with your disk, you can be sure the data is gone.

Control Your Entertainment

Digitize All Your Analog Media



Effort: High

Cost: Free to \$60

We understand that you have all sorts of nostalgia for your collection of analog media, but if you want to free up space by ditching your old turntables and tape players, or if you need to create a digital archive for posterity, we've got you covered. First, you can convert your old vinyl records or cassettes on the cheap by plugging their respective players into your PC's audio-in port and capturing the sound with the free, cross-platform Audacity (find.pcworld.com/62933). If VHS digitization is the capability you seek, you'll have to make a purchase: Either you can buy a DVD recorder and use your old VCR as an input, or you can buy and install a video-capture card (such as the Hauppauge WinTV HVR-1800 MCE) for your computer, and then connect your VCR to it.

For more details on converting >>>



POD TO PC, true to its name, transfers music from your iPod or iPhone to your computer.



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Now with FTP!



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Now you can automatically compare, synchronize, and back up your emails, precious family photos, contacts, MP3s, financial documents, and other important files locally - between desktops, laptops, servers, and external drives, as well as through FTP.

GoodSync Version 7 will:

- ✓ Automatically synchronize and backup all your data.
- ✓ Prevent file deletion and data loss, remove duplicates.
- ✓ Organize/transfer files between multiple devices.
- ✓ Sync and back up files locally or through FTP.
- ✓ Help you achieve complete peace of mind!

GoodSync's powerful technology is years ahead of the pack. Excellent reviews by industry experts and customers alike solidify **GoodSync** as a leader in file backup and synchronization.

**PC World Readers
Download GoodSync Today
It's FREE!**



GoodSync
Get in Sync with GoodSync

www.GoodSync.com/PCW

your old, analog media to digital files, consult Jackson West's complete how-to guide at find.pcworld.com/62935.

Eliminate DRM Hassles



Effort: Minimal

Cost: \$40

The entertainment industry is desperate to control how you use your digital media, but you just want to enjoy what you've paid for, wherever you happen to be. In many cases, removing DRM from media is a breeze. If you have a lot of music to convert, DRM Dumpster (find.pcworld.com/62934) automates the process by using a rewritable CD. Alternatively, check out Tunebite (www.tunebite.com), another commercial app that strips DRM from virtually any piece of media you throw its way. Don't want to pay? Try the oldest trick in the book: Burn the DRM-protected file to a CD and then rip it as an MP3.

Clean Up Your Music's Metadata



Effort: Minimal

Cost: Free

Because of its close ties with the iPod and iPhone, iTunes remains one of the most popular media players around. Even so, it could be a lot better. To that end, give TuneUp Companion (find.pcworld.com/62936) a try. This free

download automatically scans, identifies, and updates your music's metadata with appropriate album art, plus song, artist, and album info—making it easier for you to find and build playlists and enjoy some high-quality album-art eye candy.

Sync iTunes Across Multiple PCs



Effort: Moderate

Cost: \$29

You would like your iTunes library to follow you wherever you go, but iTunes isn't all that obliging. In fact, you might say that Apple's player is downright hostile to the idea. That's where SuperSync (supersync.com) comes in. This commercial app automatically syncs your iTunes library across multiple computers—even over the Internet. It even syncs videos, playlists, play counts, and pretty much anything else.

Get Tunes Off Your iPod



Effort: Minimal

Cost: Free

With the largest-capacity iPod today weighing in at a whopping 120GB, Apple is proud to point out that you can fit up to 30,000 songs on the device. Unfortunately the Apple folks have no interest in helping you get any of the songs off your iPod. Simply put, Apple wants to discourage any method of sharing music that doesn't

involve your taking a trip to the iTunes Music Store. But you have plenty of legitimate reasons to move music from your iPod to your PC—which is why we're happy to point you toward Pod to PC (podtopc.com) and Pod to Mac (podtomac.com), free tools that quickly and easily transfer music from any iPod or iPhone to any computer.

Share Videos and Pictures From the Road



Effort: Moderate

Cost: Free (apps); \$50 to \$100 (Eye-Fi)

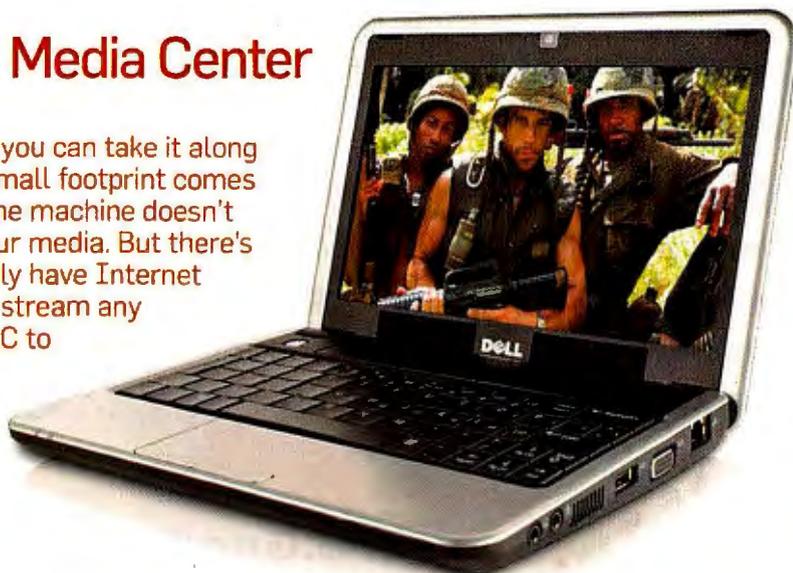
If you're a fan of the photo-sharing site Flickr, grab the Flickr Uploadr (www.flickr.com/tools), a free app that makes uploading, tagging, and sharing any picture or video via Flickr a breeze. If instead you're partial to Google's desktop image-management tool, Picasa, that program sports simple tools for sharing your photos via your Gmail account or online with Picasa Web Albums (picasaweb.google.com). Ready to kick your photo sharing up another notch? Consider Eye-Fi (www.eye.fi): It looks like any other SD memory card, but after you've walked through its simple configuration wizard, your Eye-Fi card wirelessly uploads any picture or video from your camera to your PC, to Flickr, or even to YouTube. ●

Use Your Netbook as a Media Center



Effort: Moderate • **Cost:** Free

Your netbook is tiny enough that you can take it along wherever you go, but with that small footprint comes similarly small capacity—meaning that the machine doesn't have a ton of room for you to store all your media. But there's a silver lining. Assuming that you generally have Internet access (it is a netbook, after all), you can stream any media from your more capacious home PC to your netbook with Orb (www.orb.com), a free application that broadcasts any media on your computer to virtually any other device—including your Wii, your iPhone, and, yes, your netbook.



JUNE/
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AMD
Turion™ X2

64

ATI
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GRAPHICS



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(LX.PAW0X.142)

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- 160°/160° horizontal/vertical viewing angles
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- 5ms response time
- Tilt adjustment
- Three-year limited warranty²
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Acer B193W bdmh

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- 19" wide-screen TFT LCD
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- 2000:1 dynamic contrast ratio
- 160°/160° horizontal/vertical viewing angles
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- VGA, DVI (HDCP) signal connectors
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Monitor sold separately



Monitor sold separately

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- 5ms response time
- Tilt adjustment
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Acer recommends Windows Vista® Business.

AMD
Athlon™ X2

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- ATI Radeon™ HD 3200 graphics
- 802.11b/g/Draft-N WLAN, gigabit LAN, V.92 modem, webcam
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- One-year limited warranty²

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Quality is built into every notebook PC Acer makes. The standard limited warranty² includes hardware technical support via toll-free phone plus a concurrent International Traveler's Warranty for travel outside the U.S. and Canada. For extra protection – and peace of mind – consider a warranty extension or, even better, the Total Protection Upgrade. This plan covers the cost of a replacement unit if, as determined by Acer, your covered notebook cannot be repaired.

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Each of these upgrades prepays freight from the Acer repair depot and excludes extension of the International Traveler's Warranty.

¹ When referring to storage capacity, GB stands for one billion bytes and MB stands for one million bytes. Some utilities may indicate varying storage capacities. Total user-accessible capacity may vary depending on operating environments.

² For a free copy of the standard limited warranty end-users should see a reseller where Acer products are sold or write to Acer America Corporation, Warranty Department, P.O. Box 6137, Temple, TX 76703.

³ Genuine Windows® XP Professional can be installed in place of, not in addition to, Genuine Windows Vista® Business.

⁴ The 60-day trial of Microsoft® Office Ready is available with Genuine Windows Vista® Business only, not with Genuine Windows® XP Professional.

⁵ For next-business-day response customer call must be received by 4:00 p.m. Central Time. Next-business-day response does not apply to service calls missed for reasons outside the control of Acer, such as airport closures or parts shortages. Next-business-day response and on-site service applies to the continental U.S. and Canada only and may not be available in all locations. In those areas where on-site service is provided, a technician will be dispatched, if necessary, following efforts to resolve the problem by telephone support.

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shoot and save



★ BY PAUL JASPER, BEN LONG, AND TIM MOYNIHAN
PHOTOGRAPHS BY ROBERT CARDIN

What matters most to you in a camera:
Picture quality? Battery life? Great design?
Whatever your priorities may be, we can match
you up with a near-\$200 camera you'll love. »

they say

you get what you pay for, and \$200 certainly isn't peanuts. When it comes to new point-and-shoot digital cameras, however, that price represents a line in the sand: Below that mark are generally bare-bones entry-level models, while hovering around \$200 are a growing number of feature-rich cameras that offer great bang for the buck.

You can now find a few models in this price range with wide-angle lenses; some have big, 3-inch LCD screens; and others come with handy features such as the ability to use AA batteries for power. We looked at ten new cameras selling in the \$200 range and rated them in several categories, including best image quality, best battery life, best features, and best overall value. Although we tried to test all the notable

Top 10 Bargain Point-and-Shoot Digital Cameras

Many of the models in the new 2009 crop of cameras in the \$200 range offer some great features for the price-conscious.

MODEL	PCW Rating	Performance	Features and specifications	Bottom line
BEST BUY 1 Panasonic Lumix DMC-FS25 \$250 find.pcworld.com/62989	80 VERY GOOD	<ul style="list-style-type: none"> Image quality: Very Good Overall design: Very Good Battery life: Very Good Number of shots: 320 	<ul style="list-style-type: none"> 12.1 megapixels 5X optical zoom (28-145mm) 18 scene modes 2.3 by 3.8 by 0.9 inches 	The Lumix DMC-FS25 serves up a wide-angle lens, fun features, a huge LCD screen, and long battery life for the price.
2 Nikon Coolpix L20 \$130 find.pcworld.com/62990	78 GOOD	<ul style="list-style-type: none"> Image quality: Very Good Overall design: Very Good Battery life: Good Number of shots: 230 	<ul style="list-style-type: none"> 10.34 megapixels 3.6X optical zoom (38-136mm) 18 scene modes 2.4 by 3.8 by 1.2 inches 	For value, ease of use, looks, and image quality, the Coolpix L20 is one of the best bargain point-and-shoots we've seen.
3 Pentax Optio P70 \$180 find.pcworld.com/62991	77 GOOD	<ul style="list-style-type: none"> Image quality: Good Overall design: Very Good Battery life: Good Number of shots: 217 	<ul style="list-style-type: none"> 12 megapixels 4X optical zoom (27.5-110mm) 22 scene modes 3.8 by 2.1 by 0.8 inches 	The Optio P70 lacks a few frills, but its wide-angle lens and HD video mode are great features for a thin, stylish point-and-shoot.
4 Canon PowerShot A1100 IS \$200 find.pcworld.com/62992	77 GOOD	<ul style="list-style-type: none"> Image quality: Very Good Overall design: Good Battery life: Fair Number of shots: 146 	<ul style="list-style-type: none"> 12.1 megapixels 4X optical zoom (35-140mm) 15 scene modes 3.8 by 2.5 by 1.2 inches 	A very good value for the price, with better image quality than that of many more-expensive cameras and a nice feature set.
5 Sony Cyber-shot DSC-W230 \$200 find.pcworld.com/62993	77 GOOD	<ul style="list-style-type: none"> Image quality: Good Overall design: Good Battery life: Very Good Number of shots: 310 	<ul style="list-style-type: none"> 12.1 megapixels 4X optical zoom (30-120mm) 13 scene modes 3.7 by 2.3 by 0.8 inches 	The slick Cyber-shot DSC-W230 has a great LCD and neat in-camera features, but image quality and stabilization could be better.
6 Panasonic Lumix DMC-LS85 \$120 find.pcworld.com/62994	77 GOOD	<ul style="list-style-type: none"> Image quality: Good Overall design: Good Battery life: Good Number of shots: 280 	<ul style="list-style-type: none"> 8.1 megapixels 4X optical zoom (33-132mm) 21 scene modes 2.5 by 3.9 by 1.2 inches 	For a bargain-bin model, the Lumix DMC-LS85 offers nice stabilization, good images, a Leica lens, and useful scene modes.
7 Olympus FE-5010 \$190 find.pcworld.com/62995	75 GOOD	<ul style="list-style-type: none"> Image quality: Good Overall design: Good Battery life: Good Number of shots: 217 	<ul style="list-style-type: none"> 12 megapixels 5X optical zoom (36-180mm) 14 scene modes 3.8 by 2.2 by 0.8 inches 	The FE-5010 takes good pictures and is easy to use. If that's all you're looking for in a camera, you'll likely be satisfied.
8 Pentax Optio E70 \$120 find.pcworld.com/62996	75 GOOD	<ul style="list-style-type: none"> Image quality: Good Overall design: Good Battery life: Good Number of shots: 285 	<ul style="list-style-type: none"> 10 megapixels 3X optical zoom (35-105mm) 19 scene modes 3.8 by 2.4 by 0.9 inches 	This solid entry-level camera has easy controls and nice picture modes, but weak spots in sharpness and portrait abilities.
9 Canon PowerShot A480 \$130 find.pcworld.com/62997	74 GOOD	<ul style="list-style-type: none"> Image quality: Very Good Overall design: Fair Battery life: Good Number of shots: 278 	<ul style="list-style-type: none"> 10 megapixels 3.3X optical zoom (37-122mm) 12 scene modes 3.8 by 2.4 by 1.2 inches 	The super-entry-level PowerShot A480 offers good image quality, but the lack of any stabilization is a major drawback.
10 Fujifilm Finepix Z30 \$180 find.pcworld.com/62998	74 GOOD	<ul style="list-style-type: none"> Image quality: Very Good Overall design: Fair Battery life: Good Number of shots: 283 	<ul style="list-style-type: none"> 10 megapixels 3X optical zoom (35-105mm) 13 scene modes 3.6 by 2.3 by 1.0 inches 	The fashion-first Finepix Z30 backs up its looks with sharp images, but its design and rubber buttons won't please everyone.

CHART NOTE: Prices and ratings are as of 5/19/09.

new bargain cameras for this roundup, two exciting models weren't available in time: The \$200 Kodak EasyShare Z915 packs a 10X optical zoom, and the \$200 Samsung SL620 looks sharp, with an appealing range of features. As for the cameras that we were able to test, here's a close look at our overall top four picks, plus our choices in various key categories of our testing.

★ BEST OVERALL

- 1 Panasonic Lumix DMC-FS25
- 2 Nikon Coolpix L20
- 3 Pentax Optio P70
- 4 Canon PowerShot A1100 IS

For overall bang for the buck, Panasonic's Lumix DMC-FS25 shines due to great battery life (320 shots on a single charge of its lithium ion battery), a 29mm film equivalent on the wide-angle end of its 5X-optical-zoom lens, optical image stabilization, and the third-best picture quality here. It finished in the top three of most categories (image quality, widest-angle lens, battery life, and LCD size), making it our number-one pick for the best overall performer.

It does cost a tad more: Its suggested retail price is \$250, though we were able to find it online for about \$200. If the extra \$50 breaks your budget, the Nikon Coolpix L20, which is just \$130, earned the best overall image-quality score in this roundup.

Rounding out our overall picks among bargain-bin point-and-shoots are the Pentax Optio P70 and the 12.1-megapixel Canon PowerShot A1100 IS. The \$180 Pentax has an amazing feature set for a camera in this price range: a 720p HD video mode, the widest-angle lens of the lot (a 27.5mm film equivalent on the wide end), and a compact design that makes it look fancier than most \$200 cameras we've seen. The Canon boasts excellent image quality as well as optical image stabilization and AA-battery friendliness for the \$200 asking price.

Panasonic Lumix DMC-FS25

BEST BUY Offering a wide-angle Leica lens, very good image quality, a big LCD, and excellent battery life, the Panasonic Lumix DMC-FS25 is a great, well-rounded



Panasonic DMC-FS25

This Panasonic model provides the best blend of features in the group.



PLUS: A huge, 3-inch LCD dominates the back of the DMC-FS25.



Nikon Coolpix L20

It's hard to find an easier camera to use than Nikon's point-and-shoot.



PLUS: A roomy, 3-inch LCD complements this model's stellar image quality.

pocket camera. It costs a shade more than the competition (\$250 list), but we've seen it available on the Web for closer to \$200.

A few distinguishing characteristics make it a phenomenal buy at \$200, as well as a great value for \$250. One of them is Panasonic's Intelligent Auto mode, six features—optical image stabilization, ISO optimization, automatic scene selection, backlight correction, red-eye correction, and face detection—that work in tandem.

Intelligent Auto did a good job of selecting the right settings in our informal tests. The optical image stabilization kept images crisp both when zoomed in to the max and when we shook the camera dramatically. Another key draw is its wide-angle chops, thanks to its 5X-optical-zoom Leica lens that reaches from 29mm to 145mm.

A great feature, especially for a camera in this price range, is the AF Tracking mode, which lets you lock in on a moving subject and keep it in focus as the subject (or the photographer) moves around—very helpful for those who want to shoot sports scenes.

Another nice touch: It offers some unusual selections among its 21 scene modes, such as Pinhole (which mimics the effects of a pinhole camera), Film Grain (which applies a gritty black-and-white filter), and Photo Frame (which puts teen-centric, party-time borders around your shots).

Other features include a burst mode that shoots about two images per second, manual and preset white balance selections, and seven "color" modes that apply effects such as sepia tone and vivid colors.

In PC World Test Center jury evaluations, the Lumix DMC-FS25 earned one of the best image-quality scores in our group of about a dozen \$200-range cameras. Color accuracy, exposure quality with the flash turned on, and image sharpness were all notable strong suits, earning it an overall image-quality score of Very Good.

The Lumix DMC-FS25 also netted 320 shots on a single charge of its lithium ion battery, for a battery life score of Very Good. Most other \$200 cameras top out at about 250 shots per charge.

The camera comes with a combination of buttons, switches, and a four-way navigational mini-joystick. The arrangement >>

makes most functions easy to find, but the mini-joystick (which doubles as one-touch access to exposure compensation, the flash, the self-timer, and the macro mode) is small and finicky for big hands to use.

Besides the joystick, four buttons adjoin the big, bright 3-inch-diagonal LCD: one for camera modes, one for adjusting the viewfinder, one for the menus, and one for deleting. One toggle switch lets you jump between capture and playback modes. Another powers the camera on and off.

To avoid shutter lag, the Lumix DMC-FS25 will capture shots instantly if you autofocus before snapping. Otherwise, if you just press the shutter button, you'll get about a second's lag.

The DMC-FS25 also records standard-definition video, but as with many point-and-shoots, you can't zoom in and out while filming. It can capture video at three different settings as .mov files, all at 30 frames per second: 848-by-480 clips in WVGA, 640-by-480 clips in VGA, and 320-by-240 clips in QVGA mode.

It's best to try the Panasonic Lumix DMC-FS25 before you buy it, mostly to assess the love-it-or-hate-it joystick—the only main drawback of this camera. If you can find this model for around \$200, you'll see that it provides excellent value.

Nikon Coolpix L20

Nikon's Coolpix L20 is one of the best models we've seen in a growing category of cameras: very affordable, easy-to-use point-and-shoots with surprisingly stellar image quality and a bit of fashion sense. It costs just \$130, but its image quality surpassed that of some much more expensive cameras in the PC World Test Center's jury evaluations. In fact, it netted the best image-quality score of any point-and-shoot camera we've seen so far this year.

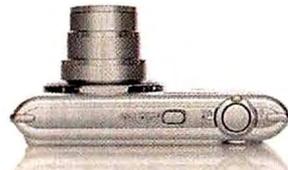
Although the 10.34-megapixel L20's image-stabilization system is software-based, it did a great job of capturing clear, unblurred images—even when we shook it around vigorously while taking a photo or zoomed in to the maximum capacity of its 3.6X-optical-zoom (38mm to 136mm) lens. Images were surprisingly clear and sharp.

The deep-red Coolpix L20 we tested had



Pentax Optio P70

The P70 has the widest-angle lens of any camera here, at 27.5mm.



PLUS: Measuring only 0.8 inch, it's also very slim and stylish for the price.



Canon A1100 IS

We loved the optical stabilization and image quality of this PowerShot.



MINUS: Its 2.5-inch LCD is on the small side.

a lacquered plastic finish that feels nice in the hand. Even though it looks slick (in both the literal and aesthetic senses of the word), we could operate the camera with wet hands without its getting slippery.

A huge, 3-inch-diagonal LCD screen dominates the back. On top are several buttons: on/off, shutter, playback, and a fourth that switches among movie and still modes and access to the 16 scene modes.

Instead of a ring around the shutter, the Coolpix L20 uses a wide/tight zoom bar on the back of the camera where your right thumb would normally rest. It's easy to operate and comfortable to use thanks to a grooved indentation for the thumb—but some people will prefer a ring-around-the-shutter-button approach to zooming.

A nice extra that's rare in point-and-shoots of any price is an ability to zoom in and out in movie mode. The L20 captures 640-by-480 AVI clips at 30 frames per second (you can knock the resolution down to 320-by-240 at either 30 or 15 fps).

In our jury evaluations, the Coolpix L20 outshone all other cameras in the \$200 price range for overall image quality, despite demerits for image distortion.

Battery life is a bit weak, but not terrible: The Coolpix L20 completed 230 shots before its AA batteries needed to be replaced, significantly short of the 300-plus shots that many competitors offer.

You don't get either full manual controls or manual ISO controls. The ISO automatically boosts in low-light settings when you have the flash turned off, but you can't select specific ISO sensitivity levels. This camera is definitely an entry-level model with an emphasis on ease of use.

The Coolpix L20 has a "Blink Warning" feature that alerts you if someone in the shot blinked. Also nice is a panorama-assist mode, which guides you through the process of shooting panoramic images by keeping the ghosted edge of the last photo visible as you take subsequent shots. The bundled ArcSoft Panorama Maker 4 application (part of the camera's photo-management software suite) does a great job of stitching things together from there.

One item in the CD-ROM-installed suite is worth mentioning: The Nikon Transfer

app lets you transfer and manage photos from the camera, edit embedded photo info, and upload photos to Nikon's My Pictown sharing service.

The Coolpix L20 is a very affordable camera that performed quite well in our image tests. For value, ease of use, and eye-catching looks, it's one of the best bargain point-and-shoots we've seen so far, and it's a great option for beginners and casual snapshooters.

Pentax Optio P70

If your budget for a new camera tops out at \$200, you could do a lot worse than the \$180 Pentax Optio P70. This 12-megapixel model is easy to use and takes decent snaps. It squeezes in several neat features, including HD video capture; but for Pentax, achieving the low price meant a few compromises.

The silvery aluminum body of the version we reviewed appears a little cheap, but the white and red models are quite attractive—and alluringly slim. Despite being only 0.8 inch thick, the Optio P70 carries a 4X zoom lens with a 27.5mm wide-angle extreme—great for panoramas. But the camera's shake-reduction mode uses software instead of shifting the lens or sensor mechanically.

Like many other recent point-and-shoot cameras, the P70 recognizes faces to set the focus and exposure automatically. In addition, this model has a Smile Capture mode that releases the shutter only when your subjects smile and beeps if anyone blinks.

When we accidentally left that mode turned on, the camera shot pictures sluggishly and stored images slowly; but it was much faster once we learned to use the mode correctly. The other controls are sensibly uncomplicated.

Most cameras around \$200 let you shoot standard-definition video that works fine for short sequences but produces black bars on the sides of your wide-screen TV. The P70 captures high-def video that looks much better but still lags behind what you'd get from a pricier camera. It records at 720p resolution at just 15 frames per second, and



Sony DSC-W230

The lens of this Sony Cyber-shot offers 30mm on the wide-angle end.



PLUS: The eye-catching W230 has a slim frame and a great interface.



Panasonic DMC-LS85

Though this Lumix model costs just \$120, it's an excellent performer.



MINUS: However, its plastic build doesn't feel durable.

you can't zoom while shooting video. The P70 also lacks an HDMI port for connecting directly to your HDTV, so to play movies easily you'll need a TV with either an SD Card slot or a link to your PC. The camera has an HD mode for shooting 16:9-aspect-ratio still photos, too. That mode may be appropriate for displaying slide shows on your HDTV or digital photo frame, but the 2.1-megapixel images it captures won't look so great for printing or editing.

The Optio P70 has a unique Vertical Snap mode to take one-handed portraits like a camera phone. Ultimately, though, we'd rather see phones become more like cameras than vice versa.

Our most optimistic low-light and macro test shots came out poorly; but for general take-anywhere use, the P70 did a good job. It received an image-quality score of Fair from our PC World Test Center judges, performing at a consistent level in every test.

Despite a few trade-offs, the Pentax Optio P70 offers good value as a small, light camera you can carry anywhere. Considering its 12-megapixel sensor, the camera delivers lackluster image quality, but it's certainly adequate for the price.

Canon PowerShot A1100 IS

Offering a nice feature set, a little bit of style, very good image quality, and a street price of around \$200, Canon's PowerShot A1100 IS is a great starter point-and-shoot for people who want better image quality than most similarly priced point-and-shoots can provide.

The A1100 has a well-made plastic body; the right side bulges a bit to create a hand grip. At 3.8 by 2.5 by 1.2 inches, the camera may feel bulky in some pockets; and because it uses two AA batteries, it's heavier than cameras that work with a proprietary rechargeable battery. Nevertheless, the A1100 is still small enough to slip easily into a coat pocket or bag. It comes in four colors: blue, green, gray, and pink.

In PC World Test Center testing, this PowerShot took 146 shots before the batteries needed replacing—a sur- ➤

prisingly low number for a point-and-shoot camera with a small LCD screen.

The 2.5-inch LCD and some controls are on the back. On top are the power button, the mode dial, and the shutter/zoom control. The A1100 provides an assortment of automated features. You can choose among Auto, Program, Movie, and various scene modes. In Auto mode, the camera makes every critical exposure and setting choice for you; in Program mode, it lets you manually toggle flash use and adjust ISO, white balance, and other settings. The camera lacks true aperture priority and manual modes, but it does allow you to adjust exposure compensation.

The unit's scene modes are your best option for getting good results in tricky situations. From its Mode dial, you can select from five scene modes—or choose SCN, which enables you to consider additional scene modes listed in an on-screen menu.

The A1100 comes with three light meters, but it eschews complex features such as focusing modes. Its automatic focus works very well. Pressing the Face Detection button causes the camera to focus automatically on faces in your scene; this works well in good light, but less so in lower light.

The 4X zoom lens captures images across a range from fairly wide to telephoto, and the lens has good optical stabilization. The A1100's exceptional macro mode lets you get within 1.2 inches of your subject, and it even works with the camera's video mode (640-by-480 resolution, with sound).

The LCD screen looked slightly washed out, making fine details in brightly lit areas harder to see. You can use the optical viewfinder instead, though it shows only about 85 percent of the final image.

When you're reviewing an image, half-pressing the shutter button pops you back into shooting mode immediately—no worries about missed shots.

In our lab tests, the A1100 had an excellent overall image-quality score for a \$200-range camera, though image sharpness was so-so. We saw no discernible distortion, vignetting, or chromatic aberration. And the A1100 has low noise. Shooting at up to ISO 400 yields surprisingly clean results; even at ISO 800 or 1600 in low light, the



Olympus FE-5010

Available in three hues, the two-toned FE-5010 is a subtle head-turner.



MINUS:

But we weren't very impressed by its image quality.



Pentax Optio E70

In our tests, this Optio had great battery life for an AA-powered camera.

PLUS: At \$120, it also won't drain your bank account.



resulting shots remained very usable.

For \$200, the PowerShot A1100 IS provides strong performance. If you're looking for a good-quality entry-level camera, you should definitely consider this model.

★ BEST IMAGE QUALITY

- 1 Nikon Coolpix L20
- 2 Canon PowerShot A1100 IS
- 3 Panasonic Lumix DMC-FS25

If you care about image quality more than anything, we have good news: The best overall imaging score in PC World Test Center jury evaluations went to one of the most affordable cameras we tested, Nikon's 10.34-megapixel, \$130 Coolpix L20. Its big, 3-inch-diagonal LCD screen takes a toll on battery life, however—the camera took 230 shots before we had to change the AA batteries (other cameras took more than 300 shots). Also, the L20 is best used on a tripod, as it lacks optical image stabilization.

If you're seeking optical image stabilization or a wider-angle lens, two other cameras with top-scoring image quality may be a better fit. The AA-powered, \$200 Canon PowerShot A1100 IS placed second in our imaging tests—including the best score overall for undistorted images—and has optical image stabilization. Also boasting hardware-based image stabilization, as well as a 29mm wide-angle lens, is Panasonic's Lumix DMC-FS25, which matched the color-accuracy performance of both the Nikon Coolpix L20 and the Canon PowerShot A1100 IS; it also fared better than those cameras when the flash was turned on.

★ WIDEST-ANGLE LENS

- 1 Pentax Optio P70
- 2 Panasonic Lumix DMC-FS25
- 3 Sony Cyber-shot DSC-W230

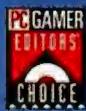
Never underestimate the power of a wide-angle lens. Three of the bargain cameras in our roundup have some nice wide-angle >>

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chops, beginning with the slender (but feature-packed) Pentax Optio P70. The 12-megapixel P70's 4X-optical-zoom lens reaches from 27.5mm on the wide-angle end to 110mm on the telephoto end. Plus, it shoots 720p high-definition video, though with some limitations (no HDMI-out, you can't use the zoom while you're shooting video clips, and its 720p video mode maxes out at 15 frames per second). Still, for wide-angle reach and overall feature set, it's a top-notch buy for \$180.

Yet again, the 12.1-megapixel Panasonic Lumix DMC-FS25 is also among the top three picks in this category, offering a wide-angle lens as part of its 5X-optical-zoom Leica lens (29mm to 145mm). Other than the extra reach on the telephoto end, the Lumix DMC-FS25 has another advantage over the Pentax Optio P70: namely, mechanical image stabilization as opposed to the P70's software-based stabilization.

Another wide-angle camera is the Sony Cyber-shot DSC-W230, a 12.1-megapixel, 4X-optical-zoom (30mm to 120mm) point-and-shoot with a big, 3-inch LCD screen and terrific battery life (310 shots on a single charge of its lithium ion battery). This \$200 Sony unit does have a few limitations: Overall image quality was at the lower end of the cameras we tested, with noticeable shortcomings in flash exposures.

★ BEST BATTERY LIFE

- 1 Panasonic Lumix DMC-FS25
- 2 Sony Cyber-shot DSC-W230
- 3 Pentax Optio E70

Sometimes, you just want a camera you can take with you on a trip without having to pack a battery charger, too. Cameras using AA batteries (the Canon PowerShot A1100 IS, the Canon PowerShot A480, the Panasonic Lumix DMC-LS85, and the Pentax Optio E70) help, but buying all those batteries can add up over time.

One of the best picks among budget cameras for long battery life is—you guessed it—the Panasonic Lumix DMC-FS25, which has a rechargeable lithium ion



Canon PowerShot A480

Canon's A480 is a bare-bones point-and-shoot camera with great image quality.



MINUS: But it has no image stabilization at all.



Fujifilm Finepix Z30

With unusual curves and vivid color, there's nothing subtle about the bold design.

PLUS: The Z30 also shoots surprisingly sharp photos.



battery that lasted 320 shots in our tests before needing to be juiced up again.

Also performing well in our battery-life tests were the Sony Cyber-shot DSC-W230 (310 shots) and the Pentax Optio E70 (285 shots)—the latter was the best AA-powered performer. The Panasonic Lumix DMC-LS85 (280 shots) and the Canon PowerShot A480 (279 shots) also fared well in this category for AA-powered models.

The biggest offenders in battery-life drain were the Canon PowerShot A1100 IS (just 146 shots), the Olympus FE-5010 (217), and the Pentax Optio P70 (also 217).

★ MOST FASHIONABLE

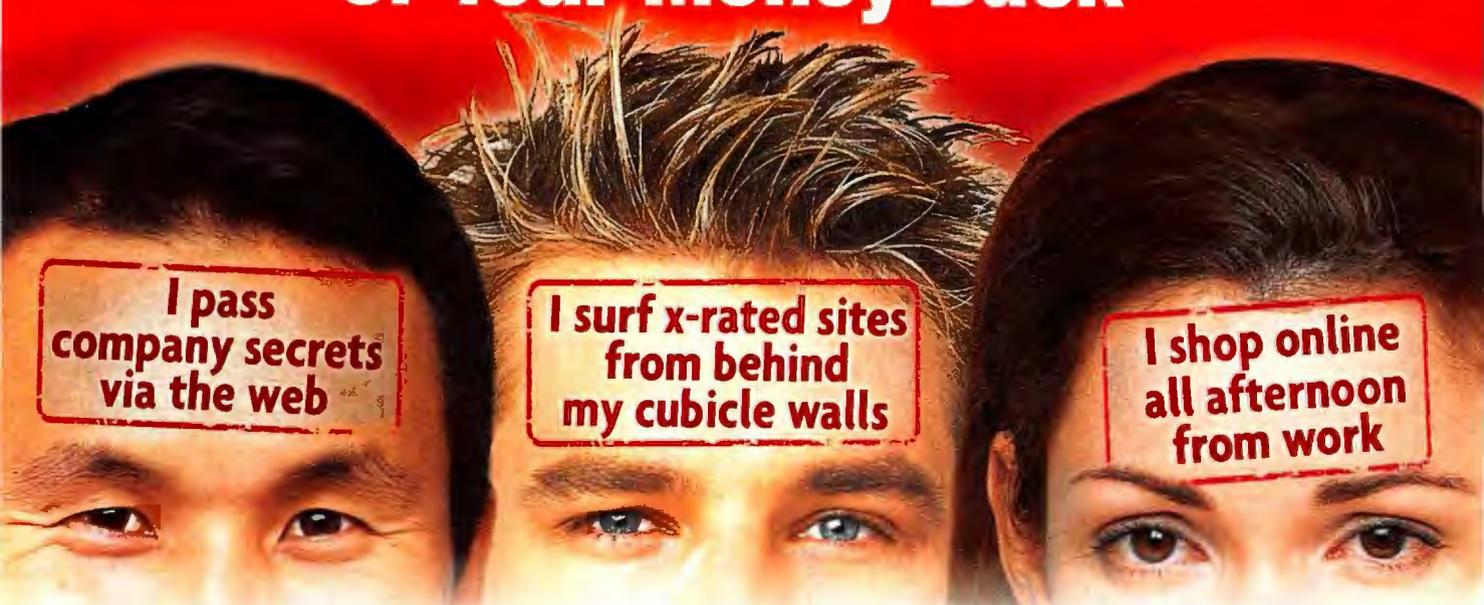
- 1 Olympus FE-5010
- 2 Fujifilm Finepix Z30
- 3 Pentax Optio P70

Now more than ever, technology has become a fashion accessory, and camera makers are definitely taking notice. It goes beyond having a few color options for each model, too. The 12-megapixel, 5X-optical-zoom (36mm to 180mm), Mondrian-styled, duo-tone \$190 Olympus FE-5010 comes available in navy blue, black, and a pinkish hue that Olympus calls "plum."

If the FE-5010's subdued style is way too subtle for you, consider the Fujifilm Finepix Z30. This small, faux-bejeweled point-and-shoot may look like a toy, but it actually performed very well in our image-quality tests. In fact, it had the best sharpness rating of any camera we tested, as well as very low levels of image distortion. The Finepix Z30's feature set isn't as fancy as its looks, though: It lacks a powerful zoom (3X optical, from 35mm to 105mm), and it has only software-based image stabilization.

If skinny is what you're after (without sacrificing much in the way of features), the Pentax Optio P70's slim frame somehow packs in its wide-angle 4X-optical-zoom lens, HD video capabilities, 22 scene modes, and a 2.7-inch-diagonal LCD screen. Our reviewer thought the P70's silver version was a bit plain, but the red and white versions are eye-catching. ●

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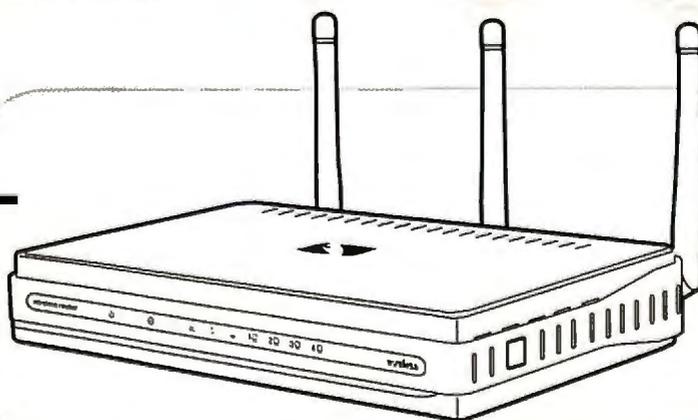
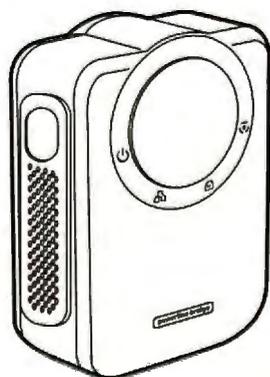


Powerline

Networking

By combining a Wi-Fi router and powerline equipment, you pair the convenience and mobility of wireless with a dependable way to stream video or save files to a network drive. Our tests reveal the best of both kinds of gear. >>

BY BECKY WARING



Wireless networks today are faster, more secure, and more reliable than their predecessors. But to some extent Wi-Fi is a victim of its own success: Search for a Wi-Fi hotspot these days, and you may find a dozen networks competing for the same 2.4GHz bandwidth—so nobody gets a good signal.

Meanwhile, apps such as network backup, high-def video streaming, and VoIP can choke the fastest Wi-Fi. At best, a draft-2.0 802.11n router offers a little over 100 megabits per second in real-world throughput. If multiple Wi-Fi clients claim a share, performance can plummet.

The convenience and ubiquity of 2.4GHz Wi-Fi make it the technology of choice for the router at your network's heart, so we evaluated six workhorse routers that support draft-2.0 802.11n Wi-Fi and gigabit ethernet: the Belkin N+, the D-Link DIR-655, the Linksys WRT320N, the Netgear WNR3500, the SMC Barricade N ProMax, and the TrendNet TEW-633GR.

We also looked at powerline networking kits from Actiontec, Belkin, D-Link, Linksys, Netgear, and ZyXel. Each kit lets you use your home's electrical circuits to hard-wire essential devices, each did at least as well as draft 802.11n Wi-Fi on our throughput test, and each delivered rock-solid high-definition video streaming from a Sling Media Slingbox Pro.

For many people, a hybrid network that incorporates both technologies is ideal; fortunately, that isn't difficult to set up (see "Adding Powerline to Your Network Is Easy," page 98).

Unlike in the past, all of the draft-2.0 802.11n Wi-Fi routers we tested this time rated at least Good overall; several earned marks of Very Good. The Belkin N+ and the D-Link DIR-655 scored highest thanks to very good performance and setup tools, along with valuable features such as support for USB drive sharing and a security-conscious guest access mode.

Among powerline kits, the D-Link DHP-303 is our top pick. Its throughput was more than 30 percent higher than the competition's, and it carries a lower price tag. But, again, all six powerline kits we tested delivered rock-solid HD video streaming. The chart on page 102 provides a summary of our findings for powerline kits. To see a full review of each powerline kit, use the related Find-It URL listed on the chart.

A hybrid Wi-Fi/powerline network solves many problems: By using powerline wiring to connect bandwidth-intensive devices that you rarely move around (network-attached storage drives, printers, game consoles, home entertainment center components), you improve their performance and that



BELKIN'S N+ WIRELESS Router F5D8235-4 snagged our Best Buy award on the strength of its design, setup, and extras.

of mobile Wi-Fi gear, by reducing the overall network demand on the wireless bandwidth.

One surprise from our performance tests is our discovery that some routers equipped with 2x3 arrays (two transmitting and three receiving antennas) outperformed some 3x3 configurations, even at long range. So a 3x3 router is not necessarily better than a 2x3 one.

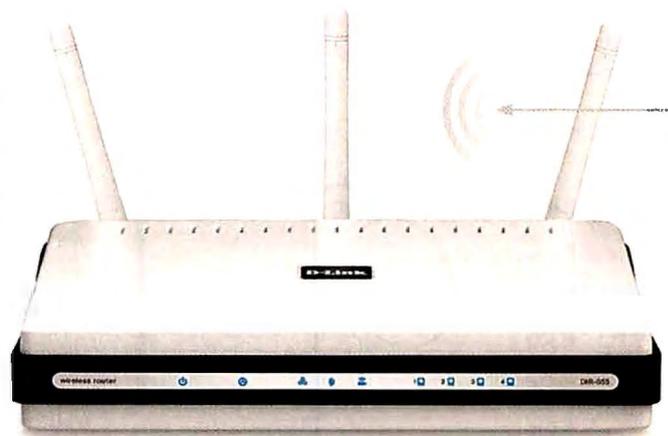
On the other hand, a laptop equipped with a 3x3 Intel Ultimate N WiFi Link 5300 client card consistently outperformed one equipped with a 2x3 Intel WiFi Link 5100 client adapter. The improvement was dramatic, too, ranging from 28 to 62 percent overall, so paying the \$40 or so extra for the higher-end client in a new laptop may be a good investment.

A few vendors offer simultaneous dual-band 802.11n routers, which support 2.4GHz and 5GHz networks at the same time. 5GHz networks support legacy 802.11a clients and are more robust than 2.4GHz networks because their dozen nonoverlapping 22MHz channels are less prone to interference than the three 2.4GHz channels. Even so, we decided not to review such routers, for several reasons: They're still rather uncommon; they're very expensive; and powerline generally offers better performance for the streaming video applications for which a 5GHz network is frequently used.

Belkin N+ Wireless Router F5D8235-4

BEST BUY Pros: Easy setup; guest Wi-Fi access; USB drive sharing. Cons: Poor short-range performance; no WPA-Enterprise or RADIUS server support; vertical mount only.

Belkin's attractive N+ router stands out from the pack in design, features, usability, and long-range wireless through-



THE D-LINK DIR-655 Xtreme N Gigabit Router excels at short-range throughput, and supports both drive sharing and printer sharing.

THE LINKSYS DUAL-BAND Wireless-N Gigabit Router WRT320N combines cool design with snappy performance.

put. Though its 2x3 antenna design lagged in short-range testing, the N+ Wireless Router F5D8235-4's throughput performance improved by a dramatic 62 percent—more than any other router—when we tested it along with the higher-end 3x3 Intel 5300 adapter. So if you buy this router, try to pair it with a 3x3 antenna card.

The setup assistant is excellent, guiding users through such tasks as establishing connections, enabling wireless security, and choosing a Wi-Fi SSID (that is, a network name). The router manages more-advanced settings through a standard Web utility. I especially appreciated being able to set up a special Wi-Fi guest network with its own passphrase, obviating the need to give out a private password to visitors. The router also keeps guests isolated from other devices on the network. On the downside, the N+ was one of only two routers we examined that lacked WPA-Enterprise encryption and RADIUS server support—omissions that will convince many businesses to rule it out.



The Belkin must be positioned vertically. It has a (not very functional) download-speed indicator bar. More useful are the wireless security and Internet connection lights.

The F5D8235-4 was also one of only two routers we reviewed for this roundup to support USB drive sharing. To

use this feature, you plug in a USB flash or hard drive in FAT32 or NTFS format; instantly it is accessible through a special Storage Manager application, or directly via the router's IP address. You can access the drive with either a PC or Mac. As often happens with shared USB drives, though, performance was poor. It's mainly useful for light file sharing, rather than for everyday network backup. You'll get far better throughput from a gigabit NAS drive.

D-Link DIR-655 Xtreme N Gigabit Router

Pros: Very good performance; USB drive and printer sharing; Wi-Fi guest zone access; comprehensive routing features.

Cons: Only one computer can access a shared drive or printer at a time; no Mac support for drive or printer sharing. >>

Draft-N Wireless Routers: Most Perform Well

MODEL	PCW Rating	Performance score	Setup and documentation	Enterprise security support ¹	USB printer/drive sharing	Guest access mode	Bottom line
1 BEST BUY Belkin N+ Wireless Router F5D8235-4 \$100 find.pcworld.com/62885	86 VERY GOOD	Good	Superior	No	Both	Yes	An average performer, Belkin's router shines in design, setup, and features, including very versatile USB drive and printer sharing.
2 D-Link DIR-655 Xtreme N Gigabit Router \$100 find.pcworld.com/62886	86 VERY GOOD	Very Good	Very Good	Yes	Both	Yes	This top-performing unit has many extras. Cross-platform households should note that USB drives can't be accessed from Macs, however.
3 Linksys Dual-Band Wireless-N Gigabit Router WRT320N \$110 find.pcworld.com/62887	85 VERY GOOD	Very Good	Very Good	Yes	Neither	No	Speedy performance, excellent utility software, and optional strong parental controls make this a great choice for families.
4 TrendNet TEW-633GR 300Mbps Wireless N Gigabit Router \$100 find.pcworld.com/62890	84 VERY GOOD	Very Good	Good	Yes	Neither	No	This capable router delivers very good performance and routing options, but it lacks the extra features we expect at this price.
5 Netgear RangeMax Next Wireless-N Gigabit Router WNR3500 \$120 find.pcworld.com/62888	81 VERY GOOD	Very Good	Good	No	Neither	No	This workhorse router was quite fast at long range, but it has an inflexible design and too many missing features for the price.
6 SMC Barricade N ProMax Draft 11n Gigabit Broadband Router SMCWGBR14-N; \$120 find.pcworld.com/62889	79 GOOD	Good	Fair	Yes	Printer only	No	On paper, it has great specs, but its subpar setup and performance, and high price tag, make the Barricade hard to recommend.

CHART NOTE: Prices are as of 4/20/09. FOOTNOTE: ¹ WPA & WPA2 Enterprise support and RADIUS Authentication Server support.

D-Link's DIR-655 was one of the first gigabit draft-2.0 routers, and it's still one of the best. D-Link has added a number of valuable features via firmware updates, such as USB drive and printer sharing, and a special Wi-Fi guest zone. Factor in a low price tag plus comprehensive routing and firewall features, and it's no wonder the DIR-655 is one of our top picks.

The D-Link's throughput was very good overall, though certainly better at short range. This 3x3 antenna router also performed well with both the 2x3 and the 3x3 Intel cards.

Housed in a drab matte-white box, the DIR-655 Xtreme N Gigabit Router won't win any design awards, but it can be mounted horizontally, vertically, or on a wall. You set up the

DIR-655 through its Web utility; thanks to the utility's straightforward wizards, I had no problem getting connected. The single USB port on the rear supports flash or hard drives and printers (including multifunction devices).

Drive sharing is easy, but limited by the fact that only one Windows computer (Macs aren't supported at all) can access the drive at a time through a special system tray application. If someone is using a drive and forgets to log out, other users on the network won't be able to access it at all.

The D-Link's drive-sharing throughput was somewhat faster than that of the Belkin N+ when we used the router in combination with our Western Digital MyBook drive, but >>

Adding Powerline to Your Network Is Easy

IF YOU CAN plug in a power cord and an ethernet cable, you can set up a powerline network. Start by plugging a powerline adapter into a wall socket. Don't use filtered power strips or surge protectors, though, because they will interfere with the network connection. Next, run an ethernet cable from the powerline adapter to a free LAN port on your Wi-Fi router.

Now plug a second powerline adapter (or a powerline switch containing multiple ethernet ports) into a wall socket in any room where you want access to the powerline network. After a few seconds, the two powerline devices will recognize each other and become connected.

You can then connect any device that has an ethernet port to your network. In the living room, for example, you can hook up a video game console, TiVo box, DVR, Blu-ray player, Windows Media



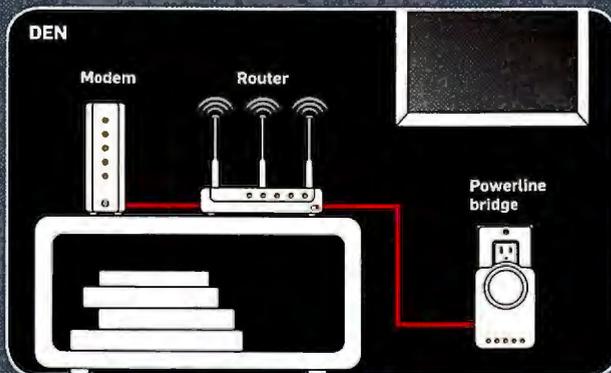
IN OUR TESTS, D-Link's DHP-303 easily outperformed the other powerline-based kits.

Extender, or network media player. You can even hook up a Wi-Fi access point to bring coverage to a previously dead area.

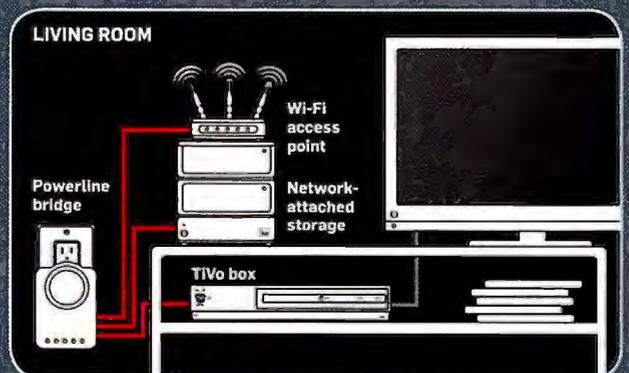
To prevent neighbors operating on the same electrical circuit from hopping onto your network, you can change the default encryption passphrase on all the kits simply by pressing buttons on each adapter.

You can even move adapters from one outlet to another, and they will keep their settings. Power outages shouldn't wreak long-term havoc on your network: It should pop up again when the power returns.

The only installation issue you're likely to have is poor performance due to bad circuitry. In my 100-year-old house, older outlets had severe interference problems, but on my newer circuits the adapters worked perfectly. If you're unsure of your circuitry, buy from a vendor that has a good return policy.



THE EXTRA PIECES of a powerline network are two powerline bridges and cabling. The network starts in whatever room houses your router. You connect the powerline bridge to a wall socket (not to a power strip), and then you run an ethernet cord from the bridge to one of the ports of your router. Powerline networks are most useful



for devices that are stationary and need a consistent network connection. Plug another powerline bridge into a wall socket, and you can run an ethernet connection to a set-top box (such as a TiVo) or to a network-attached storage device. You can even connect to a Wi-Fi access point if you have trouble getting a signal from your main router.

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it was still much slower than with a typical gigabit NAS. Printer sharing works in much the same way, with each user claiming an available printer from the system tray utility, and essentially owning that printer.

The Wi-Fi guest zone has its own SSID and encryption password to keep your primary password private, and is completely locked out of your wired network by default.

Linksys Dual-Band Wireless-N Gigabit Router WRT320N

Pros: Very good performance and design; versatile software utility; selectable dual-band radio; optional parental controls.

Cons: Works in only one band at a time; doesn't include a USB port.

The Linksys WRT320N is the sole router in this review that can operate on either the 2.4GHz or the 5GHz Wi-Fi band. Though I didn't test the WRT320N's 5GHz performance, the router exhibited very good throughput overall on the 2.4GHz band, at both short and long range.

If you're surrounded by neighboring Wi-Fi networks, and if all of your devices can operate over 5GHz (most newer laptops with built-in 802.11n adapters support both bands), switching to 5GHz could be the answer to your interference problems. Be forewarned, though: 5GHz 802.11n does not have quite as good range as the 2.4GHz band.

The WRT320N has a sleek spaceship-style design and very good features. It also has an excellent software utility called LELA that goes beyond standard setup tasks to include features like network maps and device information, making it useful for ongoing network monitoring.

What makes the Linksys interesting for families is its embedded Home Network Defender software from Trend Micro and Cisco. A \$60 yearly subscription is required, but a 30-day trial is included. Home Network Defender provides flexible but strong parental controls, Web surfing protection against phishing sites and malware, and full Trend Micro Antivirus + Anti-spyware software for up to four PCs.

Centralizing parental controls for the entire network on the router yields far easier and stronger protection than putting them on individual PCs, where attackers have many ways to circumvent them.

TrendNet TEW-633GR 300Mbps Wireless N Gigabit Router

Pros: Very good short-range throughput; comprehensive Web-based configuration utility; clear quick-start guide.

Cons: Subpar long-range performance; no USB port for drive or printer sharing.

The TEW-633GR 300Mbps Wireless N Gigabit Router closely resembles the SMC router I tested, but it performed much

TRENDNET'S TEW-633GR 300Mbps Wireless N Gigabit Router performed best at short range in our tests.



better and costs less. Even though it lacks a USB printer port and the SMC model has one, it's still a superior choice.

The TEW-633GR's performance was similar to that of the D-Link DIR-655, whose chipset it shares, with very good throughput overall, especially at short range.

Like the SMC's chassis, the TrendNet's case can be mounted horizontally, vertically, or on a wall, so you have flexibility in positioning it for best reception.

Though the TrendNet is certainly a capable router, it lacks some useful extra features (such as a USB port and guest access mode), and because of that its price seems relatively high.

Netgear RangeMax Next Wireless-N Gigabit Router WNR3500

Pros: Top performance, especially at long range; very good setup and Web utilities; strong routing and firewall features.

Cons: No WPA-Enterprise encryption or RADIUS server support; no USB port; can be oriented only vertically.

The Netgear RangeMax Next Wireless-N Gigabit Router WNR3500 is a workhorse device that aced our throughput tests, especially at long range. For a 2x3 antenna router, it did impressively well with the 2x3 and 3x3 Intel adapter card. It also provides very good routing and firewall options, from Web content filtering (for parental control) to dynamic DNS.

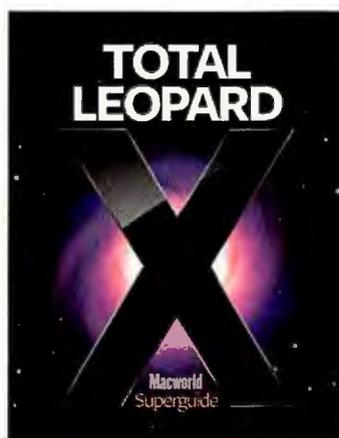
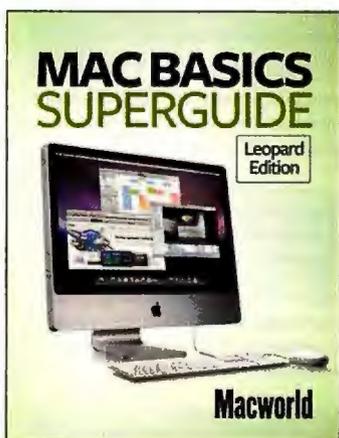
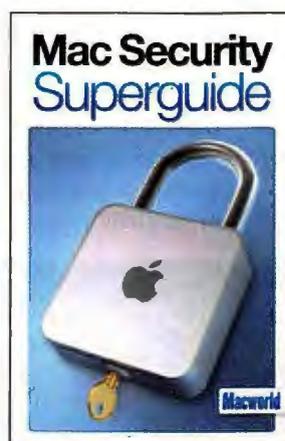
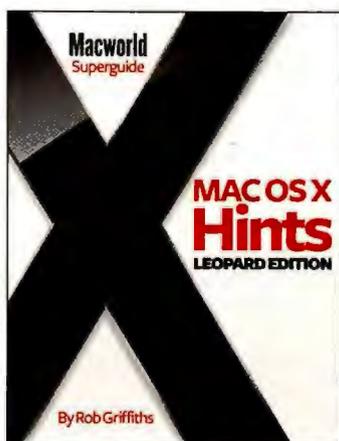
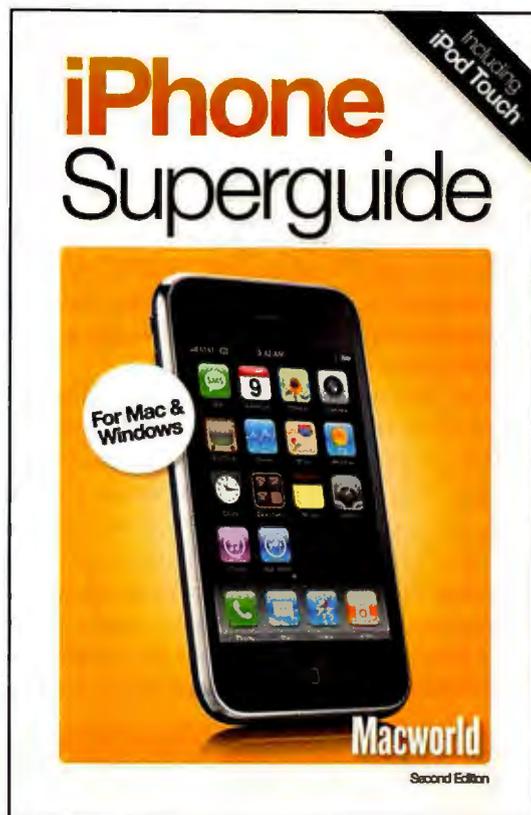
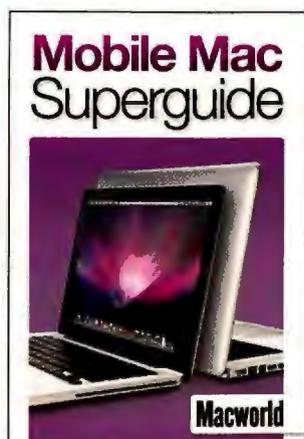
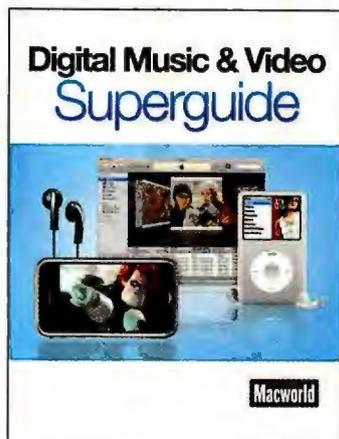
In view of this unit's relatively high price tag, I was disappointed not to see more extras, such as USB drive or printer sharing, a guest access mode, and strong parental controls. It also lacks WPA-Enterprise or RADIUS server support, which some small businesses will see as critical omissions.

That said, the WNR3500 has a very well-designed setup utility, and what may be >>>

NETGEAR'S RANGEMAX NEXT Wireless-N Gigabit Router WNR3500 turned in its strongest performance numbers in long-range testing.



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the best context-sensitive help service I've ever seen in a router Web interface. The Web configuration utility can look for updated firmware every time you log in—a feature that I wish all routers would emulate. After all, keeping your firmware up-to-date is the first rule of router maintenance.

Though the Netgear is quite good-looking, it (like the Belkin router) can be used only in an upright position and has no wall-mount holes. The antennas are internal.

SMC Barricade N ProMax Draft 11n Gigabit Broadband Router SMCWGBR14-N

Pros: USB printer port; good routing features and Web utility.

Cons: Below-average performance, especially at long range; clunky multifunction scanner sharing; high price.

The SMC and TrendNet routers that I reviewed for this story look practically like clones. They're based on the same U-Media design, though packaged in different-colored plastic cases. Even the user manuals look almost alike. Nevertheless, there are still some major differences between them.

The Barricade stumbled in our long-range throughput tests compared with the TrendNet, offering only fair performance. Since both routers have 3x3 antenna arrays, I expected more.

On the plus side, the Barricade has a USB port for printer sharing, though not the useful drive sharing that the Belkin

SMC'S BARRICADE N ProMax Draft 11n Gigabit Broadband Router SMCWGBR14-N looks like a silvery twin of the black-clad TrendNet router, but its test results were not as good.



and D-Link routers offer. The company says you can use the scanning capability on multifunction printers connected to the router, but the Web-based scanning tool is so basic that you're probably better off just walking over to your scanner.

The Barricade's routing features and Web utility are well conceived, too, and come with handy setup wizards. The Barricade looks good, albeit somewhat utilitarian. It has three external antennas and can be mounted horizontally, vertically, or on a wall, so you can easily find the best placement. ●

Powerline Networking Kits: A Connection at Any Outlet

MODEL	PCW Rating	Performance	Setup and documentation	Ethernet ports	Bottom line
1 BEST BUY D-Link DHP-303 PowerLine HD Network Starter Kit \$120 find.pcworld.com/62906	91 SUPERIOR	Superior	Very Good	1	The D-Link DHP-303's UPA technology offers far faster throughput than competing HomePlug AV kits; the drawback is that the two standards aren't interoperable.
2 Belkin Powerline AV+ Starter Kit F5D407 \$180 find.pcworld.com/62907	83 VERY GOOD	Good	Very Good	3	Multiple ethernet ports, a convenient desk-mount option, and solid performance earn this HomePlug AV kit a spot near the top of the powerline networking class.
3 Netgear XAVB101 Powerline AV Ethernet Adapter Kit \$130 find.pcworld.com/62913	81 VERY GOOD	Good	Very Good	1	Netgear's kit is easy to set up, has a solid design, and includes a helpful software utility, but your networking options are limited by the kit's single ethernet port.
4 ZyXel PLA-401 and PLA-470 HomePlug AV adapters \$180 find.pcworld.com/62908	81 VERY GOOD	Good	Good	4	Though they don't qualify as an official kit, these paired ZyXel powerline adapters performed creditably when we put them to work as a one-two combination.
5 Actiontec MegaPlug AV Powerline Gaming Kit HPE200AV \$125 find.pcworld.com/62905	79 GOOD	Good	Very Good	1	This kit from Actiontec delivers good performance for high-definition video streaming and gaming, but it doesn't stand out from the pack in any special way.
6 Linksys PLK300 PowerLine AV Ethernet Adapter Kit \$180 find.pcworld.com/62909	73 GOOD	Good	Very Good	4	Linksys's decision not to provide a connection-quality indicator and a wall-mount option prevent this otherwise very capable powerline kit from ranking higher.

CHART NOTE: Prices are as of 4/20/09.

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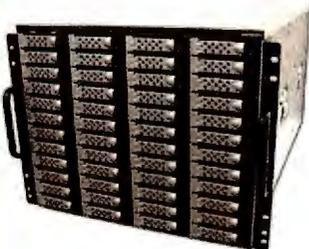
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Here's How

Master Software Updating to Protect Your PC

Running the latest versions of programs helps to keep your computer secure from malicious software. Here's how to manage the process.

BY ROBERT VAMOSI

BEYOND HAVING security software installed, the best way to keep malware off your computer is to maintain a fully patched Windows system. That includes patching desktop applications that may not come from Microsoft. Sometimes, however, default update settings can leave your PC hobbled by bad drivers, software glitches, or unwelcome new features such as Windows Genuine Advantage. Here's a look at several key applications (including Windows)

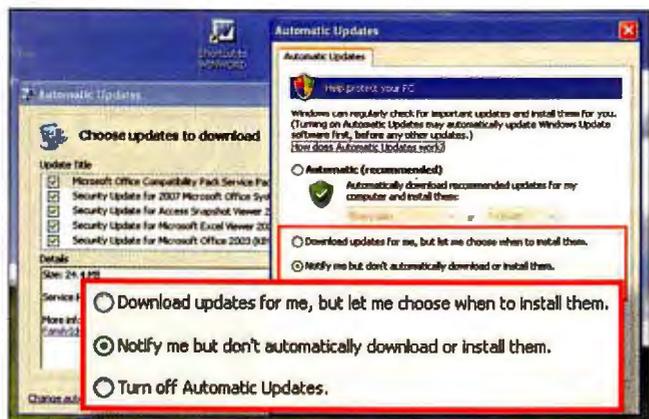
and their update processes, including some details about what you should know and expect from each vendor.

Update Windows

Microsoft issues security updates for Windows, Office, and Internet Explorer every second Tuesday of each month, commonly known as Patch Tuesday. Occasionally the company issues emergency out-of-cycle patches as well. The best way to receive these is to set your Windows system (XP, Vista, or, soon, 7) to download and install them automatically upon release. But Microsoft offers several other options to consider.

First, check the current status of your Automatic Updates in Windows:

1. Click *Start*, and then click *Control Panel*.



IF YOU'D RATHER not let Microsoft install updates without your permission, you can opt to have it provide only notifications of updates.



FOR MOST USERS, it's best to let Windows install operating-system updates automatically—though you do have other options.

2. Depending on which Control Panel view (Classic or Category) you use, do one of the following:

- In Classic view, click *Automatic Updates* or *System • Automatic Updates*.
- In Category view, click *Performance and Maintenance • System • Automatic Updates*.

Microsoft advises you to let Windows automatically download and install recommended updates. Here are your other choices.

Tweak Automatic Updates

In some cases you may not want a Windows Update to occur automatically. Occa-

sionally, for example, changes to Internet Explorer or TCP have broken third-party firewall connections to the Internet. If you prefer to wait a day or so to make sure that no such surprises lurk in the latest patch cycle, select the second Automatic Update option to download updates but install them later. If you adopt this approach, a yellow shield icon bearing an exclamation point will appear in the system tray whenever your PC downloads a new update; the shield icon will remain there until you take appropriate action.

The updates will sit on your computer until you

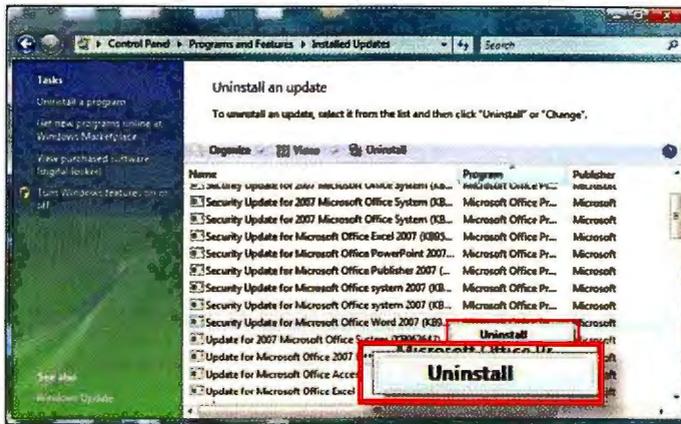
click the yellow shield icon or until the next time you reboot your machine. At that point you should see a dialog box that asks you to choose between an Express install and a Custom install. The Express option installs the updates exactly as Microsoft provides them. Custom enables you to pick and choose elements (suitable when you want to avoid a problematic new service pack, for example).

A third choice is to have Windows notify you whenever new patches are available, but not have the operating system download or install those updates. In this case you'll see a listing for each available patch, along with its title and its Knowledge Base article number (where you can find additional information). You can uncheck any update that you don't want to download and install; Microsoft will suggest these bypassed patches again the next time it has an update or when you check for one yourself (see below).

The fourth option is simply to turn off Automatic Updates. Doing so puts the burden of obtaining crucial security updates entirely on the person running the PC; consequently, this option is appropriate only for the most disciplined users.

Check for Updates Yourself

Microsoft maintains two different sites where you can find the latest patches. Microsoft Update (at update.microsoft.com) provides the



SOMETIMES PATCHES THEMSELVES end up causing problems. However, you can roll them back by using **Add or Remove Programs** in Control Panel.

latest security updates for the operating system as well as updates for additional Microsoft products such as Office and Internet Explorer. (The site was moved a few years ago after criminal hackers targeted the original URL.) When viewed in IE, the site should take inventory of your system (via an ActiveX component), display the recommended updates, and then invite you to choose between the Express and Custom installs.

Some caveats: If you use

Firefox, the site won't work. Instead, you'll need to use a Mozilla add-on that conveniently opens a session of Internet Explorer at the Microsoft Update page.

If you don't want to open IE, or if you use some other browser, go to the second site, Microsoft Download Center (find.pcworld.com/62865). There, click *Download Categories* in the top toolbar, and select *Windows Security & Updates* from the dropdown menu. Many of the updates are not specific to

your machine—but if you know what you're looking for, you should be able to find it in the list.

Avoid Trouble

If you learn that a new service pack, say, is available for Vista but worry that your current apps might not work with it, you have some options. Start by changing Windows Automatic Updates

to specify either downloading without installing or notifying only. At the prompt for an installation method, choose *Custom*, uncheck the service pack or patch you wish to delay or avoid, and install the rest of the batch. You may be prompted from time to time to download and install the remaining update, but you can decline.

If an installed update proves to be the source of subsequent problems, you can take steps to reverse the damage. If you have Windows System Restore turned on (*Start>All Programs>Accessories>System Tools*), you can return to a point before the patch was installed (doing that, however, may also undo any other recent software installations).

Another, perhaps easier choice is to uninstall the patch. Go to *Control Panel>Add or Remove Programs*. Check the box at the top, if it isn't already marked; the resulting list of installed apps will include Microsoft updates. As you scroll down the list, you'll see a large block of Windows Updates, identified by update number and date. Selecting the update with the highest >>



APPLE INSTALLS ITS own update tool—and sometimes pushes extra, unwanted apps—if you put iTunes or QuickTime on your Windows PC.

Here's How

number (or the most recent date) and uninstalling it should do the trick.

Once the update is gone, Windows will try to reinstall the missing patch the next time it has a chance to do so, especially if you have Automatic Updates turned on. To prevent that, change your Automatic Update profile (see above) either to notify you of the latest updates or to download but not install them.

Even if you arrange to delay installing all patches, not every update will go swimmingly. For example, Service Pack 1 for .Net Framework 1.1 does not install correctly for some people, no matter what steps they take. The solution, according to Microsoft, is to remove a particular Registry key, after which the service pack should install correctly; unfortunately, uncovering such information can sometimes be quite difficult. Start by typing the exact error message into Google or another search engine; the results page should include at least one Knowledge Base article on the Microsoft TechNet or Support site.

In other instances you may simply want a newer version of, say, Internet Explorer. Visit Microsoft Update, the Microsoft Download Center, or the Internet Explorer site.

Update Third-Party Applications

Your operating system isn't the only software that you need to keep patched. In the old days,



THE MICROSOFT UPDATE site finds and installs updates for Office and other Microsoft products that are on your PC, in addition to Windows itself.

users commonly had to find third-party security updates on their own. More recently, however, as criminal hackers have begun targeting common desktop applications, vendors (those of multimedia apps in particular) have become better at pushing out their security patches. Here's a look at the update process for some common types of desktop software.

Firefox: Mozilla silently and automatically downloads its browser security updates in the background; when you next launch the browser, Firefox notifies you, waits for your go-ahead, and then

does the installation. If you think something hasn't been installed, click *Help • Check for Updates*. But full-version updates (an upgrade from Firefox 2 to Firefox 3, for example) will still take a clean installation from Mozilla.

iTunes and QuickTime: Whenever you launch an Apple application within Windows, Apple does a brief check and then notifies you of the latest release for iTunes or QuickTime (if you aren't already running it). You can also request an update by clicking *Help • Check for Updates*. Once in a while, Apple will push out

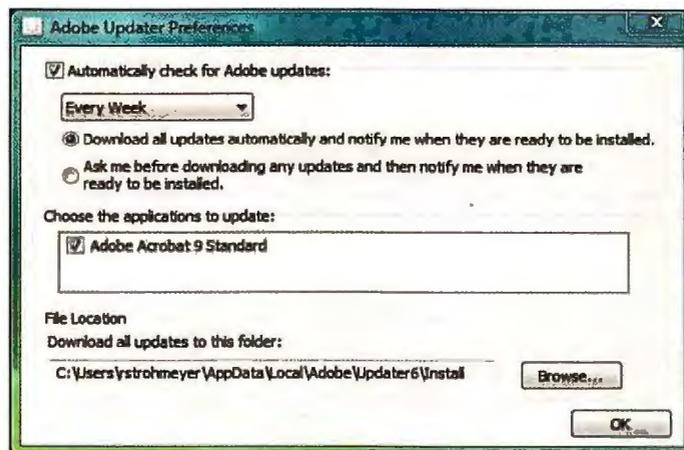
a notification of a new security update for iTunes, QuickTime, or both. When it does, you'll see a dialog box popping up to explain what the update includes.

Unfortunately, Apple has been known to bundle other offerings—such as Safari and Bonjour for Windows—with those updates, regardless of whether you already have the applications. If you don't want the extra

programs, simply uncheck their boxes in the dialog box before installing the update.

Flash and Adobe Reader: Adobe, like Apple, pushes out security updates as they are completed and issued. Alternatively, you can request an update check by clicking *Help • Check for Updates*. In general you can expect legitimate requests from Adobe for permission to install new updates to appear shortly after you've booted into Windows; you should then install them.

Java: Sun recently ran afoul of security researchers, who discovered that unsafe older versions of Java remained on the Windows machine on which the researchers had installed newer, more secure versions of Java. With JRE6 Update 10, Sun now removes older versions of Java from a PC, but it doesn't remove any pre-Update 10 versions; you'll have to uninstall those yourself. (Note: Don't worry if your system is Java-less; not all users have Java installed on their desktop.)



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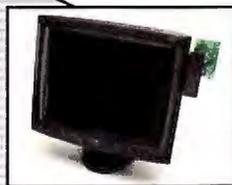
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- Apparel / Clothing
- Liquor & Tobacco Stores
- Cellular & Electronics
- Restaurants, Delis
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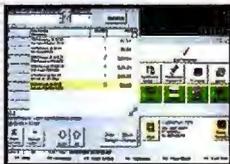
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Create Your Own Interactive YouTube Videos

Have you ever wanted to let your audience step through your media their way? We'll show you how easy it is to turn your ordinary YouTube videos into interactive experiences.

BY DAVID MURPHY

INTERACTING WITH YouTube? That's easy: Type a brief description of what you want to watch into the site's search box, pick from one of hundreds of selections, and sit back to enjoy yet another brief glimpse into the musical life of Tay Zonday—or whatever suits your online video fancy. But watching a YouTube video has always been just that, watching. Until now.

YouTube has bundled a new set of tools into its video authoring system that enables you to hack a small degree of interactivity into your videos. These additions won't be interactive in the style of a traditional Flash game or application, where you can do whatever you'd like within a single content window, but they will give you the power to do more with YouTube than you ever thought possible. In our case, it helped us make a choose-your-own-adventure guide for building a PC (find.pcworld.com/62895)—a project we've used here as an example.

The Setup

You'll want to come into your YouTube interactive video experience with a

game plan. Resist the urge to film your movie off-the-cuff as you would with other YouTube videos; treat the project too casually, and you'll be creating extra work for yourself in the long run. Your interactive video can take many forms, but our directions assume you'll be creating a "click here to do something" kind of movie.

Setting up an outline for your project is the surest way to avoid unnecessary work. Think of the plan for your film as a giant flowchart: Clip A can lead to any number of outcomes—B, C, or D, for example. Regardless of how you decide to organize your video, make sure that you've given yourself the ability to reuse as many clips as possible in your interactive chain.

Here's a small example, based on how we split our build-a-PC video:

- Introduction [A] links to Full Video [H], Case Overview [B], Motherboard Components [C], and Wiring [F].
- Case Overview [B] links to Motherboard Components [C] and Hard Drive & Optical Drive [E].
- Motherboard Components [C] links to Power Supply [D] and Hard Drive & Optical Drive [E].

Although our video is interactive in that it allows users to select their path through the overall narrative, we're still guiding the way, using a single batch of videos. The power of YouTube's annotation function is that it allows you to create various pathways through



START BY CLICKING on the Annotations button, then select a 'Spotlight' annotation—a square or rectangle with only the corners filled in.



YOU CAN SHUFFLE and size the optional text that can pop up when a user runs the mouse over the annotation area in the main video.



YOU CAN FINE-TUNE your annotations' entry points and on-screen durations, as well as the optional text, in the Properties window.

the same batch of videos—basically reusing what you've shot in a bunch of different combinations.

The Shoot

The actual process of filming your YouTube video is no different from how you would normally shoot a

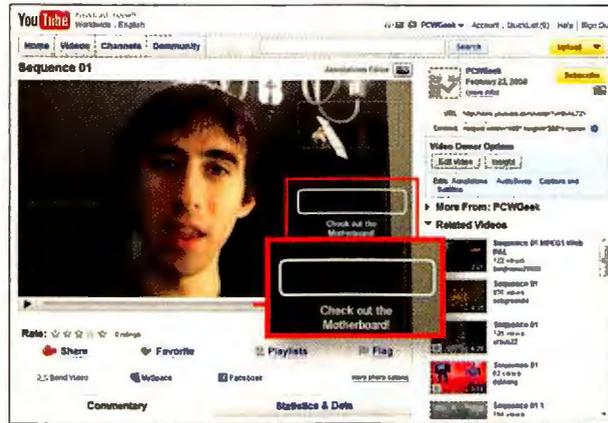
piece of footage for the site. If you're aiming for high-quality videos, you'll want to make sure that your camera of choice can shoot at a resolution of at least 1280 by 720 pixels. And if you want to avoid unpleasant resizing farther down the line, shoot your videos in

either 16:9 or 4:3 native format. The former will fill YouTube's widescreen video player perfectly; the latter will force YouTube to introduce black letterbox bars to the sides of your videos.

Finally, be sure that you've thought out where to place the annotations that you'll be adding later to your videos. Shoot in such a way that the clickable rectangular annotations can appear without overlapping key video elements.

Annotations stay in one place, so don't expect to be able to use them to overlay a critical prop such as a moving car or bouncing ball.

Also, annotations can't exist past the length of a YouTube movie. This means that if you want to slap them at the end of your film to give users a choice of new clips to watch, let the camera roll long enough after



UNLESS A USER mouses over the specified area, a Spotlight annotation will look like a large, transparent rectangle on the frame.

the scene has ended so that viewers will have enough time to select their option.

Adding Annotations

Annotations button: You'll start your trip down annotation lane by clicking on the Annotations button. Then you'll want to select a "Spotlight" annotation—it looks like a square where only the corners are filled in.

Once you've uploaded all

your videos to YouTube, go into your 'My Videos' page and click on the Annotations button for the video that will serve as the main element (and likely the introduction) for your project. This video should contain all the necessary YouTube-searchable elements—a title, a summary description, tags, and so on. The clips you'll be linking to should be named something different and should feature

no tags of any kind. You want your YouTube visitors to find one main video in their searches, after all.

Spotlight annotation: This little see-through box is resizable and movable. You can also shuffle and size the optional text that can pop up when a user runs the mouse over the annotation area in the main video.

Wait for your video to load fully once you've reached the annotation screen. To make your video interactive, slide the timeline bar to the part of the video where you want your viewers to select how they wish the story to unfold. Pause the video and click on the icon in the lower-left corner that looks like a page with a plus sign. Select the annotation that looks like a rectangle with just the corners outlined. Position the box where you want users to be able to click to make their selection.

Properties box: You can fine-tune your annotations' entry points and on-screen durations, as well as the optional text, in this window. Don't forget to set links to your other YouTube videos.

If you want, a link can have a name that will pop up when users hover over the area. You can also fine-tune the moment the box appears and how long it stays on screen, using the time controls to the right of the video window. Once you're satisfied, click on the chain-link icon to the left of the time to add the URL to the next YouTube video you want viewers to see. Repeat this step for all of the "choices" you need to create.

EDITOR'S PICKS

The Top Interactive YouTube Videos

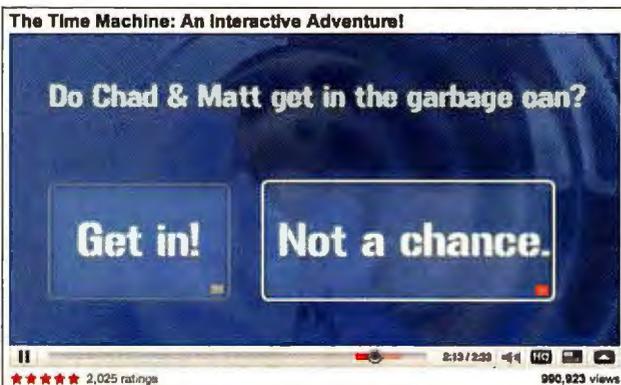
WANT TO CHECK out more interactive videos? In no particular order, here's a list of the finest interactive YouTube videos to date. Use them as inspiration for your own multivideo creations.

- **YouTube Street Fighter:** Re-create this arcade classic in the comfort of your browser window! find.pcworld.com/62896

- **Interactive Fortune Teller:** Remember the movie *Big*? The Interactive Fortune Teller is YouTube's answer to Zoltar Speaks. find.pcworld.com/62897

- **Interactive Card Trick:** Try out YouTube's first, and most famous, interactive card trick. find.pcworld.com/62898

- **The Time Machine:** This full-length adventure is a great example of how high-quality filmmaking and interactivity can combine to make for a gripping YouTube experience. find.pcworld.com/62899



INTERACTIVE YOUTUBE VIDEOS can be useful, like ours on building a PC, or purely entertaining, like this interactive adventure.

Protect Your Privacy When Uploading Photos

YOUR DIGITAL PHOTO files hold all sorts of interesting information. You no doubt know that you can find the date and time taken, date modified, and exposure information in your photo's metadata. You might also know that your photo can tell you what make and model of camera you used, and even details about the lens and flash. But you might also be storing your name, your home address (see "Photos That Know Where They Were Taken" at find.pcworld.com/62882), and other private or potentially embarrassing information in those files as well—all of which other people can see if you post the photos online. Let's make sure you know how to protect that personal data.

Inside Your Photo's Metadata

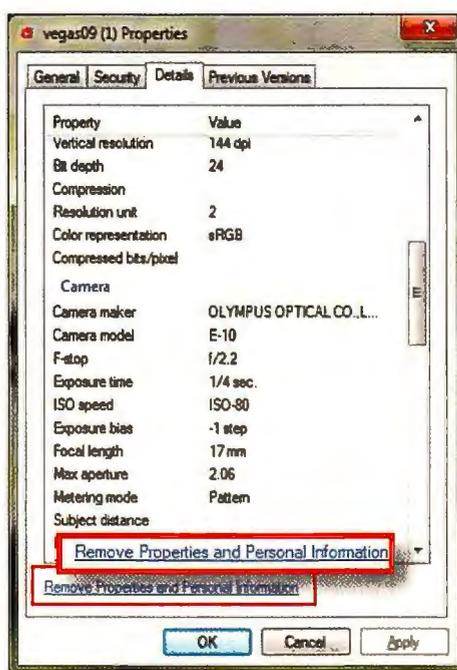
Quite a lot of information is lurking around inside your photos—more than you might know. You can uncover all that metadata either in Windows itself or through a photo organizer. If you have Windows Vista, for example, right-click a photo and choose *Properties*. Then click the *Details* tab, and you should see much of the metadata that is packed into your photo.

Photo organizers often arrange the same information in a more attractive way. (The online version of this article—at find.pcworld.com/62883—includes an example.)

Most of that information is pretty innocuous.

The shutter speed and aperture setting of your camera? No big deal. But what if you use a GPS device to geolocate your photos? That can be handy, but you might not want to upload the GPS location of your own backyard to the Web.

Keywords and tags can also be tricky, at least potentially. In my blog, I've long been recommending that you tag your photos instead of organizing them by folder. And that's fine, unless you happen to use embarrassing keywords. If you tagged photos of a relative, friend, or coworker with a snarky nickname, for example, don't forget that if you upload the picture to a photo-sharing Web site, the tag usually uploads with it, too. So anyone who looks at your picture of the boss will be able to see that you tagged him as "clumsy." Oops.



IN VISTA, CLICK 'Remove Properties and Personal Information' in the Properties•Details tab to remove all of the metadata from the photo.

How You Can Protect Your Private Info

Concerned? If you have metadata you might not want to share with the world, fear not. It's easy to strip personal information out of your image files before you upload them to the Internet.

You can remove all of a photo's metadata using

nothing more than Windows itself, if you have Vista. Just go back to the *Details* tab of the *Properties* dialog box discussed earlier. At the bottom of the window, you should see a link that says *Remove Properties and Personal Information*. Click it, and Windows will strip all the metadata away from the photo. You can even select several images and do this to all of them at the same time.

If you don't have Vista, or you want an even easier metadata removal method, try a program like JPEG

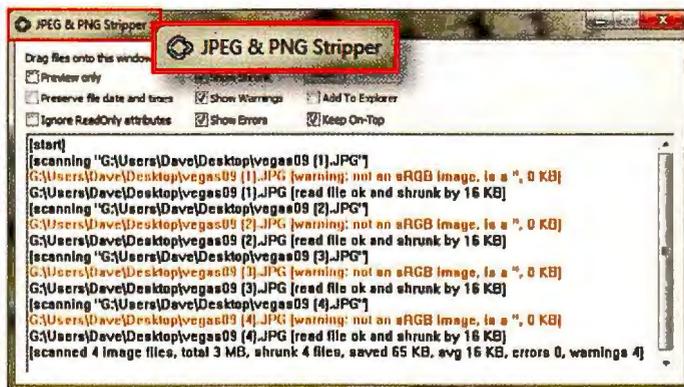
& PNG Stripper (find.pcworld.com/62884). This free utility does exactly what it promises: To use it, just drag your photo files to the Stripper window, and the app instantly erases the metadata.

If you use either of these methods to delete metadata, it will be gone forever, so you'll probably wish to re-

move the metadata only from the copy of the photo that you plan to upload or share. Don't do it to the copy you're keeping on your computer unless you are sure you'll never want to search for it by its tags or look up the exposure information ever again.

Note: You can see all my *Digital Focus* blogs at find.pcworld.com/62172.

—Dave Johnson



THE FREE JPEG & PNG Stripper utility can remove private information from photos in Windows XP before you upload them to a photo-sharing site.

Give an Old PC New Life With Fast Presto Linux

WANT TO RESURRECT an old PC that's collecting dust? Wish you could almost instantly boot your laptop or netbook for a quick peek at your e-mail or a Web page? Presto (prestomypc.com) promises exactly that kind of convenience.

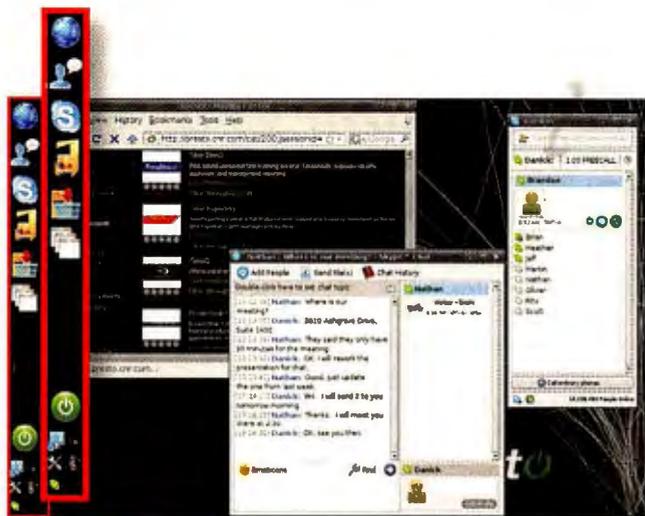
It's a compact, fast-loading Linux operating system that installs in Windows (no pesky boot CDs to burn) and runs alongside it (the installer adds a dual-boot menu to your system, so you can pick which OS to run at startup).

In other words, Presto gives you the fruits of Linux without the usual hassles. I've been test-driving the OS

for several weeks, and I'm seriously impressed. It has its limitations, but it definitely succeeds in delivering the most accessible version of Linux ever.

And perhaps the speediest. I installed it on a two-year-old Acer laptop that takes a good 2 minutes to boot Vista. Time to boot Presto: under 20 seconds. The OS comes preloaded with some basic applications—Firefox, OpenOffice, Skype, and IM client Pidgin—but you can add loads more via the Presto Application Store site.

So, what's not to like? The price. Granted, Presto's \$20 license fee won't break any-



PRESTO BOOTS IN seconds and delivers a full-featured but streamlined version of the open-source Linux operating system.

one's bank, but it still feels a bit sacrilegious to be paying for Linux—especially considering how many free variants are out there.

Still, I highly recommend taking Presto for a spin (it has a seven-day free trial period). It's incredibly sim-

ple to install. Just download the installer file from the site, double-click that file, and follow the wizard. And Presto is totally noninvasive, in that uninstalling this OS is as easy as uninstalling any Windows program.

—Rick Broida

ANSWER LINE

? My laptop screen broke. What should I do?

—James, via e-mail

FIRST, YOU NEED to determine whether anything else is broken. Try booting the laptop. If the screen can still create a legible image, you should have no trouble seeing if everything else works. (On the other hand, if you hear a loud scraping noise, turn the system off, immediately. That could be your hard drive destroying data.)

If you can't get any image on your screen, try plugging the machine into an external monitor. If that works (the notebook's display is all that's damaged), and if you're tight on cash, you may have to accept that your laptop is now a small desktop.

You can also seek a repair, but be forewarned: Replacing a laptop's screen professionally can cost as much as buying a new portable, and almost certainly more than buying a monitorless desktop of equivalent power. Contact your laptop's manufacturer, though, and get a price before you make that decision.

Should you consider replacing the screen yourself? Most likely not. First of all, it's still expensive. I checked with ScreenTek (a company that sells replacement laptop screens) and discovered that a replacement for my Lenovo X60 tablet screen (which fortunately isn't broken) would cost about \$435—not including labor.

And that labor is the main reason why you probably shouldn't try replacing your own screen. Unlike desktops, laptops aren't de-

ASK YOUR QUESTION AT FORUMS.PCWORLD.COM



YOU CAN BUY a replacement screen for most laptops—but trying to install the new screen yourself can pose a serious challenge.

signed for convenient amateur repairs. See "Five Insane Upgrades That You Should Never Do (and How to Do Them!)" at find.pcmag.com/62881 if you want details on the tricky steps involved.

—Lincoln Spector



RICK BROIDA'S HASSLE-FREE PC

Three Quick Fixes for Windows XP and Vista Annoyances

IF WINDOWS IS running you, rather than the other way around, I have a few tricks that can put you back in the driver's seat.

Pin Frequently Used Folders to Vista's Start Menu

If you've ever right-clicked an application icon, you've probably seen the context-menu option 'Pin to Start Menu'. It's designed to make frequently used programs more easily accessible.

What about folders? Wouldn't it be nice to have that same kind of quick access to all the folders you use every day? Alas, right-clicking a folder produces no "pinning" option. Fortunately, pinning folders to the Start menu is simple. Here's the step-by-step.

1. Right-click a folder to be pinned and choose *Create Shortcut*.
2. Click and drag that shortcut to the Start button, waiting a second or two for the menu to appear.
3. While holding the mouse button down, drag the folder to any spot near the top of the menu (above the gray line, which delineates pinned programs from frequently used ones).
4. Drop the folder, and you're done.

Easy, huh? I recommend keeping pinned folders to a manageable minimum (no more than five or six); otherwise, you'll start to overload the Start menu and diminish its convenience.

If you want, right-click the newly pinned folder and choose *Rename* to edit out the "shortcut" suffix.

Of course, this is but one way to put frequently used folders at your fingertips. You can also add folders to Vista's "favorites" area in Explorer (find.pcworld.com/62915), and you can automatically restore open folders after a reboot, too (find.pcworld.com/62916).

Add Firefox's Spelling-Check Feature to Forms

Firefox 3 comes with a handy-dandy built-in spelling checker. If you've ever used, say, Google Docs or posted a message in an online forum, you've probably seen it at work: A red line appears under each misspelled word. You right-click the word to see spelling suggestions (along with the usual context-menu options).

It's a great feature, but it has one shortcoming: It doesn't work

Get fast access to favorite folders; stop typos in Web forms; make XP shut down directly.



TO ENABLE FIREFOX'S spelling checker to work in online forms, simply raise the value of `layout.spellcheckDefault` from 1 to 2.

in Web forms. Well, not yet, anyway. But it's a simple matter to tweak the spelling checker so that it pulls form duty as well.

Open Firefox, type `about:config` in the address bar, and press **Enter**. In the Filter field, type `spellcheck`. Right-click `layout.spellcheckDefault`, and click *Modify*. Raise the value from 1 to 2. Restart Firefox. The spelling checker should now work in most online forms.

Shut Down an XP System That Won't Shut Down

Reader Doug reports a problem with his Windows XP machine:

"When I attempt to turn off my computer, it will not power down all the way. Instead, it goes to the Windows XP logo that says, 'It is now safe to turn off the computer.' Other PCs, including my wife's, turn off altogether. How do I eliminate this extra step?"

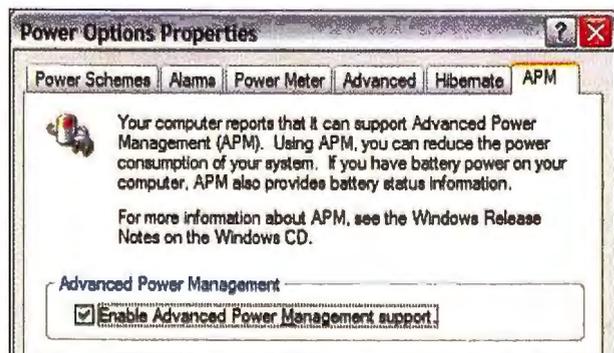
You didn't tell me the age of your machine, but I'm betting it's an older model. For starters, the next time you boot your system, hop into the BIOS settings and look for something called (or related to) Advanced Power Management. It needs to be enabled.

That step alone may solve your problem. If not, try the following: Click *Start*•*Control Panel*•*Power Options*. (If you don't see Power Options, click *Switch to Classic View*.) Click the *APM* tab. (Don't have one? See below.) Select *Enable Advanced Power Management support*, and then click *OK*.

Now try to turn off your PC. If that didn't do the trick, you need to verify that your system is ACPI-compliant (meaning it supports Advanced Configuration and Power Interface standards) and look for wayward device drivers messing with the shutdown sequence.

Microsoft has a detailed support page devoted to this issue ([browse to find.pcworld.com/62893](http://find.pcworld.com/62893)). One of its remedies should resolve your problem. If not, let me know.

If you have a hassle that needs solving, send the details to me at hasslefree@pcworld.com. I can't promise a response to every e-mail, but I'll try to address your problem in this space. ●



IN WINDOWS XP, look for an APM tab in your Power Options window, and then make sure that the proper setting is enabled, as shown.

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Just as the iPod helped to shuffle our listening habits, the Web is changing how we consume the written word. Cash-strapped publishers are looking to e-book sales for relief, and online news feeds and social networks are booming. So if there is to be an "iPod moment" for e-books, it could come from a connected e-reader that focuses as much on quick-hit, interactive content as on full-blown novels—a truly electronic book.

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WHAT WOULD YOU WANT?

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FREEDOM OF CHOICE

By using Google's Android OS, our device supports unrestricted 3G and Wi-Fi Internet access, a third-party app store, and almost any file format. Kindle-like charges (and annoying work-arounds) for file conversion, as well as the need to pay for blog subscriptions, would be a thing of the past. An ultimate e-reader could buy books from anywhere (Amazon, Sony, Coolreader), and access Google's public-domain books (currently exclusive to Sony).

LANDSCAPE ROTATION, TABLET PC FEATURES

Unlike existing e-readers, our device can scale two pages side-by-side. The 10.1-inch multitouch area is also ideal for a virtual keyboard, taking notes, and watching movies.

PARTS LIST



Kindle DX | Amazon

What we took: Wireless Internet, rotating display, text-to-speech, digital textbooks.
find.pcworld.com/62958



Digital Reader PRS-700 | Sony

What we took: Touchscreen, good file-format support, Google Book Search, SDHC card reader.
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FLEPia | Fujitsu

What we took: Color touchscreen (a first), Bluetooth, Wi-Fi. (Japan only, about \$1000.)
find.pcworld.com/62957



CrunchPad | TechCrunch

What we took: Touchscreen slate PC design. (Prototyped by the TechCrunch tech blog.)
find.pcworld.com/62959

ILLUSTRATION: BRYAN CHRISTIE DESIGN



ALTERNATIVE THINKING ABOUT SERVER ECONOMICS:

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Now more than ever, you need your money to work harder. With the new generation of HP ProLiant G6 Servers with Intel® Xeon® processor 5500 series you dramatically improve energy efficiency, flexibility and performance. And more reliability in each system means you can reduce business risk as you increase your productivity.

Decrease your IT support costs to an absolute minimum. HP Insight Control Suite (ICE) will help you to reduce operational expenses by up to \$48,380 per 100 users.*

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HP ProLiant DL360 G6 Server

- Up to two Intel® Xeon® Processor 5500 Series
- 144 GB maximum memory footprint
- Supports up to 8 small form factor high-performance SAS hard drives
- HP ProLiant Onboard Administrator powered by Integrated Lights-Out 2

\$2,969 (Save \$723)

Lease for just \$72/mo.**

SmartBuy [PN:519567-005]



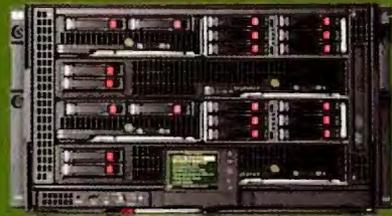
HP ProLiant BL460c G6 Server Blade

- Up to two Intel® Xeon® Processor 5500 Series
- 96 GB maximum memory footprint
- Embedded Dual Port Flex-10 10GbE Multifunction Server Adapter
- HP ProLiant Onboard Administrator powered by Integrated Lights-Out 2

\$2,209 (Save \$375)

Lease for just \$54/mo.**

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HP BladeSystem c3000 Enclosure

- Supports up to 8 server/storage blade devices in a 6U enclosure
- Optional HP Insight Control Environment management suite
- Low-line or high-line power options for maximum power flexibility

\$3,499 (Save \$2,319)

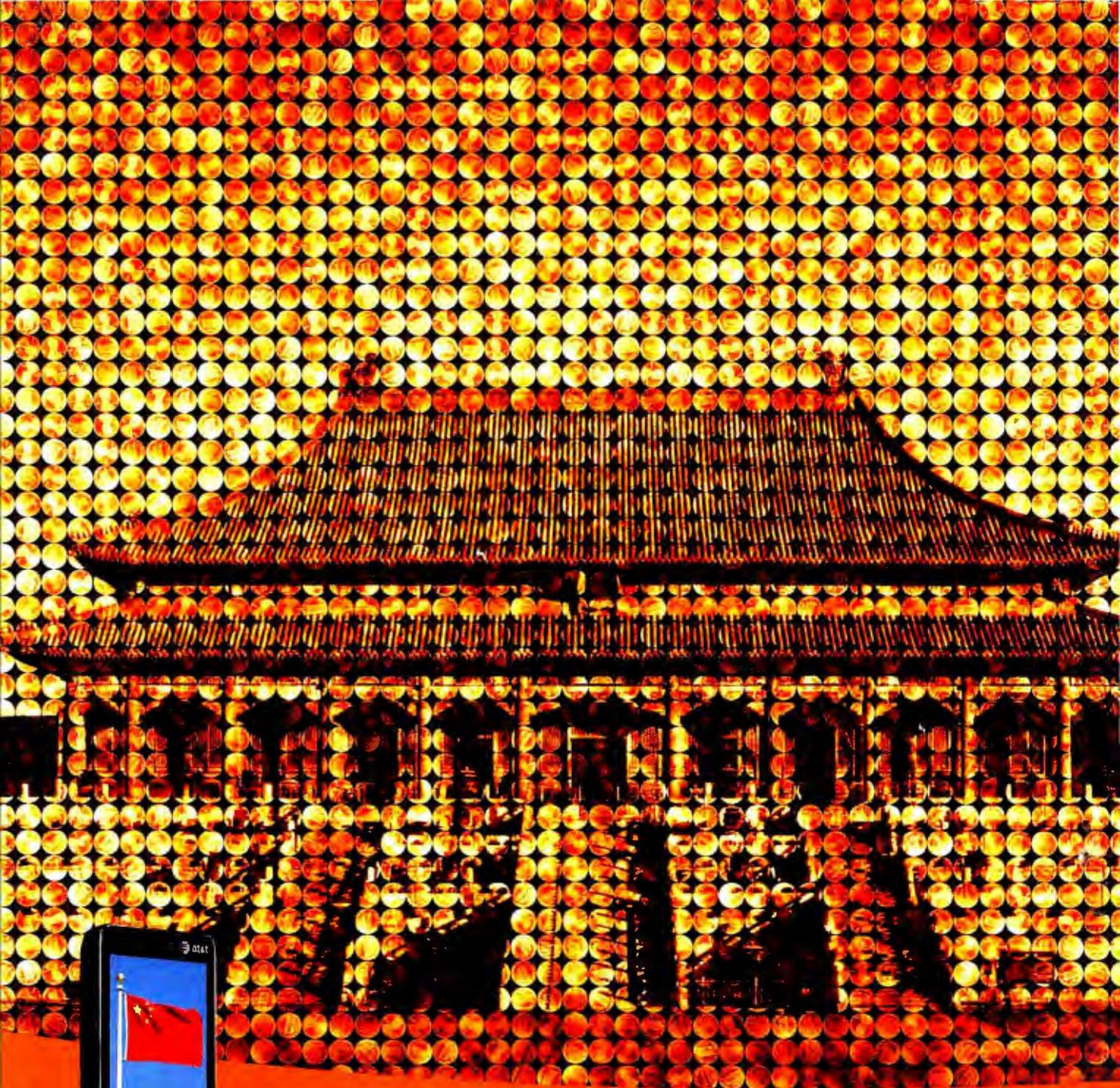
Lease for just \$85/mo.**

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To learn more, call 1-866-625-0807 or visit hp.com/go/G6superstar5



*Source: IDC white Paper sponsored by HP, "Gaining Business Value and ROI with HP Insight Control" Document #210479, Feb 2008. **Prices shown are HP Direct prices; reseller and retail prices may vary. Prices shown are subject to change and do not include applicable state and local taxes or shipping to recipient's address. Offers cannot be combined with any other offer or discount and are good while supplies last. All featured offers available in U.S. only. Savings based on HP published list price of configure-to-order equivalent (Enclosure: \$5,818-\$2,319 instant savings = SmartBuy price of \$3,499; BL Server: \$2,584-\$375 instant savings = SmartBuy price of \$2,209; DL Server: \$3,692-\$723 instant savings = SmartBuy price of \$2,969. Financing available through Hewlett-Packard Financial Services Company and its subsidiaries (HPFSC) to qualified commercial customers in the U.S. and is subject to credit approval and execution of standard HPFSC documentation. Prices shown are based on a lease 48 months in term with a fair market value purchase option at the end of the term and are valid through July 31, 2009. Other rates apply for other terms and transaction sizes. Financing is available on transactions greater than \$349. Other charges and restrictions may apply. HPFSC reserves the right to change or cancel this program at any time without notice. *Financing available through Hewlett-Packard Financial Services Company and its subsidiaries (HPFSC) to qualified commercial customers in the US and Canada and is subject to credit approval and execution of standard HPFSC documentation. Offer valid through July 31, 2009 on transactions in the United States between \$1,500 and \$150,000 USD and in Canada between \$5,000 CAD and \$150,000 CAD. Zero percent financing assumes transaction is documented as a lease with a \$1 end-of-term purchase option (or local country equivalent), assuming lessee is not required to pay any nominal end-of-term purchase price at the end of the lease term and disregarding any charges payable by lessee other than rent payments such as maintenance, taxes, fees and shipping. This offer cannot be combined with any other rebate, discount or promotion without prior approval by HP and HPFSC. Rates are based on customer's credit rating, financing terms, offering types, equipment type and options. Not all HP products are eligible for the 0% lease rate. Not all customers may qualify for these rates. Other restrictions may apply. HPFSC reserves the right to change or cancel this program at any time without notice. Intel, the Intel logo, Xeon and Xeon inside are trademarks of Intel Corporation in the U.S. and other countries. ©2009 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice.



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