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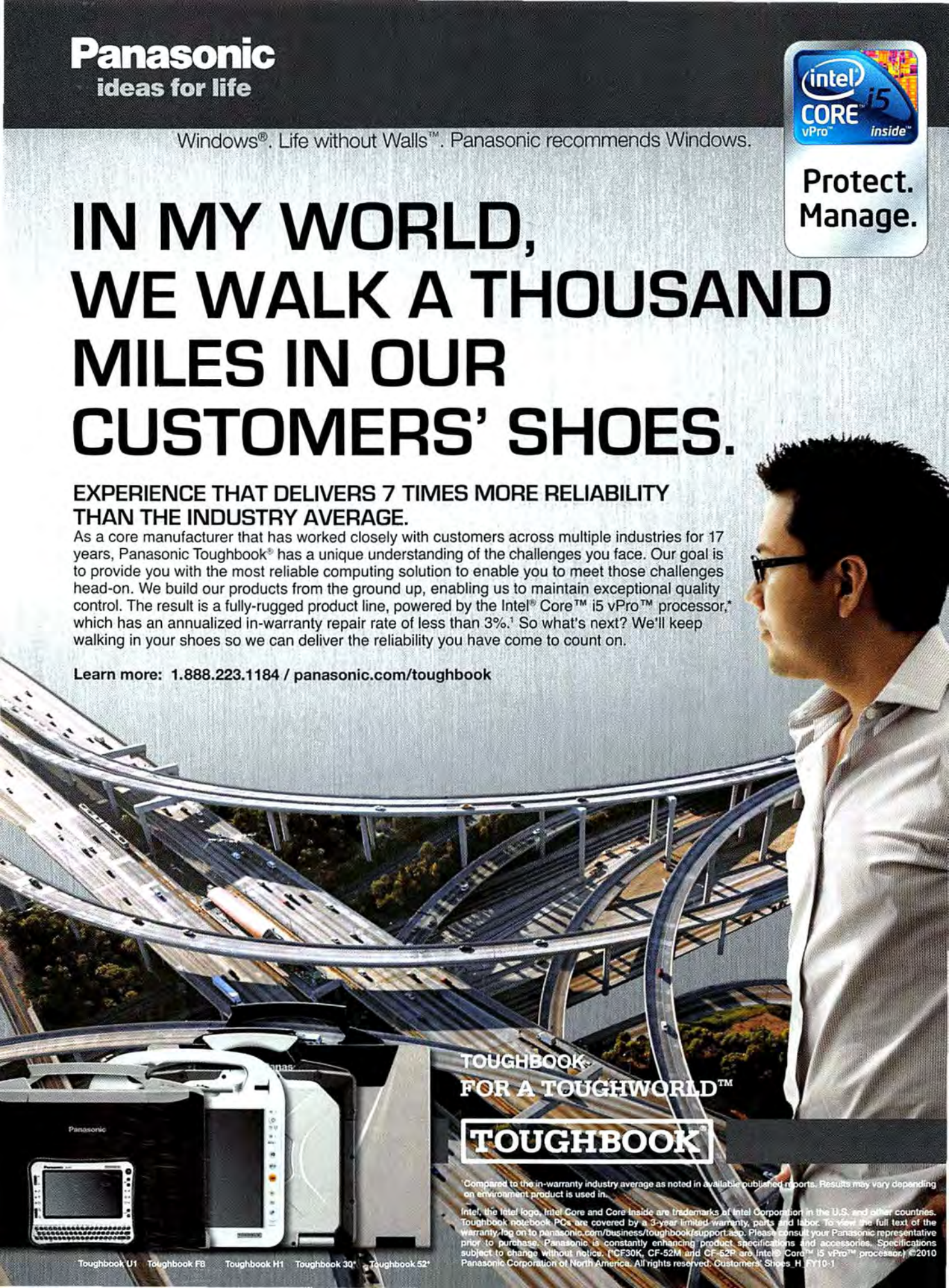

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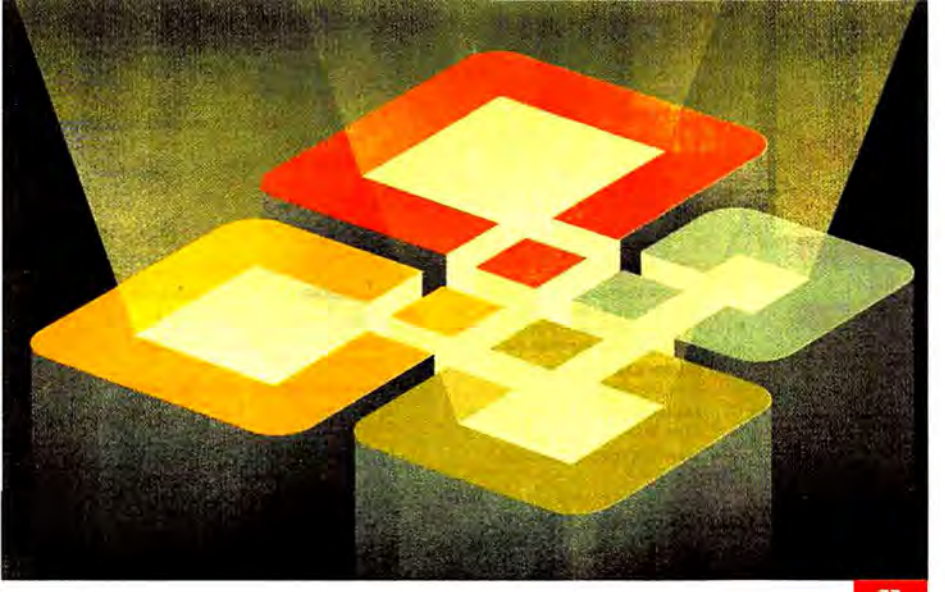

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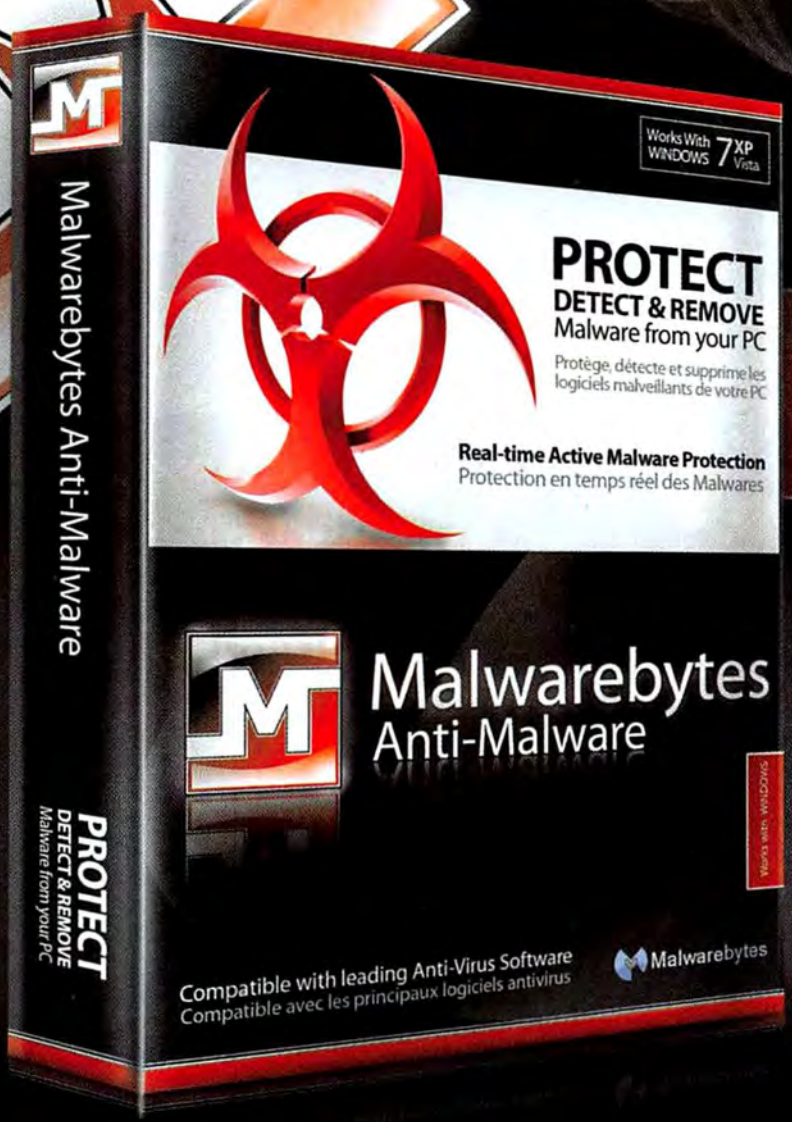

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Need Good Tech Info? Good Luck With That

In which our stealth shoppers give selected salespeople the third degree and learn the meaning of the phrase *buyer beware*.

PITY THOSE POOR tech sales folk. For starters, they have to be all-knowing—understanding how an absurdly large number of products work, what those myriad arcane specs mean, and which features different types of users need.

Then they have to know what's in stock, what upgrades will soon be available, and how competing products stack up. Finally, they must maintain a sunny disposition while dealing with impatient customers who demand expert advice, ultrapersonal service, and instant gratification.

It's a tough job. And this month, we made it just a wee bit harder. For our cover story, "Where the Deals Are" (see page 64), we fanned out across the country to identify which stores, both online and off, excel—and which ones tank. That task entailed sending undercover shoppers to retail establishments in seven cities, and placing more than 200 phone calls to salespeople at brick-and-mortar stores in six other regions.

Sneaky Shoppers

"It's not easy blind-calling dozens of tech stores without their catching on that they're being evaluated," observes Senior Editor Anne B. McDonald, the ringleader/cat herder on this ambitious undertaking. "Our callers had to be on the phone for a long time, asking about a wide variety of products, all the while sounding like a real shopper."

This activity tested the acting abilities of researchers Rachel Sadon and Leah Yamshon, who slogged through the bulk of the test phone calls (and logged endless hours of shopping online, as well). It also put a lot of pressure on the salespeople, many of whom, it seems, proved unequal to the task.

The story spells out how the various vendors rank on quantitative measures. But to give you, our loyal readers, a sense of each store's culture, I asked Sadon and Yamshon to share some of their peak experiences, both positive and negative, from their six-week stint as *PCWorld*'s deep-cover investigators.

At the top of the list, the two had consistently good things to say about the advice proffered by sales reps at Best Buy. Sadon cited one paragon of service, a monumentally patient fellow on the phone at a Best Buy in Minneapolis, who "literally answered every question I had and remained upbeat and interested for over 20 minutes."

Both of our phone warriors agreed, however, that the clueless staffers at most retailers far outnumbered the clueful ones. When Yamshon asked a RadioShack salesperson in Phoenix about Windows 7, for example, he told her "It's like Vista but newer." Now there's a helpful bit of advice for you.

Then there was the Sears sales associate in Washington, D.C., who assured Sadon that "You can never manually adjust shutter speed or aperture on a point-and-shoot"—a misfactoid that would certainly astound the product managers at Sony, Nikon, and other digital camera manufacturers.

Later, another Sears representative, this one in Minneapolis, seemed astonished that Yamshon wasn't concerned about what color the camera was. "Most people care more about color than anything else," she explained. When Yamshon told her that she cared more about picture quality, the sales rep conceded, "Yeah, I guess that's important too."

The winner of the award for most frank response came from a Target salesperson in Memphis. When Yamshon inquired whether a certain drive was compatible with both PCs and Macs, the rep admitted, "I have no idea; my husband does these things for me."

And while we're on the subject of candidness, we'd be remiss if we didn't acknowledge the Minneapolis Walmart salesperson who advised Yamshon to "Go to Walmart.com, you know, on the Internet" to check the company's laptop selection. When pressed for additional information, he told her, "We are not computer specialists. We just sell them and know the basics. You should call Best Buy or a computer store."

On second thought, maybe that isn't such bad advice. ●

Steve Fox is editorial director of PCWorld.

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PCW Forum

Among our readers' responses to May's "Maximum Security"—in which we tested and evaluated an array of PC-protecting suites—were letters expressing frustration at the limitations that plague such suites. Have you had a security nightmare? Add your comments at find.pcworld.com/69890.

ILLUSTRATION: HARRY CAMPBELL

Security Suites

Your article "Maximum Security" [May] misses one key aspect of the user experience with the major antimalware packages. And that is simple reliability.

Twice this past week, my copy of Norton Internet Security 2010 failed on boot, as if my one-year subscription had expired. In fact, I'm only some 30 days into the subscription.

When this software fails, none of its services are available. I become exposed to viruses, other malware, and spam. And I am forced to spend considerable time contacting Symantec's technical support to find a solution.

But Symantec's tech support is trained to do only one thing: Uninstall and reinstall. This may work around the problem, but it doesn't actually solve it.

Norton Internet Security may technically be the best, but is it viable?

Michael Dean, North Bend, Oregon

PCWorld's continuing lab results for security suites were welcome, but they reveal that no single product is 100 percent effective, creating concern that malware may remain in a typical PC.

Although only one central security program should reside in memory, users could manually run various free programs—such as SuperAntiSpyware and Malwarebytes' Anti-Malware—as supplements to the central program.

Jerry Hartke, Lancaster, Massachusetts

Where were G Data Internet Security (your winner last year), Eset Smart Security 4, Comodo Internet Security Pro, and Microsoft Security Essentials? They're nowhere to be found in your May roundup. Neither are individual antivirus, antispyware, antirootkit, or firewall programs listed. This article needs to be redone the correct way.

Keith Brooks, Melbourne, Florida

Editor's response: G Data has not yet released an updated version for this year, and Comodo's new version was released too late to be included. Our roundup focused on the most current for-pay suites (individual utilities are too numerous for one review). Eset's suite did not make our Top 10, but see find.pcworld.com/70086. **And for the free Microsoft Security Essentials, see** find.pcworld.com/63552.

—Nick Mediati

Dirty Little Tech Secrets

Regarding May's "Dirty Little Secrets: 20 Tech Facts They Don't Want You to Know": It's depressing when technologies that have so much promise to promote freedom and increase efficiencies are instead used to slowly but surely enslave mankind. At the end of the day Ted Kaczynski (the Unabomber) may very well end up being proven right.

The most appalling aspect of this sad state of affairs is that we, collectively as consumers, are the ones putting the shackles to our own ankles. When will we wake up, become informed, and demand that *we* have control over our privacy and personal information? That *we* will not stand for being collated, sequenced, data-mined, stored, and filtered as some commodity of private enterprise and government?

mb56, PCWorld.com forums

On "Your Facebook Apps Are Spying on You" [find.pcworld.com/70121]: Yep, many do. If it weren't for the constant spam the apps deliver to one's inbox, they might have more success getting people to use them. As for me, I can't put up with their annoyances long enough to need to be concerned about spying.

malignantpoodle, PCWorld.com forums

Regarding May's "Dirty Little Secrets": The idea of someone remotely hacking your Webcam is plain kinda scary.

Jimmy Sylakowski, PCWorld.com forums

Finding Lost Devices

May's "Lost!" was interesting, but you left out the single most important step to take when looking for a missing device: the "ground search."

When you stand up to leave an area, check the immediate area—floor, table, chairs, anyplace the device might be sitting. Maybe you took it out and forgot about it, or maybe it fell out. But if you see it, you'll recognize it and pick it up.

You should check your pockets, too, of course, but you may not remem- »

ber every single thing you put in them that day. A quick ground search can find stuff that you may not recall having put in your pockets in the first place.

Jou Baur, San Leandro, California

When people are shelling out $200 for a smartphone, it may make sense for them to spring for insurance, too. But if you are sticking with one of the low-end phones that sell for $50, getting insurance for it is a waste of time and money.

serendip80, PCWorld.com forums

One impressive service to add to your list: Google Apps, Educational or higher edition, provides a remote wipe of mobile phones that are registered to the service. If you lose your phone, your group's administrator can log in, and with one or two clicks, send instructions to the phone to reformat its drive.

DavidHackett, PCWorld.com forums

User Reviews

Regarding "User Reviews: How to Use Them Wisely" [*Consumer Watch,* May]: I find negative and neutral reviews most helpful. I figure most companies won't give their own product anything less than 4 (out of 5) stars. I also usually know why I want a product, and would like info on why I wouldn't want it.

I disregard any reviews that don't say specifically why the reviewer liked or disliked the product under discussion.

I also generally disregard product reviews that are only negative because the product was dead on arrival.

nafhan, PCWorld.com forums

Mobile Digital TV

Your article ["Mobile Digital TV: Coming to a Small Screen Near You," *Forward,* May] makes me wonder how the devices you surveyed will fare in markets that are also served by Clear 4G Internet services. [**Editor's note:** For more information on such services, see page 14.] The Clear mobile hotspot box sells for about the same price as the Valups box you tested, and it does phone, Internet, and through-Internet services; it also has more and more TV content available, much of it in resolutions suitable for phones, iPads, or full-scale netbooks and laptops. Though Clear is considered a WiMax technology or service, if it were to add an over-the-air component and an antenna, I think it would blow dedicated mobile TV devices out of the water.

rcprimak, PCWorld.com forums

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Forward

Good-Bye to Privacy?

BY TOM SPRING

Learn about major new threats to your privacy, from social networks to advertisers to yourself.

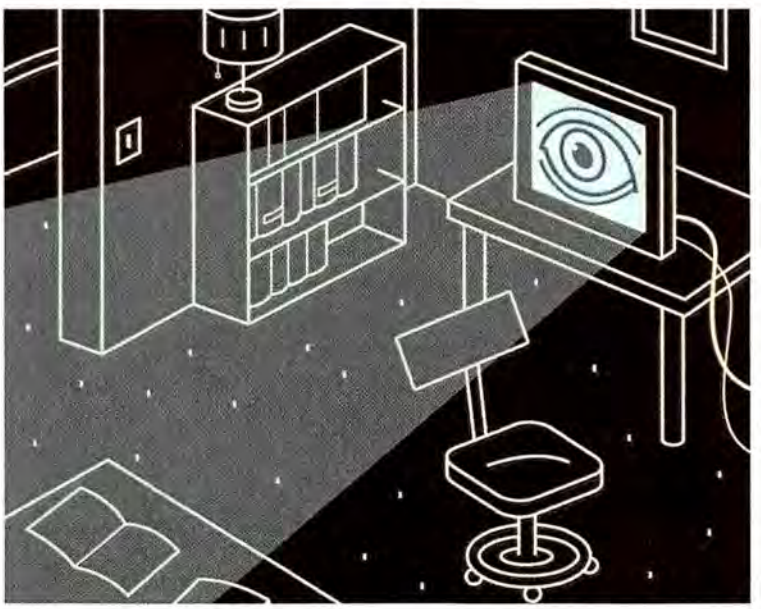
NEW YORKER Barry Hoggard draws a line in the sand when it comes to online privacy. In May he said farewell to 1251 Facebook friends by deleting his account of four years to protest what he calls the social network's eroding privacy policies.

"I'm sick of keeping track of my Facebook privacy settings and what boxes I have to check to protect myself," says Hoggard, a computer programmer. "I don't have a lot of illusions about online privacy, but Facebook has gone too far," he says of Facebook's recent privacy policy changes.

From Facebook to advertisers who may be putting your online identity up for sale to the highest bidder, and to strangers who could track you across town, new ways of using technology and the Internet are making privacy issues a flash point for controversy.

"Privacy today isn't what it was a year ago," says Jeffrey Chester, director of the Center for Digital Democracy, a nonprofit group that promotes online privacy and free speech. "It wasn't long ago we were worried about advertisers planting cookies on our PC," he says. With today's trends, keeping a handle on your privacy is going to become even harder a year from now, he adds.

What follows are several emerging privacy threats.



Social Networks

Do social networks herald the end of privacy? Lots of former Facebook users who recently ditched their accounts in protest think so. With 450 million users, many say, Facebook is a bellwether for other social networks on user privacy.

Swapping small talk and vacation photos made Facebook addictive for users. But over the years, they've watched as their private info became shared with a growing sphere of strangers—advertisers. And in May, Facebook made changes to its privacy policy that exposed more personal data to a wider range of marketers.

One change involved the Instant Personalization pilot program, which let selected Facebook partner Websites access your data and tailor content to your tastes. With Instant Personalization activated, your Facebook information can be accessed the moment you arrive on partner sites including Microsoft's Docs.com, Pandora, and Yelp. When the program launched in April, Facebook automatically activated it for all users. However, a privacy uproar forced the company

ILLUSTRATION: HARRY CAMPBELL

PCWORLD.COM

For tips on negotiating the maze of Facebook's privacy settings, go to find.pcworld.com/70132. And for ongoing coverage of privacy issues, read our Privacy Watch blog at find.pcworld.com/70133.

to revise its policy. Instant Personalization is now optional for users.

Facebook has suffered privacy backlashes before. In 2007 it introduced Beacon, an ad system that tracked certain actions of Facebook users on 44 partner sites so as to report those actions back to users' Facebook friends network. But many users revolted, citing privacy concerns. Facebook CEO Mark Zuckerberg quickly apologized and made Beacon an optional feature.

"Facebook is literally turning down the Facebook privacy settings for its users," says Electronic Privacy Information Center director Marc Rotenberg. In May, EPIC and 14 other consumer groups filed a complaint against Facebook with the Federal Trade Commission. The complaint accuses the site of following unfair and deceptive business practices, in part, for disclosing previously private details to the public.

Google Buzz (the search giant's social network) has also endured privacy issues. Buzz exposed a list of users' most frequently accessed e-mail contacts when it launched earlier this year.

Social networks have forced users to rethink what privacy is in a world where public sharing of private lives has become commonplace, observes Jeremy Mishkin, an attorney specializing in privacy law. "The real issue is how best to assure individuals they have control of their own information," Mishkin says.

Facebook declined interviews, but issued a statement: "It's important that Facebook and other sites provide [users] with clear control over what information they want to share, when they want to share it, and with whom. We're listening to feedback and evaluating the best way to respond to concerns."

Data Harvesting

Creating a digital profile on you gets a lot easier if you are on Facebook or Google Buzz and hanging a shingle on LinkedIn. That marketers use your interest in, say, Volkswagen cars to target-market you a new Jetta may be no surprise. But will your Facebook status ever be used by a credit agency, health care provider, or future employer to determine if you are a good bet?

Firms such as California-based Rapleaf say they are working with financial institutions to run their databases of e-mail addresses to assemble customer profiles based on information shared on social networks. Rapleaf's vice president of business development, Joel

Jewitt, says it collaborates with company marketing departments, not credit-approval departments, to better target financial services to banking customers.

Rapleaf is merely one of many firms—from Acxiom to Unbound Technology—that tap into social networks to marry your profiles, tweets, and LinkedIn information with your e-mail address. If a company wants to know more about you, it can just hire one of these outfits.

The firms bristle at the notion that your credit card interest rates could be jacked up based on a tweet that you just got laid off. But privacy experts say that this may be a reality in coming years. (For more, see find.pcworld.com/70135.)

Stalked by Ads

To privacy activists, online advertisers have always been too smart for their own good. Now two emerging trends in advertising have privacy groups once more complaining that Madison Avenue has gone too far.

The first trend is advertisers' combining online and offline data to build digital dossiers of Web surfers. Companies such as BlueKai, DataLogic, and Nielson are working with online advertisers to help them reach Internet users with ads based on their offline behaviors and demographic attributes. Advertisers are careful to note that only nonpersonally identifiable information is used and that people are never identified by name, but rather as demographic subgroups. Want to show a banner ad to, say, a conservative Caucasian mom with three kids, age 34, with a household income of $120,000, who works out four times a week at the gym? No problem.

Connections between the offline and online worlds are often made via an e-mail address kept on record by a company that you do business with. That e-mail ad-

dress could create a link to a composite profile made up of your online activities from sites such as social networks. By cross-referencing that e-mail address, advertisers can show you banner ads tailored to your spending habits and to your political views expressed on Twitter.

The second trend is a real-time ad-bidding technology that lets advertisers, such as Google and Yahoo, track users online and deliver customized third-party ads—all in the blink of an eye.

Here is how it works. As you go from site to site, advertisers can bid in real time to show you an ad tied to your online activity. For example, if you are shopping for a Nikon digital SLR camera, you may see an ad for a competing Canon DSLR model on the next site you visit. If you buy that Canon, advertisers can then bid—in a fraction of second—for the right to show you, on the next site you jump to, ads for lenses for that camera.

Advertisers can track you from site to site only if the same advertising compa- »

ny delivers ads to them. For instance, Google-owned DoubleClick delivers ads to thousands of the Web's top destinations. Its real-time ad-bidding program is called DoubleClick Ad Exchange.

Privacy Double Whammy

The rise of those two online marketing trends that create cunningly effective advertising campaigns may not be a real surprise. But privacy activists say that they go too far and that advertisers are unfairly tracking people and profiting from their data.

"Consumers will be most shocked to learn that companies are instantaneously combining the details of their online lives with information from previously unconnected offline databases without their knowledge, let alone consent," says Ed Mierzwinski of the Public Interest Research Group, a government watchdog organization.

The Center for Digital Democracy's Jeffrey Chester says that this type of advertising fosters predatory ads. Examples could be dubious health cures or high-interest loans for HDTVs.

The CDD and PIRG have asked the Federal Trade Commission to look into ad networks such as Google's and Yahoo's. The groups seek more transparency from advertisers and a way for consumers to opt out of this type of profiling.

Advertisers have been sensitive to privacy concerns, according to the Ponemon Institute, a privacy research group. Ponemon says such concerns have prompted online advertisers to use behavioral ads 75 percent less than they would otherwise.

Transparency is key for advertisers, says Scott Meyer, chief executive of Better Advertising. He says the industry has stepped up efforts to ward off government regulation by developing self-regulatory programs. One is the use of transparency icons: Click on such an icon in an ad, and it tells you that the targeted ad is using demographics and behavioral data.

Better Advertising offers a browser plug-in called Ghostery (www.ghostery.com) that can alert you to hidden trackers and block scripts from tracking you. Chrome, Firefox, and Internet Explorer support the add-on; but, except in Chrome, the blocking functions don't work.

Mobile Stalking

Without a handle on your GPS-equipped smartphone or geolocation services, you may have only yourself to blame for "friending" Big Brother. Here's why.

Mobile social networks

Foursquare, Gowalla, and Loopt are designed to make it easy for your friends to track your whereabouts as you go to restaurants, bars, and shopping malls. A bevy of iPhone and Android mobile apps make use of location information. Facebook says it will introduce features later this summer that will make location sharing as easy as updating your status.

These services have privacy advocates urging consumers to be careful as to how much they reveal about themselves. In February, privacy groups spoke at congressional hearings on consumer privacy and urged lawmakers to limit how much advertisers can track users of these services. Privacy guidelines for location-based services and advertising are outdated and obsolete, they say.

Peer Privacy Pressure

Reward-based geolocation services such as Foursquare, which doles out coupons and "points" for members who broadcast their location, spur these concerns.

"You need to consider whether there is anything that your location might indicate about you that you don't want to be public," says Peter Eckersley, senior staff technologist with the Electronic Frontier Foundation civil liberties group. For example, he says, "are you going to church? To a political meeting? To a nightclub? To the beach on a Tuesday?"

Mobile Ad Targeting

Still other experts worry about advertisers eager to break into a nascent direct-to-mobile marketing industry. Mobile social network Loopt says it is developing an ad service that can target offers to repeat customers of a specific store just as they walk in. The company says that advertisers want to reach people as they are making a buying decision.

Apps that run on smartphones and location-aware gadgets, such as the iPad, also concern privacy activ-

ists. "With the help of GPS technology, every advertiser is going know where you are [and] what you're doing on your phone," says the CDD's Chester. Mobile apps—even e-readers—will know how close you are to a mall, a restaurant, or your doctor's office, for instance.

What is the future of privacy? Will we all just throw up our hands and agree with Facebook CEO Mark Zuckerberg, who famously stated in 2009 that "the age of privacy is over"? Better Advertising's Meyer believes that the creepy "someone is watching me" feeling will dissipate as technology allows you greater control over your privacy, and as transparency increases.

Maybe then we can all stop looking over our shoulders.

PCWorld *contributor Ian Paul helped with this report.*

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Will 4G Wireless Live Up to the Hype? A Primer

A rundown on the who, what, when, where, and why of the new generation of mobile broadband that—some experts say—will give our devices superpowers.

PERHAPS YOU'VE started seeing stories about something called "4G" and are wondering what it is and whether you want it.

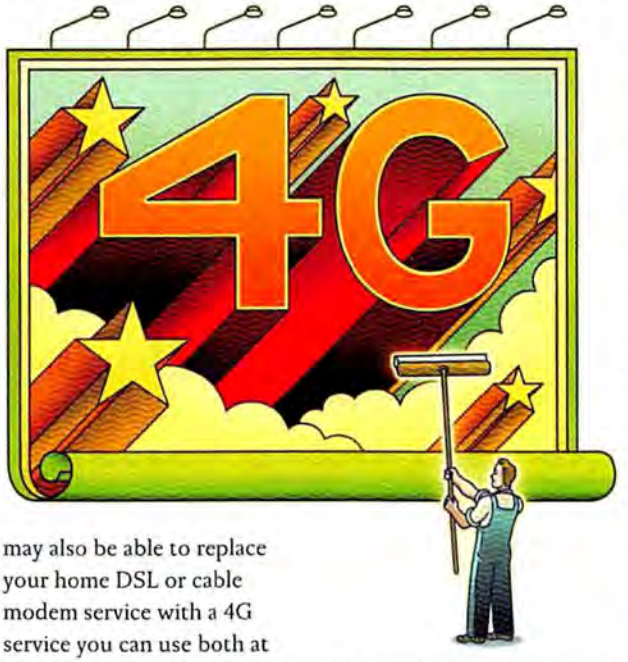
Here's a quick guide to the basics of 4G wireless.

What does "4G" mean? 4G is a marketing term that service providers are using to describe the "fourth generation" of wireless services. They typically offer between four and ten times the performance of 3G networks.

What technologies run 4G services? The two main technologies are Long Term Evolution (LTE) and WiMax. The IEEE (Institute of Electrical and Electronics Engineers) developed the WiMax standard; the 3GPP, an industry body for providers that use GSM (the leading technology for cellular communications), heads development of the LTE standard. WiMax and LTE use different types of wireless spectrum.

How fast is 4G compared with 3G? WiMax providers are advertising download speeds of between 2 megabits per second and 6 mbps, with peak speeds of 10 mbps or more. Verizon, which will launch LTE networks in the United States later this year, is expecting to offer services with download speeds in the 5 mbps to 12 mbps range. Most 3G data systems today deliver speeds of between 400 kilobits per second (that is, 0.4 mbps) and 1.5 mbps.

Should I want 4G? The faster download speeds of 4G should greatly improve the performance of demanding applications such as streaming video, networked gaming, and videoconferencing. You may also be able to replace your home DSL or cable modem service with a 4G service you can use both at home and on the road.



Are 4G services available now? In some places. In the United States, the partnership of Clearwire and Sprint offers WiMax-based services in 28 cities, including Atlanta, Chicago, Philadelphia, and Seattle, with plans to add more cities in 2010.

Among LTE providers in the U.S., Verizon plans to launch commercial services in 25 to 30 as-yet-unnamed markets before the end of 2010; AT&T expects to add LTE service in 2011.

Do other providers intend to offer LTE? Yes. In March, MetroPCS announced plans to launch LTE services in Las Vegas this year. T-Mobile is expected to launch LTE services sometime in the future, but it has not specified a time frame for doing so.

What are the cost advantages of 4G versus 3G? Right now, the Clearwire/Sprint plans provide true "unlimited" data usage, whereas virtually all 3G cellular plans impose extra charges for downloading more than 5 gigabytes of data per month. Plans from Clearwire and its resellers are typically $10 to $20 per month cheaper than the standard $60 per month of a 3G cellular data plan, too. At this writing, Verizon has not announced LTE pricing.

Can I get 4G on the 3G phone or USB modem I have now? No. 4G networks run at different frequencies than the ones current cellular services use.

Does 4G support voice calls? Not in any current implementation, other than VoIP applications like Skype or Vonage. Most early 4G phones will be "hybrid" devices that include a 3G chip to handle voice calls.

Are any 4G phones available now? As of April 2010, the only 4G phone announced for U.S. markets is Sprint's HTC EVO 4G, which was unveiled in March and is expected to be available by this summer. Verizon has said that it expects LTE phones to ship by mid-2011.

Why doesn't the iPhone come in a 4G version? Since Apple sells the iPhone in the United States under an exclusive contract with AT&T, it has manufactured the phone with chips that connect to AT&T's 3G cellular network. Many people hope that Verizon, whose plans for a 4G network are more immediate than AT&T's, will begin selling a CDMA version of the iPhone later this year.

Can I use 4G while I'm on the road, as with a cell phone? Yes. The idea behind 4G is that it's mobile broadband.

Can 4G services replace my home DSL or cable modem? Yes, unless you're looking for really high-speed services. Clearwire's WiMax service can match some cable modem offerings.

For users who want both home and mobile service, WiMax 4G may be a better deal than the combined price of a stationary service and a 3G data plan.

See find.pcworld.com/70122 for more answers to questions about 4G wireless.

—Paul Kapustka

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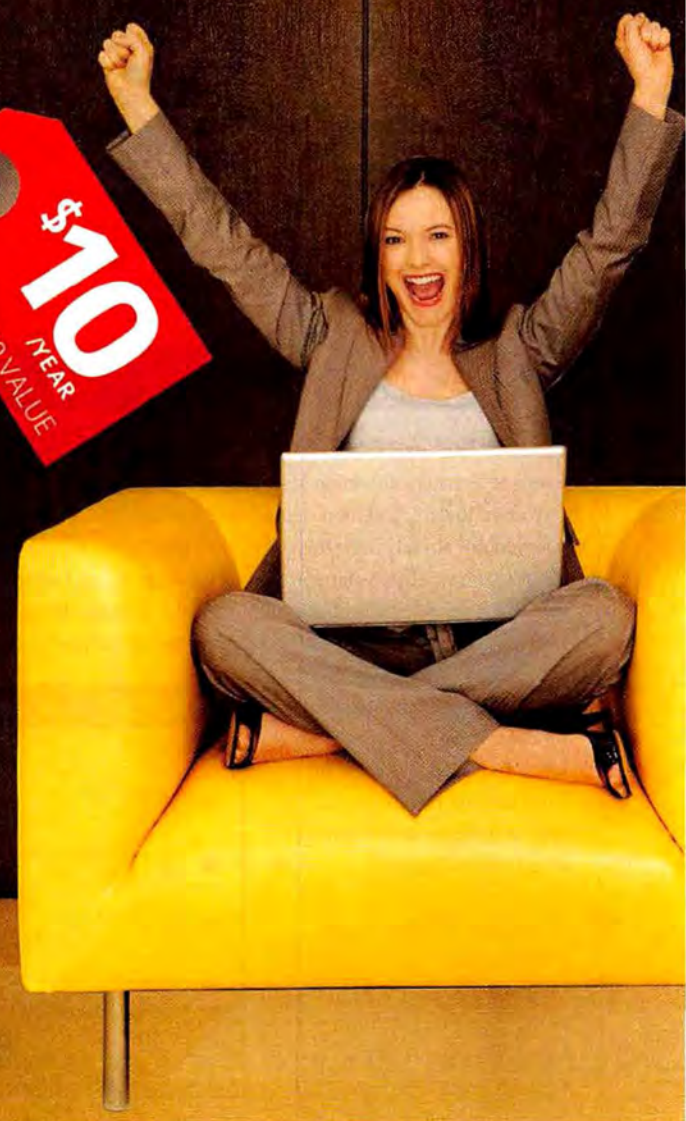

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Google Editions: E-Books Over Your Browser

GOOGLE WANTS TO bring your digital book reader into the cloud. In May, the company announced plans to launch its own digital bookstore, a Web-based effort called Google Editions. The store will open sometime this summer, a Google spokesperson has confirmed. And unlike many of the current e-book options on the market, Google Editions will let you buy and use its books wherever you want.

A Different Digital Bookstore

The news of Google Editions' impending debut comes from Chris Palma, Google's strategic partner development manager, who outlined Google's plans to flip the digital book industry upside down.

Unlike its rivals—Amazon, with its Kindle; Apple, with its iBooks; and Barnes and Noble, with its Nook—Google Editions will allow you to download and read books using only your Web browser, meaning via any device that can surf the Web: your laptop, your desktop, even your Kindle, Nook, or iPad. No separate apps or interfaces will be required.

Google E-Book Sales

Reports suggest that the purchasing process may also be a completely different beast. You will be able to buy your e-books not only through Google's service, but also from the Websites of retailers—both big-name stores and small independent shops—that will keep most of the money earned.

Google engineer Dan Clancy has been cited as saying that Google Editions will offer a substantially larger selection than other e-book retailers. For publishers, Google's approach could also mean greater control over their products and how they're sold.

Still unknown, though, is how the Google Editions user interface will work.

—JR Raphael

BETA WATCH

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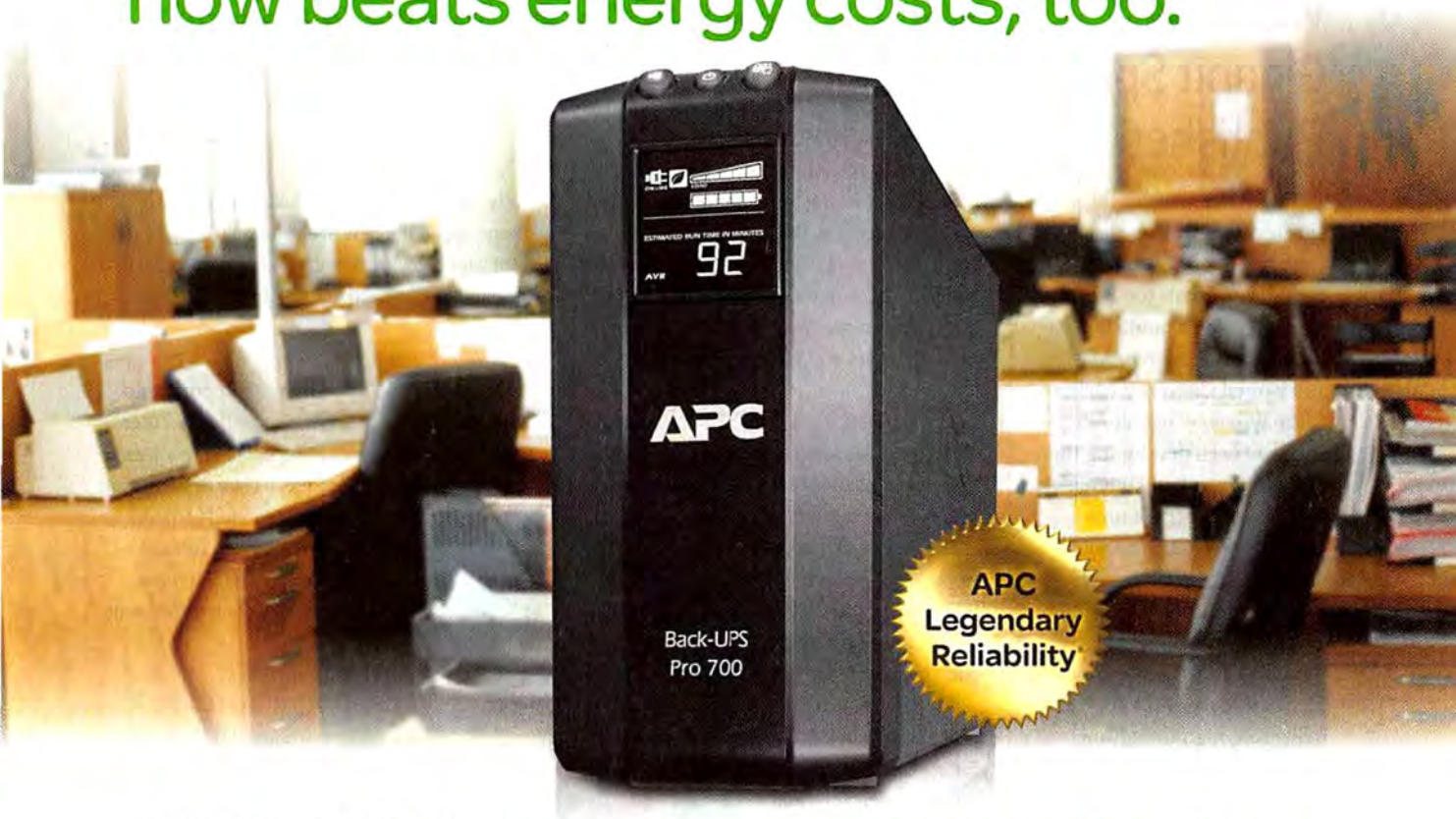
ILLUSTRATION: PETER HOEY

Unbeatable power protection now beats energy costs, too.



Only APC Back-UPS delivers unsurpassed power protection *and* real energy savings.

Today's cost-saving Back-UPS

For years you've relied on APC Back-UPS to protect your business from expensive downtime caused by power problems. Today, the reinvented Back-UPS does even more. Its highly efficient design noticeably reduces energy use, so you start saving money the minute you plug it in. Only APC Back-UPS guarantees to keep your electronics up and your energy use down!

Unique energy-efficient features

Power-saving outlets automatically shut off power to unused devices when your computer and peripherals are turned off or on standby. Automatic voltage regulation (AVR) adjusts the undervoltages and overvoltages without using the battery. With our patent-pending AVR bypass, the transformer kicks in only when needed and automatically deactivates when power is stable. Plus, APC's highly efficient designs reduce power consumption when power is good and extend runtimes when the lights go out. Together, these power-saving features eliminate wasteful electricity drains, saving you about $40-50 a year. And managing today's Back-UPS couldn't be easier thanks to an integrated LCD that provides diagnostic information at your fingertips.

Trusted insurance for all your business needs

The award-winning Back-UPS provides reliable power protection for a range of applications: from desktops and notebook computers to wired and wireless networks to external storage. The reinvented APC Back-UPS is the trusted insurance you need to stay up and running and reliably protected from both unpredictable power and energy waste!

Keep your electronics up and your energy use down!

Back-UPS models are available with the features and runtime capacity that best suit your application, and many models have been designed with power-saving features to reduce costs.

The High-Performance Back-UPS Pro Series

High-performance Back-UPS Pro units deliver cost-cutting, energy-efficient features. Power-saving outlets automatically shut off power to unused devices when your computer and peripherals are turned off or on standby, eliminating costly electricity drains. BR700G shown above.

The energy-efficient ES 750G

The ES 750G boasts innovative power-saving outlets which automatically shut off power to controlled outlets when the computer plugged into the host outlet is deemed asleep, eliminating wasteful electricity drains.

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The ES 550G uses an ultra-efficient design that consumes less power during normal operation than any other battery backup in its class, saving you money on your electricity bill.

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Superfast Wireless Gigabit Spec Published

THE GROUP developing a wireless technology that can transmit data up to ten times faster than today's speediest Wi-Fi published its initial specification in May and named Cisco as a backer.

The Wireless Gigabit Alliance has been developing the technology, called "WiGig," for a year. It will use unlicensed spectrum around 60GHz and should be able to attain transmission speeds of 6 gigabits per second.

WiGig is designed to replace cables for jobs such as delivering high-definition video streams to monitors and sending data between a laptop PC and its docking station. It's not intended to compete with Wi-Fi.

The specification includes support for tri-band devices that maintain compatibility with current Wi-Fi devices that operate in the 2.4GHz and 5GHz frequency ranges.

The alliance is now also offering equipment makers the chance to sign up as "adopters" of the technology; doing so would let them access the specification so that they could begin developing WiGig products. The first compatible products are due sometime in 2011.

—Martyn Williams

GEEKTECH

Web 101: New Site-Design Tools Are Coming

HTML5 and CSS3 will let Web developers do more with their sites. Here's what you need to know.

HTML HAS BEEN the standard language for building Web pages. Now some new technologies, primarily HTML5 and CSS3, are going to change how you interact with Websites.

Both are the latest versions of markup programming for Web pages. HTML5's video element, which simplifies adding video to a Web page, has been getting all the attention, but HTML5 has many features that will make it great for users and Web developers alike.

Flash-Free Video and Animation

HTML5 will allow you to watch videos without using a plug-in like Flash or Silverlight—the video feature is built right in.

This will be of great help to Apple iPhone users. But HTML5 may benefit BlackBerry phones too (most can't support Flash).

HTML5 video support is still in flux. Safari, Chrome, and the upcoming Internet Explorer 9 will support embedded HTML5 video that uses the H.264 format. Firefox currently supports only HTML5 video that uses the Ogg Vorbis format (the Firefox folks claim that H.264's closed-source nature could cause problems with licensing in the future).

HTML5 and CSS3 will make it easier for Web designers to create animations and interactive games without Flash. For examples of what you can do with these tools, see Akihabara Games (find.pcworld.com/70106) and an animated *Star Wars* AT-AT walker at find.pcworld.com/70107.

Offline Storage

HTML5 gives Web apps the ability to store information and Internet utilities—including e-mail and calendars—for offline use.

When you're back online, these apps will load faster because the structure of the page will already be saved in your browser's cache.

With the offline-storage feature, you should be able to specify in the browser which sites or types of sites you want the browser to continually cache without individually saving each page; using the new system, you'll be able to set your browser to automatically save, say, all the pages of a particular Website.

New Design Tools

HTML5 and CSS3 also make for more attractive Web apps and sites. HTML5 has features that make Web-application building much easier. Some examples are more color and gradient support, shadowing, rounded corners, and, of course, offline storage. These all make for a more pleasant-looking Web page.

HTML5 Compatibility

Though HTML5 and CSS3 aren't yet finalized, some browsers—such as the current versions of Chrome and Safari—have already implemented certain draft features. And with these browsers you can see sites that have started using HTML5 and CSS3, such as CNN.com, NYTimes.com, Vimeo, and YouTube (in beta)—all employ the new video player, for example.

Internet Explorer 8 has very limited HTML5 support; however, IE 9 will support H.264 video, embedded audio (no plug-in required), scalable vector graphics, and CSS3.

HTML5 remains in "working draft" stage; it will still be a while before the spec is final.

HTML5 and CSS3—combined with other Web technologies like JavaScript—can improve the style, format, and operating speed of any Web page. The two languages will revolutionize the way we program and view the Internet, all without using many third-party apps like Flash.

—James Mulroy

Visit the GeekTech blog at go.pcworld.com/geektech *for more hacks, tweaks, and tips.*

ILLUSTRATION: PETER HOEY

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Keep Clear of Cold-Blooded Craigslist Scams

BY RACHEL SADON

PEOPLE VISIT CRAIGSLIST today for the same reason that they used to read the Sunday classified ads two decades ago: That's where the stuff is. But the hugely popular site is also where scammers go to set up shop—and from garden-variety pyramid schemes to complex money-laundering ploys to pet adoption frauds, the sheer diversity of ways to get stiffed on Craigslist is unmatched.

To be fair, the site offers very rational advice on how to recognize and avoid scams (find.pcworld.com/69801). But scammers persist, in part because Craigslist is impossible to police effectively and in part because a lot of people ignore the aforementioned advice.

Let's look at some Craigslist con classics—and draw some lessons on how to avoid them.

Learn from others' bad Craigslist experiences, and avoid getting bilked, conned, or swindled on the Web's most popular classified site.

Check Fraud

One common con on the site is check fraud. Here's how it works: You list an old couch for sale on Craigslist, and a scammer calls or e-mails you with an offer to buy it—but the person is out of town and arranges to send you a check. When it arrives, the check is written for a much larger amount, and the crook asks you to wire back the difference, possibly offering to pay a little extra for inconveniencing you. But the original check is a fake—and guess who's left holding the bag for the balance?

In January 2006, a variation of this scheme landed innocent seller Matthew Shinnick of San Francisco in jail for 12 hours. He tried to cash a bogus check that a fraudster had sent him purportedly to pay for two bicycles that Shinnick had advertised on Craigslist; but bank officials suspected Shinnick of knowingly participating in the scam, and called in the police, who arrested him. The district attorney dropped the charges against Shinnick within 24 hours, and six months later Shinnick obtained a ruling in superior court exonerating him by "findings of fact," but at that point he was on the hook for thousands of dollars in legal fees that he had incurred.

The lesson: Deal locally and never wire money to strangers.

Employment Scams

Employment scams on Craigslist count on the desperation that many people feel when seeking work to cloud their judgment. Two common ploys are involve asking for up-front training fees and soliciting personal information (often via a Website that looks legitimate) for "direct deposit" or "background check" purposes.

Promising a $21,000 salary for two months' employment, one scammer set up a fake company and hoodwinked 79 professionals into working for weeks on a sham project.

The lesson: Posts that offer an attractive salary despite requiring little or no experience, or that involve initial fees, telecommuting without meeting your boss, or hiring without an interview are giant red flags.

'Free' Stuff That Isn't

Craigslist is famous for its many legitimate postings for free stuff, but on very rare occasions malicious people have posted listings in the "Free" section, asserting that someone »

ILLUSTRATION: MATTHEW HOLLISTER

PCWORLD.COM

Other online marketplaces, including eBay, are adopting aggressive measures to fight back against fraud. For details, read "eBay Steps Up to Defend Retail Businesses" (find.pcworld.com/70120).

else's goods are available for the taking.

In one instance, a thief stole three saddles from a Robert Salisbury of Jacksonville, Oregon, and then tried to cover her tracks by posting a message on Craigslist declaring that everything at Salisbury's address was up for grabs.

Anyone whom the authorities find in possession of stolen items is subject to criminal prosecution—as was the perpetrator of the hoax, who was caught and charged with burglary, criminal impersonation, and malicious mischief.

The lesson: Word your free-stuff ads carefully. And be skeptical about picking up a free item if it involves entering the home of someone who isn't there.

Perilous Pet Ads

Last year, the U.S. Centers for Disease Control and Prevention issued a warning about a swindle informally known as the Cameroon Pet Scam: "Typically, the person offering the animal for adoption lives in another country and claims to be looking for a good home for the animal. Victims pay shipping fees up front but never receive the animal."

Another con involves supposedly "rescuing" dogs or cats, often from an animal shelter, and then selling them for a profit on the site. A New Jersey family reported putting their dog up for free adoption directly via Craigslist. The next day, they got a call from a woman who had paid $100 for the dog (also via Craigslist) but then tracked down the original owners after noticing signs of ill health in the animal and discrepancies in its veterinary papers.

The lesson: Craigslist is not the ASPCA. Make sure to get valid paperwork and documentation. Or find a pet at your local animal rescue shelter.

The misdeeds we've looked at here are hardly unique to Craigslist, but the epicenter of the world's online classified ads has a notably toothless security ethos: "Simplicity and shame work best." According to Craigslist founder Craig Newmark, the most effective tools are warnings and flagging posts for removal. And scammers know it.

SKEPTICAL SHOPPER GINNY MIES

Should You Not Donate by Text Message?

Giving to charities via cell phone is quick and convenient, but use some caution before you send that text.

WE ALL HAVE our excuses for not donating to disaster relief funds or to our favorite charities: We're broke, the donation process is too complicated, we lack the time to write and send a check, and so on. Mobile donating—giving money to an organization via text message—makes giving a little easier. But is it safe? And does it have a significant impact on the charity or the people in need?

Donating by cell phone is incredibly quick and easy: You just text a word (like 'HAITI') or a number to a specific phone number, and a set amount is charged to your phone bill. Your carrier then delivers the funds to the charity. The mobile donation approach has been around for a couple of years, but it didn't really catch on until the 2010 Haiti earthquake. The American Red Cross's Haiti Relief and Development Fund, the most successful mobile campaign to date, raised more than $32 million within a month after the disaster.

Advocates say that mobile donations are an appealing option because they're convenient and offer instant gratification. The system also opens up philanthropy to individuals who might otherwise feel that they couldn't contribute. Younger audiences, for instance, appreciate being able to donate via text message because they don't need a credit card to do so.

Find a Legitimate Charity

Before you start texting away, though, make sure that you're donating to a legit nonprofit organization. If you're unsure about a charity, you can look it up on a watchdog site such as Charity Watch. Be wary of charities you've never heard of or organizations that contact you directly to get you to donate via text. Stick to the big-name charities, and you should be okay.

The Federal Trade Commission also advises prospective donors to give directly to a charity rather than to a group that solicits contributions on a charity's behalf. A group advocating for the American Red Cross, for example, will take a portion of the proceeds to cover its costs, leaving less of your donation for people in need.

Also try to determine whether normal texting rates will apply to your donation. During the Haiti crisis, most carriers waived texting charges for donations. It all depends on the carrier and on the charity you're giving to. In addition, make sure that you're committing to a one-time donation and not to a recurring one that will appear on your phone bill every month.

The biggest problem with mobile donations, though, isn't where the money is going, but how long it will take to get there. It might take only a few seconds for a donor to text 'HAITI', yet the contribution might not reach the targeted relief agencies for a few months. Some carriers, such as Sprint, expedited their subscribers' donations to Haiti relief organizations. Normally, however, it takes roughly 30 to 60 days for the carriers to transfer donated funds to an agency.

In any event, mobile donations can do only so much. Carriers may impose limits on the amount and the number of times you can donate. For example, during the Haiti earthquake crisis, AT&T imposed monthly maximums of five donations of $5 or three donations of $10. If you're looking to make an impact, the best way is via a one-time lump-sum contribution to the charity's Website.

ILLUSTRATION: HARRY CAMPBELL

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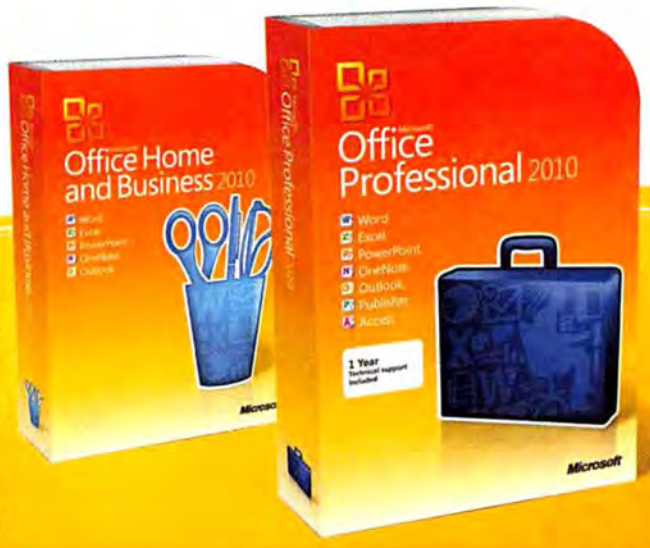

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ON YOUR SIDE

MARLA MIYASHIRO

I BOUGHT A BFG Tech video card at a Fry's Electronics store and submitted a rebate claim. BFG rejected it, seemingly because the barcode on my box doesn't match the one associated with the rebate. On BFG's site, the barcode on the video card's spec sheet doesn't match the barcode on my box. So all video cards sold with the same packaging as mine are excluded from the rebate. Is this due to a packaging mistake, a documentation mistake, or a mistake on the rebate form? *Eric Bousset, Dublin, California*

OYS responds: We contacted BFG about Bousset's issue. A company representative told us that it had first set up the rebate offer for a similar model and then changed it, but that Fry's had posted the rebate offer before getting BFG's update. She also said BFG's rebate company was going back through the submissions and honoring the claims for both models. Bousset has received his $10 rebate.

If a company unfairly rejects your rebate claim, call it. With the right documentation, you may be able to prove that the company made a mistake. By bringing an issue to a company's attention, you give it a chance to correct its error—not only for you, but for other customers as well.

Rejected Reimbursement

Bill Holleman of Stone Mountain, Georgia, contacted us after he ordered a warranty replacement for a failing hard drive in his daughter's HP Pavilion laptop. An HP customer service agent told Holleman that he had three days to ship the bad hard drive to HP, or he would be charged for the new drive. Under this tight deadline, Holleman paid a local computer service company $49 to remove the old drive. He asked HP to reimburse the $49, but it refused, saying that he needed preauthorization.

An HP rep told us that Holleman should have been told he had 15 days—not 3—to return the defective part. She also noted that HP's limited warranty stipulates that customers can bring defective products to an authorized service provider, but that HP won't pay for work done by shops not authorized by the company. Nevertheless, HP did reimburse Holleman.

We recommend getting a list of authorized repair shops from the vendor when you need to have warranty repairs done. Also, if a customer service rep gives you an unreasonable deadline for returning parts, ask to speak to a supervisor to verify that the information is correct.

Recalled Audio Receivers

Niles Audio, in cooperation with the U.S. Consumer Product Safety Commission, has recalled about 3800 ZR-6 MultiZone Receivers. A failure in the receiver's internal components can cause connected loudspeakers to overheat, posing a fire

hazard. Niles has received three reports of connected loudspeakers overheating, but no injuries have been reported. Consumers should stop using the recalled receivers and contact Niles for a free repair kit. For details, call Niles at 800/667-3991, visit the company's Website (www.nilesaudio.com/ZR6Info), e-mail the firm at ZR6Info@nilesaudio.com, or write to Niles Audio Corp., Attention: ZR-6 Recall, 12331 SW 130th St., Miami, FL 33186.

Do you have a problem with a hardware or software vendor involving customer service, a warranty, a rebate, or the like? E-mail onyourside@pcworld.com. *We can't address every issue, but we will try to handle those of greatest interest.*

ILLUSTRATION: HARRY CAMPBELL

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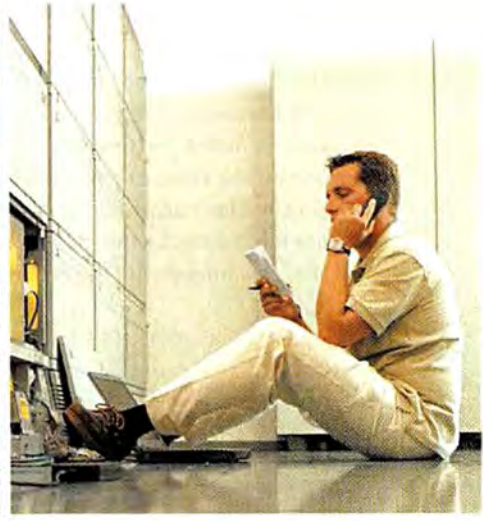

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How to Move Your Business to the Cloud

BY ADAM PASH

A FEW MONTHS ago, *PCWorld* discussed whether switching to cloud computing was worthwhile ("Should You Move Your Business to the Cloud?" *Business Center,* April). Here I'll discuss some of the tools you can use for working this way.

You can take advantage of the cloud without ditching desktop apps altogether, and you can pair your significant business apps and data with the Web to keep everything in sync, accessible from any browser, and backed up to the cloud.

Note: For links to tools and services mentioned here—I focus on some of the most popular and trustworthy options—go to find.pcworld.com/70070.

Try these tools to get started and keep everything in sync when your workgroup switches to Net-based work processes.

Office on the Web

You have a few good choices for integrating popular Microsoft Office apps with the Net.

Microsoft's Office Live Workspace service works with Word, Excel, and PowerPoint; it lets you store Office documents on the Live Workspace Website, and you can view those files in a browser, share them with other people in your workspace, and edit them on your desktop. The files stay online on Microsoft's servers, but you can open, edit, and save them just as if they were on your hard drive. (For details on Office 2010 and its approach to Web-based productivity, see page 77.)

If you prefer Google Docs (Google's suite of online office applications) to Live Workspace, a couple of tools can help you sync your desktop Office apps with Google Docs.

The first, Memeo Connect, syncs any document between your desktop and Google Docs. You can choose to edit the documents locally in Microsoft Office or online in Google Docs; either way, Memeo Connect will keep your local Office documents constantly in sync with Google Docs.

If you do lots of collaboration, a better option may be OffiSync. Once installed, OffiSync works much like Memeo Connect, letting you view and edit any document on your desktop or within Google Docs. In collaboration efforts, different users can work on the same document at the same time, and changes that one user saves will merge instantly with the version of the document that the other user has open.

Online Calendar

A calendar that syncs to the cloud ensures that you'll always have access to your schedule, and it can sync wirelessly to your smartphone.

To handle the job, look no further than Google Calendar and the Google Calendar Sync plug-in for Microsoft Outlook. Once installed, the tool can perform seamless two-way synchronization between your desktop Outlook calendar and Google Calendar.

A bonus for handsets: If you have a BlackBerry, iPhone, Nokia S60, or Windows smartphone, Google Sync for your phone wirelessly syncs your calendar with your device so that you can check your schedule on the go, add an appointment, and rest assured that the next time you sit down at your computer, your calendar will be in perfect sync.

Your contacts are the lifeblood of your business, so making sure they're always backed up, accessible from anywhere, »

ILLUSTRATION: GREG CLARKE

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See our list of 13 top Web services for business and communication at find.pcworld.com/70071; and if you travel a lot, read how to stay charged and connected while on the road at find.pcworld.com/70105.

and up-to-date is extremely important.

If you shell out for the Google Apps Premier Edition (not a bad idea if you're serious about syncing your data with Google's cloud), you also gain access to Google Apps Sync for Microsoft Outlook—a tool that deftly handles syncing of your contacts between Outlook and Google Contacts.

If you don't want to commit to Google Apps Premier but would like to sync your Google Contacts with your Outlook contacts, check out GO Contact Sync. Want to try a non-Google app? Plaxo is an excellent online contact management service that syncs with Outlook like a charm.

A bonus for your cell phone: Google Contacts, like Google Calendar, syncs seamlessly with BlackBerry, iPhone, Nokia S60, and Windows handsets. Google Sync for your phone is particularly handy with contacts, too.

If you're used to creating and editing files online, you may prefer to use a file-syncing application such as Dropbox or SugarSync to sync your documents to the cloud. Simply install one of these utilities on your computer, and you can instantly sync and back up any file between the cloud and any computer that has the app installed on it. Thereafter, anything you add to a synced folder syncs between the Web and every desktop where you've installed it.

E-Mail in the Cloud

E-mail is very important to any business, but syncing e-mail between your desktop and the Web—whether via your company's e-mail server or a cloud service like Gmail—isn't exactly new.

If you use Gmail or Google Apps, I recommend setting up Gmail's IMAP with your desktop e-mail client to keep your desktop client and your Gmail inbox synchronized. (To enable IMAP in Gmail, log in and then visit the 'Forwarding and POP/IMAP' settings page.)

Once you've set up Gmail IMAP on your desktop, your desktop e-mail client of choice will always be in perfect sync with Gmail in your browser.

NET WORK TONY BRADLEY

Using Panda Cloud Internet Protection

Small and medium-size businesses may want to consider Web-based security.

LIKE MANY PEOPLE, I am a little tired of "cloud" as a buzzword. Every vendor is adding the term to the names of its products and services to ride the wave of hype. But that doesn't mean that no financial and strategic benefits can be gained from cloud-based services.

The trick for organizations is to be diligent about determining their needs and how to address them, and then to put in the necessary time and effort to research options—cloud-based or otherwise—to discover one that fits, rather than just buying the first product with "cloud" in the name.

Security in the Cloud?

Panda Security recently announced the availability of its Panda Cloud Internet Protection (PCIP) service, a cloud-based security offering geared to small and medium-size businesses.

SMBs face the same threats, and have the same security concerns, as larger enterprises, but lack the personnel and budget to guard against them effectively. PCIP promises an affordable security infrastructure that can stop Internet threats by leveraging resources in the cloud.

"SMBs increasingly have widely distributed workforces, with employees accessing the Web from home offices, at client sites, while traveling, or in coffee shops," says Rick Carlson, president of U.S. operations, Panda Security, in a press release for the service. "The high vulnerability of these scattered Internet access points, coupled with highly targeted cybercriminal methods, means that today's businesses...require an Internet security service that can be managed remotely and deliver instantaneous protection without getting in the way of business."

Panda claims this is just what PCIP offers, as well as advantages such as data leak prevention, policy enforcement, and reporting features, providing SMBs with a comprehensive security platform.

Panda says that PCIP lets IT administrators easily and instantaneously adjust settings, filter URLs, and regulate the use of risky Internet applications, regardless of the user's device or location. It can also redirect Internet traffic and malware analysis through the cloud, freeing local network bandwidth for other uses.

Potential Savings

Like Microsoft's new offering, Windows Intune (still in beta; find.pcworld.com/70073), PCIP and the other pieces of Panda's Cloud Protection framework—Panda Cloud Office Protection and Panda Cloud Email Protection—are tools that save SMBs time and money by providing back-end infrastructure and eliminating costs and administrative requirements, freeing customers to focus on managing and protecting what are sometimes called their endpoints—the computers and devices that scattered employees use.

It's an example of the kind of exceptional opportunities the cloud can provide SMBs. Services like PCIP and the other elements of Panda Cloud Protection, or Windows Intune, give smaller companies access to an enterprise-class infrastructure and tools, but in a cost-effective way that fits an SMB budget.

Panda Cloud Internet Protection is available through Panda's authorized resellers, and it can be purchased either alone or as part of the Panda Cloud Protection suite. For additional information, and to download a free trial, browse to find.pcworld.com/70074.

ILLUSTRATION: HARRY CAMPBELL

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TECH AUDIT

CRM Revamp Saves Labor, Boosts Productivity for a School

How a Salesforce.com-based overhaul helped a nonprofit child-care center make the grade.

ESTABLISHED IN 1999, the Montessori School of the Bay Area is a registered nonprofit daycare and preschool for 60 children who range in age from three months to five years, primarily from low-income families. The school's central database was in dire need of an update to better organize the parent community, create stronger relationships with parents and donors, and improve tracking of student activities, immunizations, and other important data.

My team at Acumen Solutions took on this job on a pro bono basis, volunteering 97 hours of service time to overhaul the school's outdated and inefficient CRM system.

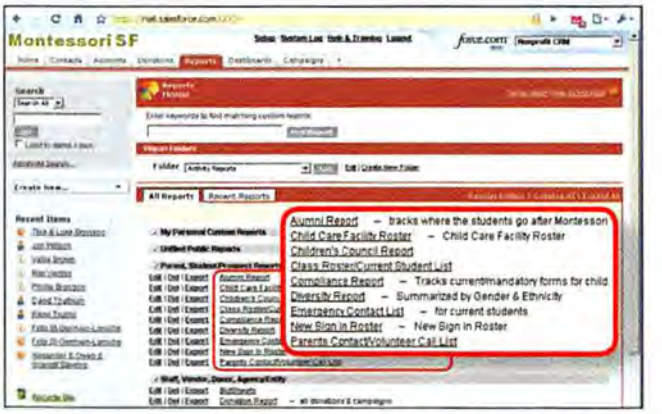
Since the school opened in 1999, it had been using ProCare—a specialized database program for the child-care industry—to manage student records and contacts. But because of ProCare's limitations, the school also used an ad hoc system of Excel spreadsheets and paper-based forms. This often led to disorganization and conflicting information. Donation records, for example, were scattered in multiple spreadsheets.

The school's wish list for a new database system included:

- The ability to manage current-student and alumni information and prospective-student waiting lists.
- A way to maintain relationships with other area schools and with local agencies to share ideas and student-assistance records.
- Features to manage marketing and accounting for donations.
- A way to track its network of parents, donors, volunteers, teachers, students, other schools, and social service agencies.

The Solution

As part of this pro bono initiative under Acumen Solutions' Social Responsibility program, my team used our Salesforce.com expertise to create a system that consolidated all of this data, including records for current and prospective students, teachers, staff members, families, parent donations, corporate donations, and fundraising events. No longer would the school need to rely on error-prone paper systems and disconnected spreadsheets.



ACUMEN'S DEPLOYMENT OF Salesforce.com Non-Profit Edition lets this Montessori school access its data through 19 customized reports.

Using Salesforce.com Non-Profit Edition, we linked the data to provide 19 customizable reports to help the school track significant factors such as student and teacher diversity, donations, alumni, class rosters, parent profiles, regulatory compliance, student activities, emergency contacts, and vendor information.

The Payoff

This new database system has replaced the previous customer contact system and many of the old paper forms and Excel spreadsheets, streamlining the school's processes and saving a great deal of administrative time that school employees can divert to the education and well-being of the students. It had previously taken 20 percent of a full-time employee's hours to access and manage information across all those spreadsheets and paper files, a wasteful effort that has been eliminated by instant access to all of the school's important records and data.

In addition, the system has strengthened communication, visibility, and efficiency across the school. Staff members can now track anything from tuition payments to student immunization status. The school can also use the system to initiate fundraisers and marketing campaigns for donations, as well as to track the returns.

—Jon Wilson, Acumen Solutions

For more real-world tech solutions for small and midsize businesses (including cloud services, virtualization, and complete network overhauls), check out PCWorld's Tech Audit (find.pcworld.com/64147). ●

MEET THE PROS

Acumen Solutions

JON WILSON IS a senior consultant in the financial industry vertical practice at Acumen Solutions, based in San Francisco. His areas of expertise include sales operations, customer support, marketing, business process automation, and systems integration. He has extensive experience with business process reengineering programs, data migrations, application development, and training design and delivery.

Acumen Solutions is a business and technology consulting firm with offices across the United States and in Europe. Jon can be reached at jwilson@acumensolutions.com.

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Bugnets Could Spy on You via Mobile Devices

BY ROBERT VAMOSI

IMAGINE SITTING IN a café and discussing the details of a business proposal with a potential client. Neither you nor the client has a laptop; you're just two people having a conversation. But unbeknownst to you, someone half a world away is listening to every word you say. Later, as you leave, you receive a text message referring to the proposal and demanding money in exchange for silence.

New botnets designed for mobile gear may allow remote attackers to see and hear their potential victims, no matter where they are.

Recent research from two universities suggests that such a remote-eavesdropping scenario may soon be possible.

According to George Mason University researchers Ryan Farley and Xinyuan Wang, cell phones make excellent surveillance devices for remote snoops. In a paper (see the PDF at find.pcworld.com/70083), Farley and Wang discuss a "modernized mic hijacker" that an attacker could control over what they call a "roving bugnet." The eavesdropper would use a piece of malware called a "bugbot" to listen in on in-person interactions via a nearby smartphone or laptop. Such attacks would be more likely to target specific people (a wayward spouse, say) than to play a role in widespread attacks on the general public.

Mobile Malware on the Rise

Though fewer than 500 pieces of cell phone malware have been written since 2004, researchers have seen an explosion within the past year. Mikko Hyppönen, chief research officer for F-Secure, says that 95 percent of mobile malware was written for the Symbian OS, but that's changing fast due to the success of Apple's iPhone and Google's Android OS.

Given the relative scarcity of mobile malware, Farley and Wang conducted experiments on Windows XP and Mac OS laptops. The researchers directed their bugbot to join an Internet Relay Chat channel so that they could remotely enable and disable each laptop's microphone to stream real-time conversations occurring in the area. The same thing, they said, could be done on almost any smartphone.

Phone Users Are Vulnerable, Too

Researchers at Rutgers University announced in a 2010 paper (see the PDF at find.pcworld.com/70084) that they had successfully demonstrated possible attack methods by creating mobile phone rootkits (malware that burrows deep into the operating system).

The researchers built their rootkits for Neo Freerunner smartphones, which run the Openmoko Linux-distribution operating system. Google Android uses Linux, and therefore could be attacked right away. The Rutgers team says that with a little work the Linux rootkits could be ported to the Apple iPhone OS, Windows Mobile, and Symbian OS.

The simplest rootkit, which targets a smartphone's battery, would need only to enable Bluetooth or the phone's GPS function to drain the power. If your phone were infected, you'd find yourself having to recharge it more often—or, when you needed it most, your phone would be dead.

More sinister is the rootkit that grants third-party access »

ILLUSTRATION: ANDY POTTS

PCWORLD.COM

Does Google's hands-off approach to app submissions for the Android Market leave smartphone users—and their employers—vulnerable to malware infections? Read more at find.pcworld.com/70119.

to your GPS information. Even when you're not using your phone, the GPS service keeps tabs on your whereabouts; such information, when exposed to a less-than-trustworthy person, would take stalking to a new level.

The most harmful rootkit, however, would access your voice and text messages. The Rutgers team constructed a rootkit that relayed text messages over to a third party. If your phone were so compromised, whenever you sent or received a new text message, a cybercriminal would get a copy, too.

Even Apple's tightly controlled iPhone App Store could potentially house malicious apps or bugbots. At Black Hat DC 2010 (a security conference), Nicolas Seriot of the University of Applied Sciences Western Switzerland demonstrated how a malicious program could bypass the App Store's strict filters (see the PDF at find.pcworld.com/70085). Seriot also showed the audience that a malicious third-party application—not even a rootkit—could provide remote access to the iPhone's contact list, image file, text messages, GPS data, and other vital information. So far, Apple has not directly responded to Seriot's research.

Taking Precautions

In general, you should be suspicious of phone downloads—even ringtones—as such files could harbor malware. But you also need security software for your phone, sooner rather than later. Fortunately, Eset, F-Secure, Kaspersky, McAfee, and Symantec (Norton) all offer tools that can protect against most mobile malware. And some phone vendors, such as Nokia, now preinstall antivirus on their handsets.

One startup is going a step beyond. In addition to blocking malware, Lookout (mylookout.com), a mobile security tool that is free at this writing, offers a suite of defenses: a mobile firewall, mobile data backup (which allows you to return your phone to a preinfected state), and the ability to wipe a lost or stolen phone remotely.

BUGS & FIXES JAMES MULROY

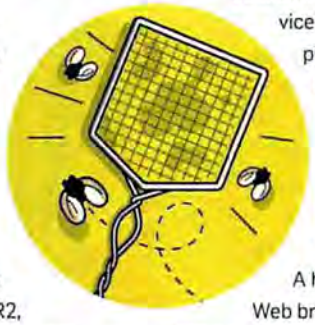
Security Woes for Windows, McAfee, Firefox

Critical updates plug OS and browser holes; an antivirus update crashes PCs.

THE BUGS KEEP marching in this month, with Microsoft, McAfee, and Mozilla all having to deal with serious security-related software problems.

This Month's Windows Fix

According to Microsoft, "two privately reported vulnerabilities in Windows Authenticode Verification...could allow remote code execution." In other words, an attacker could take control of your PC by exploiting either of those flaws. The intruder could gain administrator rights, with the ability to add, change, or delete practically any file.



Microsoft has issued an update that addresses the vulnerabilities by performing additional verification operations. This update is critical to all supported versions of Windows, including 98, XP, Vista, and 7, as well as Server 2003, 2008, 2008 R2, 2003, 2000, and 2000 Professional.

If you have automatic updates enabled (recommended), you'll get this update and others instantly. If you do not have automatic updating turned on, Microsoft suggests downloading critical updates manually; go to the Control Panel, click the *Windows Update* icon, and then select *Check for Updates*. You can learn more about this patch, and download it manually, at find.pcworld.com/70092.

McAfee Update Makes Windows PCs Crash

McAfee released an update in mid-April that unfortunately caused Windows PCs to fail spectacularly. The update improperly identified a Windows component known as svchost.exe as a virus, which caused McAfee's software to delete it.

The error was so severe that 8000 of the 25,000 computers at the University of Michigan Health System and Medical School crashed, along with thousands of computers around the world.

Put simply, svchost.exe is a process that hosts other services used by various programs on your PC (read Microsoft's explanation at find.pcworld.com/70093). If you look in Windows Task Manager, you may see quite a few svchost.exe processes running (under "Image Name"), and as you can imagine, attacking all of them could be catastrophic for any system.

The problematic update mostly affected users running Windows XP Service Pack 3. If it affected you, pick up McAfee's SuperDAT Remediation Tool at find.pcworld.com/70094 to restore svchost.exe.

Firefox Flaw Corrected

A hole in the Mozilla Firefox Web browser has blossomed into a major flaw. A week after releasing Firefox 3.6.2, Mozilla released version 3.6.3 to address a critical security issue that could allow remote attackers to run commands of their choice.

To fix the bug, download Firefox 3.6.3 at find.pcworld.com/70095, or click *Help•Check for Updates•Get the New Version* in the Firefox toolbar. Mozilla says the bug does not affect versions 3.5 or earlier.

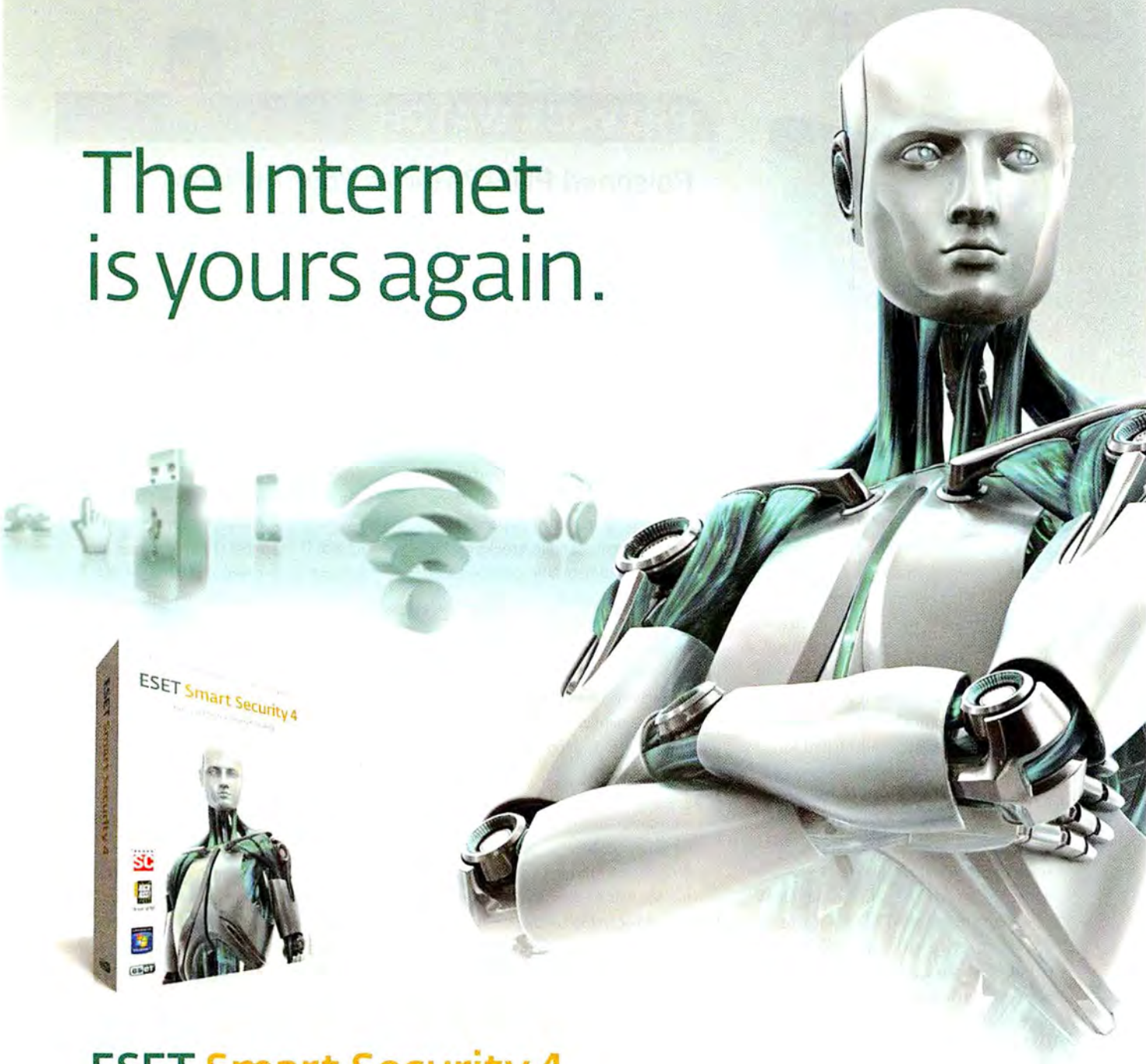
If you still want to obtain and use add-ons that are not compatible with version 3.6, don't worry: Mozilla says that it will issue a patch for Firefox 3.5 in an upcoming release in case another method of exploiting this security hole exists.

BUGGED?

FOUND A HARDWARE or software bug? Send us an e-mail on it to bugs@pcworld.com.

ILLUSTRATION: HARRY CAMPBELL

The Internet is yours again.



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Stolen Facebook IDs Up for Sale

A HACKER NAMED Kirllos has a rare deal for anyone who wants to spam, steal, or scam on Facebook: an unprecedented number of user accounts, offered at rock-bottom prices.

Researchers at VeriSign's iDefense group recently spotted Kirllos selling Facebook usernames and passwords in an underground hacker forum, but what really caught their attention was the volume of credentials he had for sale—1.5 million accounts.

iDefense doesn't know whether Kirllos's accounts are legitimate, and Facebook hasn't responded to messages seeking comment. If they are legitimate, Kirllos has the account details of about one in every 300 Facebook users. The asking price varies from $25 to $45 per 1000 accounts, depending on the number of contacts each user has. To date, Kirllos seems to have sold close to 700,000 accounts, says Rick Howard, VeriSign director of cyber intelligence.

The prices Kirllos is asking for are extremely cheap compared with what other crooks are charging. In its most recent Internet Security Threat Report, Symantec found that e-mail usernames and passwords typically went for between $1 to $20 per account; Kirllos wants as little as $0.025 per Facebook account. More-coveted credit card or bank account details can go for much more, ranging from $0.85 to $30 for credit card numbers and $15 to $850 for top-quality online bank accounts.

—Robert McMillan

PRIVACY WATCH

ERIK LARKIN

Poisoned PDFs? Here's Your Antidote

Embedded malware represents a new twist that makes PDF dangers even worse. We'll show you how to stay safe.

ATTACKS EMPLOYING poisoned PDF files have leaped to the top of the threat list, according to statistics from major security companies. Symantec reports (find.pcworld.com/70096) that suspicious PDF files skyrocketed in 2009 to represent 49 percent of Web-based attacks that the company detected, up from only 11 percent in 2008. The next-most-common attack, involving a good old Internet Explorer flaw, was far behind at 18 percent.

In a typical scenario, crooks might hijack a legitimate site and insert a PDF file made to exploit flaws in Adobe Reader. They then link to that PDF via social-engineering lures such as spam or comments on a blog or social network. Even astute users who check the link would see a legit domain. Not knowing the site was hacked, they would be more likely to download and open the file.

Now, a new threat allows for launching malware hidden inside a PDF file. In this type of attack, discovered by researcher Didier Stevens, opening the PDF file triggers an attempt to install the malware. The action causes Adobe Reader to produce a confirmation pop-up, which gives you a chance to halt the attack by clicking the 'Do Not Open' button—but Stevens found that attackers could tweak the pop-up's message. His example (find.pcworld.com/70097) reads, "To view the encrypted message in this PDF document, select 'Do not show this message again' and click the Open button!" Using such a message, attackers could allay potential victims' suspicion.

Here's the kicker: This embedded-file threat makes creative use of functionality built into the PDF standard. As such, it works not only on Adobe Reader but on other PDF readers, too, even if they're up-to-date. The makers of the Zeus Trojan horse are already using this new technique to spread their evil software.

How to Fight the New Threat

Changing a program setting in the current version of Adobe Reader can help. Head to *Preferences•Trust Manager*, and deselect *Allow opening of non-PDF file attachments with external applications*. See find.pcworld.com/70098 for more details.

The latest 3.3 update for the Foxit PDF reader (find.pcworld.com/70099) also has a new Safe Reading setting—enabled by default under a new Trust Manager section in the preferences—that likewise blocks embedded programs from running.

Since traditional PDF exploits almost always hunt for one of the many holes in Adobe Reader, using an alternative PDF program is a good idea. But it's no guarantee of safety. When the embedded-file attack first surfaced, Foxit didn't even display a confirmation pop-up—it simply allowed the attack to proceed. Whichever reader you use, it's vital to keep it up-to-date. Both Adobe and Foxit are working on new security features to further mitigate the embedded-file risk.

Finally, a good antivirus program may stop a malicious PDF before it can launch an attack. And VirusTotal.com is excellent for scanning any downloaded or e-mailed file with a multitude of antivirus engines. Regardless, always back up your defenses with your own good sense. ●

ILLUSTRATIONS: (LEFT) ANDY POTTS; (RIGHT) HARRY CAMPBELL

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Reviews & Rankings

Best Cell Phones by Carrier

In the market for a new phone? Check out our top-rated models, sorted by service provider.

FROM LEFT: Apple iPhone 3GS (AT&T), Palm Pre (Sprint), Google Nexus One (T-Mobile), HTC Droid Incredible (Verizon).

SHOPPING FOR a new cell phone can be overwhelming; after all, these devices do a lot more than just make calls. They also come in a variety of shapes, sizes, operating systems, and interfaces. So which carrier has the best selection? It really depends on what you're looking for.

If you're shopping for an Android phone, Verizon and T-Mobile offer the best array of choices. In fact, the number one phone on our *Top 10 Cell Phones* chart (find.pcworld.com/63492), the HTC Droid Incredible, is on the Verizon network, as is the third-ranked Motorola Droid. The second-place phone listed on the same chart, the Google Nexus One, is on T-Mobile.

AT&T currently has only one Android phone, but the company is also the exclusive carrier of the popular iPhone 3G and iPhone 3GS. In addition, AT&T sells two versions of the BlackBerry Bold, which is by far the best BlackBerry design now available.

Sprint's phone offerings aren't as impressive as those of the other carriers—for now. But with the HTC EVO 4G coming to the network this summer, Sprint could very well have a dream team of powerful 4G-capable smartphones in the works.

HTC Droid Incredible Lives Up to Its Name

The Droid Incredible ($200 with a two-year contract) is the latest, hottest Android handset to hit the market. The best of the Droids on Verizon, this phone impresses with its speed, its brilliant AMOLED display, and its fun Sense user interface.

Design-wise, the Droid Incredible seems fairly similar to the Nexus One, but in essence it's a CDMA version of the HTC Desire, which launched in February at the Mobile World Congress in Barcelona, Spain. It has an 8-megapixel camera, versus the Nexus One and Desire's 5-megapixel shooters. It also has a strange, rubberized, "topographic" battery cover, which I could have done without. The Incredible is lighter than the Nexus One, but it also feels less solid.

MORE ONLINE

For more cell phone reviews, news, and how-to articles, see our Phones Product Center at find.pcworld.com/69550.

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In contrast to the Nexus One's four touch keys, the Droid Incredible has four physical keys (Home, Menu, Back, and Search) at the bottom. I prefer the Nexus One's touch keys, though, as they give that phone a more streamlined look.

Another difference is that the Droid Incredible has an optical mouse as opposed to a trackball. As RIM has done with its BlackBerry handsets, HTC seems to be shifting away from trackballs (the HTC Desire and Legend both have an optical mouse).

The Droid Incredible runs Android 2.1 with the revised Sense interface. My favorite new Sense feature is Leap, an elegant approach to multitasking (reminiscent of Palm's WebOS deck-of-cards visualization). Pinch anywhere on the homescreen, and you jump to seven thumbnails of your open pages. You can then go to any of those open apps or close out of one. Thanks to the Droid Incredible's speedy 1GHz Snapdragon processor, this feature works extremely well, too.

Friend Stream, HTC's social network aggregator, lets you view your friends' status updates, shared links, and pictures all in one seamless view. Supported networks include Facebook, Flickr, and Twitter. »

Top 5 AT&T Phones

Apple's iPhone models remain popular, but RIM's BlackBerry Bold handsets are a great choice too.

MODEL		Rating	Features and specifications	Performance
1	Apple iPhone 3GS $200 find.pcworld.com/63910	★★★★½ SUPERIOR	• Form factor: Candy bar • Weight: 4.8 ounces • Camera resolution: 3.0 megapixels	• Sophisticated design • Extremely responsive touchscreen • Excellent video and music
	▸ Performance enhancements distinguish the 3GS—an otherwise evolutionary step up—from previous iterations of the iPhone.			
2	RIM BlackBerry Bold 9700 $200 find.pcworld.com/70082	★★★★½ SUPERIOR	• Form factor: Candy bar • Weight: 4.2 ounces • Camera resolution: 3.2 megapixels	• Most stylish BlackBerry to date • Ergonomic keyboard • Good video and audio quality
	▸ The best BlackBerry available, the Bold 9700 packs a multitude of features into a sophisticated, slimmed-down design.			
3	RIM BlackBerry Bold 9000 $200 find.pcworld.com/61990	★★★★☆ VERY GOOD	• Form factor: Candy bar • Weight: 4.2 ounces • Camera resolution: 3.2 megapixels	• Impressive display • Great keyboard • Disappointing call quality
	▸ The BlackBerry Bold 9000 almost lives up to its name with a stunning design, but its mediocre call quality and camera hold it back.			
4	Apple iPhone 3G $100 find.pcworld.com/70131	★★★★☆ VERY GOOD	• Form factor: Candy bar • Weight: 4.8 ounces • Camera resolution: 2.0 megapixels	• Beautiful design • Very responsive touchscreen • Superb video and music
	▸ At half the price, the iPhone 3G is an excellent, inexpensive alternative to its younger and fancier sibling, the iPhone 3GS.			
5	HTC Pure Free find.pcworld.com/70081	★★★½☆ VERY GOOD	• Form factor: Candy bar • Weight: 4.1 ounces • Camera resolution: 5.0 megapixels	• Svelte and attractive design • Sluggish touchscreen • Average video and music
	▸ The head-turning Pure is touch-friendly and inexpensive, but its lack of a headphone jack and its drab multimedia features are disappointing.			

CHART NOTE: Ratings are as of 4/29/10.

Along with the standard Android apps, such as Gmail, Google Talk, and YouTube, you get HTC's Twitter app (Peep) and its photo geotagging app (Footprints). You also have easy access to Verizon's apps via the Android Market's Verizon channel.

While 5-megapixel cameras seem to be the standard for high-end smartphones right now, you can expect to see a lot more 8-megapixel camera phones in the near feature. Overall, I liked the Droid Incredible's camera. You press the haptic mouse to snap pictures; though the method works okay, I would have preferred a dedicated camera key. As I held it, the phone didn't feel especially steady, and sometimes my pictures looked a bit blurry.

Otherwise, I was pleased with my outdoor shots. Colors were bright and natural, and details looked sharp. The camera also had little shutter lag. My indoor shots looked good, too, though a few had a slight yellow tint. The flash seemed a bit unpredictable as to when it would go off, however. Many of my indoor shots were pretty well lit already, so when the flash went off, the details and colors were blown out. Nighttime snapshots looked good—better, in fact, than such pictures from most flash-equipped smartphone cameras.

The Droid Incredible can shoot high-resolution video up to 800 by 480, but it can't take 720p video. Though it's fine for quick clips, I was disappointed by the slight pixelation in my videos.

WHILE OTHER PHONES have 5-megapixel cameras, the Droid Incredible offers 8 megapixels.

I wish that HTC had updated the Sense media player. It's prettier than the dull-as-dirt Android player, but I prefer iTunes or Palm's WebOS player. Still, audio sounded good, and the player supports a respectable range of audio and video formats.

Video played back over YouTube looked good. When I downloaded a few movie trailers, I was impressed by the smooth playback, sharp details, and clean colors. The Droid Incredible also supports Flash Lite, but I had difficulty playing Flash content. (I also encountered this problem with the HTC Hero on Sprint.)

The HTC Droid Incredible might be the best Android phone available—it certainly is the best on Verizon. But how will this model compare to the upcoming iPhone 4G, with its rumored front-facing camera and higher-resolution display? Smartphone shoppers will have some enticing choices this summer, that's for sure.

—Ginny Mies »

Top 5 Sprint Phones

Palm's WebOS—available on both the Pre and the Pixi—is particularly adept at multitasking.

	MODEL	Rating	Features and specifications	Performance
1	**Palm Pre** **$150** find.pcworld.com/63258	★★★★½ VERY GOOD	• Form factor: Slide • Weight: 4.7 ounces • Camera resolution: 3.0 megapixels	• Sleek, ergonomic design • Small and flimsy keyboard • Gorgeous video and audio applications
	▸ The Pre's WebOS software is touch-friendly and fun, but the cramped QWERTY keyboard detracts from the phone's usability.			
2	**Samsung Moment** **$100** find.pcworld.com/69467	★★★★½ VERY GOOD	• Form factor: Slide • Weight: 5.7 ounces • Camera resolution: 3.2 megapixels	• On the heavy side • Roomy QWERTY keyboard • Okay multimedia features
	▸ While the Moment has a vivid AMOLED display and a spacious QWERTY keyboard, the software is quirky and the touchscreen can be slow.			
3	**RIM BlackBerry Tour 9630** **$100** find.pcworld.com/70100	★★★★½ VERY GOOD	• Form factor: Candy bar • Weight: 4.6 ounces • Camera resolution: 3.2 megapixels	• Slick design • Superb keyboard • Middling multimedia features
	▸ The BlackBerry Tour 9630 entices with an ergonomic keyboard and an impressive display, but its omission of Wi-Fi disappoints.			
4	**HTC Hero** **$100** find.pcworld.com/63913	★★★★½ VERY GOOD	• Form factor: Candy bar • Weight: 4.5 ounces • Camera resolution: 5.0 megapixels	• Pocketable design • Problematic touch keyboard • Average multimedia features
	▸ Though the HTC Hero represents an innovative step forward in the development of the Android platform, it isn't without its flaws.			
5	**Palm Pixi** **Free** find.pcworld.com/64130	★★★½☆ VERY GOOD	• Form factor: Candy bar • Weight: 3.3 ounces • Camera resolution: 2.0 megapixels	• Cute design • Small, cramped keyboard • Beautiful audio and video app
	▸ The newest addition to the WebOS family has an attractive, slim design, but performance can be slow and the keyboard needs improvement.			

CHART NOTE: Ratings are as of 4/29/10.

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Top 5 T-Mobile Phones

The speedy Nexus One, built by HTC, has a superb 3.7-inch screen that makes text and graphics pop.

	MODEL	Rating	Features and specifications	Performance
1	Google Nexus One $180 find.pcworld.com/64373	★★★★½ SUPERIOR	• Form factor: Candy bar • Weight: 4.5 ounces • Camera resolution: 5.0 megapixels	• Dazzling AMOLED display • Comfortable keyboard • Audio and video are middle of the road
	▸ Though the Nexus One has a stunning display and impressive speed, it only recently gained limited multitouch capabilities.			
2	Motorola Cliq $150 find.pcworld.com/64261	★★★★½ SUPERIOR	• Form factor: Slide • Weight: 5.6 ounces • Camera resolution: 5.0 megapixels	• High-quality design • Comfortable keyboard • Audio and video are mediocre
	▸ The beautifully designed Cliq is a social butterfly's dream phone, but other users may find the MotoBlur interface overwhelming.			
3	RIM BlackBerry Bold 9700 $200 find.pcworld.com/64262	★★★★½ SUPERIOR	• Form factor: Candy bar • Weight: 4.2 ounces • Camera resolution: 3.2 megapixels	• Most stylish BlackBerry to date • Ergonomic keyboard • Good video and audio quality
	▸ The best BlackBerry available, the Bold 9700 packs a multitude of features into a sophisticated, slimmed-down design.			
4	Samsung Behold II Free find.pcworld.com/64264	★★★★☆ VERY GOOD	• Form factor: Candy bar • Weight: 4.2 ounces • Camera resolution: 5.0 megapixels	• Pocketable and light • Touch keyboard is small • Video looks terrific on AMOLED display
	▸ With a fantastic AMOLED display and an excellent camera, the Samsung Behold II will appeal to multimedia junkies.			
5	HTC HD2 $200 find.pcworld.com/69958	★★★★☆ VERY GOOD	• Form factor: Candy bar • Weight: 5.5 ounces • Camera resolution: 5.0 megapixels	• Attractive design • Very responsive touchscreen • Average video and music
	▸ Gorgeous hardware and superb specs are marred by the HTC HD2's soon-to-be-obsolete Windows Mobile 6.5 operating system.			

CHART NOTE: Ratings are as of 4/29/10.

Top 5 Verizon Phones

While HTC's Droid Incredible is the hottest Android phone, Motorola's Droid is still an appealing option.

	MODEL	Rating	Features and specifications	Performance
1	HTC Droid Incredible $200 find.pcworld.com/70079	★★★★½ SUPERIOR	• Form factor: Candy bar • Weight: 4.6 ounces • Camera resolution: 8.0 megapixels	• Beautifully designed • Highly responsive touchscreen • Average music player
	▸ The HTC Droid Incredible is the best Android phone out there, with a brilliant display, a slick user interface, and a lightning-fast processor.			
2	Motorola Droid $200 find.pcworld.com/64263	★★★★½ SUPERIOR	• Form factor: Slide • Weight: 6.0 ounces • Camera resolution: 5.0 megapixels	• Solid construction • Keyboard is a bit shallow • Superb suite of video and audio features
	▸ The Droid has a strong suite of Web features and a stunning 3.7-inch display, but some users might have trouble with the shallow keyboard.			
3	Palm Pre Plus $30 find.pcworld.com/69450	★★★★☆ VERY GOOD	• Form factor: Slide • Weight: 4.7 ounces • Camera resolution: 3.0 megapixels	• Sleek, ergonomic design • Keyboard is small and flimsy • Great video and audio applications
	▸ With expanded memory and new software capabilities, the Pre Plus is an improvement over its predecessor, but it still has some quirks.			
4	RIM BlackBerry Tour 9630 $100 find.pcworld.com/70080	★★★★☆ VERY GOOD	• Form factor: Candy bar • Weight: 4.6 ounces • Camera resolution: 3.2 megapixels	• Slick design • Superb keyboard • Middling multimedia features
	▸ The BlackBerry Tour 9630 entices with an ergonomic keyboard and a gorgeous display, but its omission of Wi-Fi disappoints.			
5	Samsung Omnia II $80 find.pcworld.com/64279	★★★★☆ VERY GOOD	• Form factor: Candy bar • Weight: 4.3 ounces • Camera resolution: 5.0 megapixels	• Pocketable and light • Touch keyboard is small • Video looks terrific on OLED display
	▸ Though an eye-catching design and various multimedia features make the Omnia II a solid Windows Mobile unit, its performance is sluggish.			

CHART NOTE: Ratings are as of 4/29/10.

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AT&T 3G MicroCell Pumps Up Coverage

DO YOU FREQUENTLY experience dropped calls or sluggish data service on an AT&T cell phone in a home or small office that's supposed to be within the network's area of coverage? An AT&T 3G MicroCell might help your wireless connection, though in my tests it wasn't 100 percent reliable. And how much hassle you'll have depends largely on the layout of both your home and your home network.

A white and orange-trimmed box about the size of a Nintendo Wii, the 3G MicroCell is a femtocell—that is, it functions as a mini cell site that connects back to the mobile network via Voice over IP through your wired broadband service.

AT&T is rolling out the $150 device in various markets; you can purchase one only in an AT&T store.

Like other femtocells, the 3G MicroCell has a built-in GPS receiver that reports to the network once activated. This enables E911 emergency service: If you dial 911 on your cell phone when it's connecting via the MicroCell, emergency responders will know where you are.

On the first couple of days after installation, my service was pretty good. Phone calls stopped dropping, although voice quality didn't improve. I also noticed very slight pauses before my callers' responses—but nothing I couldn't live with. Data was zippy.

But on the third day, my iPhone was dropping calls from locations fairly close to the MicroCell. Rebooting the device seemed to fix the problem.

Overall, the AT&T 3G MicroCell does appear able to improve service in the home, but with occasional glitches. Though I'm not entirely thrilled with it, on balance it seems to help my service more than it hurts.

—Yardena Arar

THE AT&T 3G MicroCell can help 3G coverage indoors.

★★★★☆ VERY GOOD

3G MicroCell | AT&T

Pricey, but usually delivers improved 3G coverage indoors.

List: $150

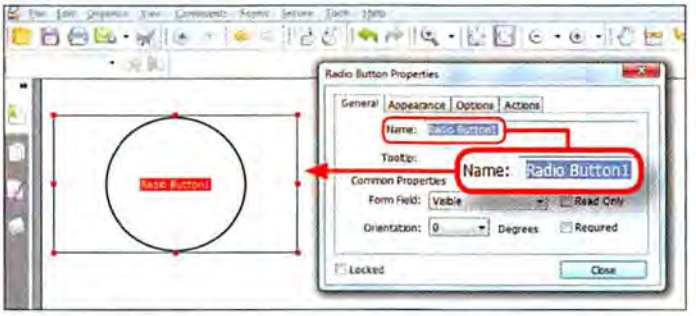
find.pcworld.com/70108

Foxit Phantom PDF Suite: A Full-Strength PDF Tool

IF YOU NEED to create or edit PDF files, want a slew of features, and are willing to spend some money, it will be worth your while to try out Foxit Phantom PDF Suite. This powerful software has just about every feature that you'd want in a PDF creator, and it makes PDFs—and lets you tweak them every which way—exceptionally quickly.

Foxit Phantom PDF Suite installs as a printer driver. Print your file as you would normally, but choose the Foxit suite's driver, and it will create a PDF. Alternatively, you can open the program itself, and convert files to PDF from there.

The program works swiftly. I converted a very complex file—a graphics-heavy and table-heavy 73-page Word document—in less than 2 minutes. Simpler files convert in seconds.



FOXIT PHANTOM PDF Suite lets you add radio buttons and images to PDFs.

You can also edit PDFs and add things like radio buttons and forms—even images and movies—to them. You can create a PDF from a scanner, or combine multiple documents into a single PDF. The program is a great PDF viewer, as well. You won't need to jump between apps to do all this—the capabilities are integrated in one product.

That power doesn't come cheap, at $129. But compared with Adobe Acrobat, it's a steal. Even the lowest-priced version of Acrobat, the standard version, carries a price tag of $299, but with a feature set somewhat comparable to the Foxit program's. You could also turn to Nuance PDF creation software—that company's PDF Create 6 goes for just $50, although it's far more limited than the Foxit product. Nuance's high-end, $150 PDF Converter Enterprise 6 does do something that Foxit Phantom can't—integrate with SharePoint.

If you need a capable tool for PDF creation and are willing to pay, Foxit Phantom PDF Suite is the one to get.

—Preston Gralla

★★★★½ SUPERIOR

Foxit Phantom PDF Suite | Foxit

Lets you quickly create, edit, and add material to PDF files.

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Top 10 Desktop Replacement Laptops

LAB TESTED

A high-end ThinkPad takes the lead this month, followed by an Acer model for gamers.

	MODEL	Rating	Performance	Features and specifications
1	Lenovo ThinkPad W701ds $3299 NEW find.pcworld.com/70061	★★★★½ SUPERIOR	• WorldBench 6 score: 123 Superior • Overall design: Very Good • Tested battery life: 2:10	• 2GHz Core i7 920XM • 17.0-inch widescreen plus secondary screen • 11.0 pounds • 640GB hard drive
	▸ For a content creator or engineer, this portable Goliath could replace a desktop workstation, allowing nonstop productivity anywhere.			
2	BEST BUY Acer Aspire 8940G-6865 $1399 NEW find.pcworld.com/70062	★★★★☆ VERY GOOD	• WorldBench 6 score: 105 Very Good • Overall design: Good • Tested battery life: 2:24	• 1.6GHz Core i7 720QM • 18.0-inch widescreen • 9.3 pounds • 500GB hard drive
	▸ Game performance and terrific graphics make this Acer an intriguing choice for gamers, despite its bulk and short battery life.			
3	Alienware M17x $3849 find.pcworld.com/70063	★★★★☆ VERY GOOD	• WorldBench 6 score: 100 Very Good • Overall design: Very Good • Tested battery life: 3:04	• 2.53GHz Core 2 Extreme QX9300 • 17.0-inch widescreen • 11.7 pounds • 320GB hard drive
	▸ Besides performing well, a tricked-out gaming machine like the M17x inevitably costs a lot. But few desktop replacements look as good.			
4	Toshiba Qosmio X505-Q850 $1899 NEW find.pcworld.com/70065	★★★★☆ VERY GOOD	• WorldBench 6 score: 115 Very Good • Overall design: Very Good • Tested battery life: 2:39	• 1.6GHz Core i7 720QM • 19.0-inch touchscreen • 10.0 pounds • 350GB hard drive
	▸ Toshiba builds a solid midrange gaming PC that also happens to be a superb platform for high-definition video and digital media.			
5	Asus G73Jh-A2 $1599 NEW find.pcworld.com/70064	★★★★☆ VERY GOOD	• WorldBench 6 score: 111 Very Good • Overall design: Good • Tested battery life: 1:48	• 1.6GHz Core i7 720QM • 17.3-inch widescreen • 8.8 pounds • 500GB hard drive
	▸ You don't have to be a gamer to enjoy the great speed and the good-looking screen (and the nonflamboyant case) of the Asus G73Jh.			
6	Lenovo ThinkPad W700ds $2599 find.pcworld.com/70066	★★★½☆ VERY GOOD	• WorldBench 6 score: 98 Good • Overall design: Very Good • Tested battery life: 2:58	• 2.53GHz Core 2 Extreme QX9300 • 17.0-inch widescreen plus secondary screen • 8.4 pounds • 400GB hard drive
	▸ This predecessor to the W701ds introduced the dual-screen laptop, but it has slower performance and fewer features.			
7	Asus W90VP $2199 find.pcworld.com/63203	★★★☆☆ GOOD	• WorldBench 6 score: 105 Very Good • Overall design: Good • Tested battery life: 1:17	• 2.8GHz Core 2 Duo T9600 • 18.4-inch widescreen • 14.0 pounds • 320GB hard drive
	▸ The W90VP has good high-resolution gaming frame rates, but the short battery life and weak sound are disappointing.			
8	Apple 17-Inch MacBook Pro/2.8GHz $2499 NEW find.pcworld.com/70067	★★★☆☆ GOOD	• WorldBench 6 score: 101 Very Good • Overall design: Very Good • Tested battery life: 3:13	• 2.8GHz Core 2 Duo • 17.0-inch widescreen • 6.6 pounds • 500GB hard drive
	▸ Apple's largest laptop registers gains in speed and options while dropping in price—a combo that makes for a great value.			
9	Toshiba Qosmio X305-Q708 $4200 find.pcworld.com/70068	★★★☆☆ GOOD	• WorldBench 6 score: 100 Very Good • Overall design: Good • Tested battery life: 1:24	• 2.5GHz Core 2 Extreme Q9300 • 17.0-inch widescreen • 12.4 pounds • 320GB hard drive
	▸ Toshiba's Qosmio X305 has lots of style and even more power, but shortcomings in its physical design hold it back.			
10	MSI GT 725 $1699 find.pcworld.com/70069	★★★☆☆ GOOD	• WorldBench 6 score: 98 Good • Overall design: Fair • Tested battery life: 2:49	• 2GHz Core 2 Quad Q9000 • 17.0-inch widescreen • 9.4 pounds • 320GB hard drive
	▸ The MSI GT 725 will satisfy gamers; other users, however, will wish for a better design, despite the laptop's nice power.			

CHART NOTES: Ratings are as of 5/10/10. Tested battery life is expressed in hours:minutes.

MORE ONLINE Visit find.pcworld.com/62693 for in-depth reviews, full test results, and detailed specs for each laptop on our chart.

PHOTOGRAPHS: ROBERT CARDIN

New WD Hard Drive Is Fast but Pricey

WESTERN DIGITAL'S new VelociRaptor is a SATA-600 drive.

AT 10,000 rpm, the Western Digital VelociRaptor WD6000HLHX drive spins faster than the competition. But does that mean faster performance? VelociRaptor drives have been out for two years; in PCWorld Labs tests, however, these drives may not have as much advantage as they once did.

★★★★☆ VERY GOOD

VelociRaptor WD6000HLHX

Western Digital

Swift hard drive barely has an edge over its SATA-600 competition.

List: $329

find.pcworld.com/70111

Compared with standard drives that spin at up to 7200 rpm, the VelociRaptor line has a distinct edge. But that edge shrank when we put the latest model—a $329, 600GB drive that's one of the few units with a 600-gbps SATA connection—up against another SATA-600 drive, from Seagate.

The new VelociRaptor (also available in a 450GB version, for $299) is a 2.5-inch hard drive mounted into WD's 3.5-inch "IcePack" drive sled that doubles as a heat sink. It installs seamlessly into a standard 3.5-inch drive bay, and its 600GB capacity, though paltry compared with a standard drive's 2TB, is double the previous size.

The drive certainly had a dramatic performance edge over SATA-300 models: It was 8 to 17 seconds faster than the 2TB WD Caviar Green WD20EADS in our tests. Against the SATA-600 Seagate Barracuda XT 2TB, however, the VelociRaptor finished in a statistical dead heat on our file-and-folder read and write tests.

The VelociRaptor is intended for high-end servers (it's rated for 1.4 million hours mean time between failures) and high-end PCs, including gaming-centric models. For its slight boost and greater endurance rating, the VelociRaptor may yet hold appeal. But the $250 Seagate may represent a better overall value: You get more gigs for your dollar, and comparable performance, too.

—Melissa J. Perenson

CMS PRODUCTS

BounceBack™ Ultimate

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No Problem

Instant PC Recovery
Restart, Resume, Relax

START UP DIRECTLY FROM YOUR USB BACKUP DRIVE,
EVEN IF YOUR COMPUTER'S HARD DRIVE IS NOT OPERATIONAL!

1. PLUG IN USB BACKUP DRIVE 2. RESTART COMPUTER 3. YOU'RE UP AND RUNNING - Now!

info.cmsproducts.com/pcw

BounceBack Ultimate Mirrors Drives—and More

BOUNCEBACK ULTIMATE is unique among backup software. It's a jack-of-all-trades that syncs; backs up files; does continuous data protection, versions, and schedules; supports multiple destinations; and will mirror your system drive onto an external drive—an exact copy from which you may boot if your main drive fails.

Version 9.2 retains its colorful interface. Over the years, though, CMS, while leaving this look intact, has gradually trimmed and condensed a rather poor workflow into one that is concise and easy to use, with all options in easy reach.

My only gripe is the price. In a world of worthy $50 backup applications—as well as the $29 BounceBack Essential—$69 seems a tad pricey. Still, BounceBack Ultimate works great for me, and is simple enough that most people can figure it out in short order. Think of it as an easy way to add RAID 1 redundancy and point-in-time restore. But most users will be fine with Essential.

Tip: The mirroring function requires an entire drive; use one not much bigger than the drive being mirrored.

—Jon L. Jacobi

★★★★½ SUPERIOR

BounceBack Ultimate | CMS

Jack-of-all-trades backup tool is pricey, but has become easy to use.

List: $69

find.pcworld.com/70113

BOUNCEBACK Ultimate's interface is a model of clarity and efficiency.

Top 5 Budget All-in-One Desktops

LAB TESTED

Models from HP and Gateway lead our list of these economical, space-saving systems.

	MODEL	Rating	Performance	Features and specifications
1	HP TouchSmart 300 $930 find.pcworld.com/70087	★★★★½ VERY GOOD	• WorldBench 6 score: 98 • WorldBench 6 rating: Superior • Overall design: Good	• 2.8GHz Athlon II X2 240e • 4GB of RAM; 640GB of storage • ATI Radeon HD 3200 • DVD±RW
	▸ This TouchSmart's style and design shine; its sluggish custom software, however, hampers an otherwise solid package.			
2	BEST BUY Gateway ZX4800-06 $750 find.pcworld.com/70088	★★★½☆ VERY GOOD	• WorldBench 6 score: 84 • WorldBench 6 rating: Very Good • Overall design: Fair	• 2.2GHz Pentium Dual-Core • 4GB of RAM; 750GB of storage • Intel integrated graphics • DVD±RW
	▸ Gateway's ZX4800-06 offers strong performance for a budget all-in-one, but some elements feel cheap or unpolished.			
3	MSI Wind Top AE2010 $650 find.pcworld.com/70089	★★★½☆ VERY GOOD	• WorldBench 6 score: 60 • WorldBench 6 rating: Fair • Overall design: Fair	• 1.5GHz Athlon X2 3250e • 4GB of RAM; 750GB of storage • ATI Radeon HD 3200 • DVD±RW
	▸ MSI's Wind Top AE2010 does a great job of filling the gap between budget-oriented all-in-one PCs and flashier big-screen models.			
4	ViewSonic VPC190 $600 find.pcworld.com/70090	★★½☆☆ FAIR	• WorldBench 6 score: 39 • WorldBench 6 rating: Poor • Overall design: Fair	• 1.66GHz Atom D510 • 2GB of RAM; 250GB of storage • Intel integrated graphics • DVD±RW
	▸ The VPC190 sacrifices a lot to achieve its low price—it lacks a touchscreen and the stronger performance of some competitors.			
5	Lenovo C300 $550 find.pcworld.com/70091	★★½☆☆ FAIR	• WorldBench 6 score: 42 • WorldBench 6 rating: Poor • Overall design: Good	• 1.6GHz Atom 330 • 4GB of RAM; 640GB of storage • ATI Mobility Radeon HD 4350 • DVD±RW
	▸ Lenovo's 20-inch C300 delivers a big screen and lots of storage; some critical deficiencies, however, put a dent in its usefulness.			

CHART NOTE: Ratings are as of 5/10/10.

MORE ONLINE Visit find.pcworld.com/69449 to see in-depth reviews, full test results, and detailed specs for these budget all-in-one PCs.

PHOTOGRAPHS: ROBERT CARDIN

JULY
2010

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Acer recommends Windows 7.

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- 320GB[1] hard drive

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Windows 7 Professional

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Acer recommends Windows 7.

Acer® TravelMate® 8172

- Genuine Windows® 7 Professional
- Downgrade right to Windows® XP Professional[2]
- 11.6" display, 1366 x 768 resolution
- 2GB DDR3 1066 SDRAM
- 250GB[1] hard drive
- 5-in-1 card reader
- 802.11b/g/n WLAN, Bluetooth®, gigabit LAN
- Integrated webcam
- Fingerprint reader
- One-year limited warranty[3]

Acer TravelMate 8172
- Genuine Windows® 7 Professional
- Intel® Core™ i3-330UM Processor

TM8172-3519 (LX.TWN03.006)

$649

Windows 7 Home Premium

Windows® 7 — the best entertainment experience on your PC.

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Acer® TravelMate® 5740

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- Downgrade right to Windows® XP Professional[2]
- 15.6" display, 1366 x 768 resolution
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- 5-in-1 card reader
- 802.11b/g/n WLAN, Bluetooth®, gigabit LAN
- Integrated webcam
- One-year limited warranty[3]

HDMI™ Connectivity

Acer TravelMate 5740

- Genuine Windows® 7 Professional
- Intel® Core™ i5-450M Processor
- 4GB DDR3 1066 SDRAM
- 320GB[1] hard drive

TM5740-6291 (LX.TVF03.069)

$799

Genius Buy

Acer TravelMate 5740

- Genuine Windows® 7 Professional
- Intel® Core™ i3-350M Processor
- 2GB DDR3 1066 SDRAM
- 250GB[1] hard drive

TM5740-5896 (LX.TVF03.066)

$699

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ASPIRE one
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Acer® Aspire® One 532h

- Genuine Windows® 7 Starter
- 10.1" display, 1024 x 600 resolution, Acer CrystalBrite Technology
- 1GB DDR2 667 SDRAM
- 160GB[1] hard drive
- Multi-in-one card reader
- 802.11b/g/n WLAN, 10/100 LAN
- Integrated webcam
- Up to eight hours battery life[4]
- Under 3.0 lb.
- One-year limited warranty[3]

Acer Aspire One 532h
- Genuine Windows® 7 Starter
- Intel® Atom™ Processor N450
- Six-cell battery

AO532h-2588 (LU.SAL0D.277)
- Onyx blue chassis

AO532h-2223 (LU.SAX0D.002)
- Silver matrix chassis

$329

Acer Aspire One 532h
- Genuine Windows® 7 Starter
- Intel® Atom™ Processor N450
- Three-cell battery

AO532h-2727 (LU.SAL0D.270)
- Onyx blue chassis

AO532h-2298 (LU.SAX0D.008)
- Silver matrix chassis

$319

10.1"

Next-Generation Netbook

Acer GD235HZ bid
- 23.6" wide-screen TFT LCD
- 3D ready[5]
- 1920 x 1080 maximum resolution
- 80000:1 dynamic contrast ratio
- 170°/160° horizontal/vertical viewing angles
- VGA, DVI, HDMI™ (HDCP) signal connectors
- 300 cd/m² brightness
- 2ms gray-to-gray response time
- Tilt adjustment

(ET.UG5HP.001)

$399

Acer D240H bmidp
- 24" wide-screen TFT LCD
- Digital photo-frame function
- 1920 x 1080 maximum resolution
- 80000:1 dynamic contrast ratio
- 170°/160° horizontal/vertical viewing angles
- VGA, DVI (HDCP), HDMI™, USB signal connectors
- 300 cd/m² brightness
- 2ms gray-to-gray response time
- Two 2.0W integrated speakers
- 1GB[1] storage
- CompactFlash®, Secure Digital card reader
- Tilt adjustment

(ET.FD0HP.001)

$325

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Acer® TravelMate® 8572

- Genuine Windows® 7 Professional
- Downgrade right to Windows® XP Professional[2]
- 15.6" display, 1366 x 768 resolution
- 4GB DDR3 1066 SDRAM
- 500GB[1] hard drive
- Integrated Super-Multi drive
- 5-in-1 card reader
- 802.11b/g/n WLAN, Bluetooth®, gigabit LAN, V.92 modem
- Integrated webcam
- Fingerprint reader
- One-year limited warranty[3]

Acer TravelMate 8572

- Genuine Windows® 7 Professional
- Intel® Core™ i7-620M Processor

TM8572-6779 (LX.TW603.021)

$999

Fingerprint Security

Acer B243HL bmdrz

- 24" wide-screen TFT LCD
- White LED backlight
- 1920 x 1080 maximum resolution
- 8,000,000:1 dynamic contrast ratio
- 170°/160° horizontal/vertical viewing angles
- VGA, DVI (HDCP), four USB signal connectors
- 250 cd/m² brightness
- 5ms response time
- Two 2.0W integrated speakers
- Height, pivot, tilt and swivel adjustments

(ET.FB3LP.002)

$299

Acer V233H AJbd

- 23" wide-screen TFT LCD
- EPEAT® Silver rating
- 1920 x 1080 maximum resolution
- 80000:1 dynamic contrast ratio
- 160°/160° horizontal/vertical viewing angles
- VGA, DVI (HDCP) signal connectors
- 300 cd/m² brightness
- 5ms response time
- Tilt adjustment

(ET.VV3HP.A01)

$195

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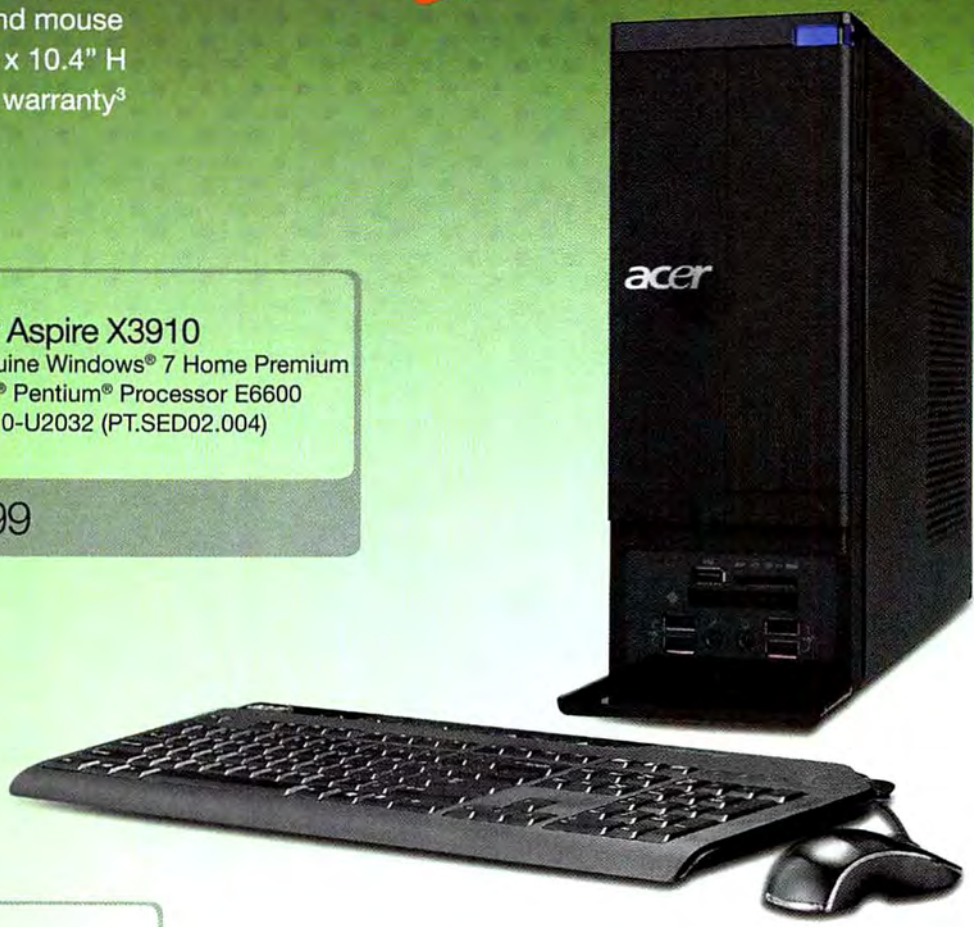
Acer recommends Windows 7.

Acer® Aspire® X3910

- Genuine Windows® 7 Home Premium
- 4GB DDR3 SDRAM
- 640GB[1] SATA hard drive
- Super-Multi drive
- Multi-in-one card reader
- 802.11b/g/n WLAN, gigabit LAN
- USB keyboard and mouse
- 3.9" W x 14.6" D x 10.4" H
- One-year limited warranty[3]

Compact PC



Acer Aspire X3910

- Genuine Windows® 7 Home Premium
- Intel® Pentium® Processor E6600

AX3910-U2032 (PT.SED02.004)

$499

Acer S243HL bmii

- 24" wide-screen TFT LCD
- White LED backlight
- 1920 x 1080 maximum resolution
- 8,000,000:1 dynamic contrast ratio
- 170°/160° horizontal/vertical viewing angles
- VGA, two HDMI™ (HDCP) signal connectors
- 250 cd/m² brightness
- 2ms gray-to-gray response time
- One 2.0W integrated speaker
- Tilt adjustment

(ET.FS3LP.001)

$299

Acer P5271

- DLP® 3D-ready professional projector[5]
- XGA (1024 x 768) native resolution
- 4,000-hour lamp life (economy mode)
- 3100 ANSI lumens (standard mode)
- 3000:1 contrast ratio
- 2X digital zoom

(EY.J8701.008)

$899

Acer® Veriton® X498G

- Genuine Windows® 7 Professional
- Downgrade right to Windows® XP Professional[2]
- Super-Multi drive
- Gigabit LAN
- PS/2®-style keyboard and optical mouse
- 4.0" W x 15.6" D x 10.5" H
- Three-year limited warranty[3] with limited on-site service during first year[7]

EPEAT® Silver Rating

Acer Veriton X498G
- Genuine Windows® 7 Professional
- Intel® Core™ i5-650 Processor
- 4GB DDR3 SDRAM
- 500GB[1] SATA hard drive

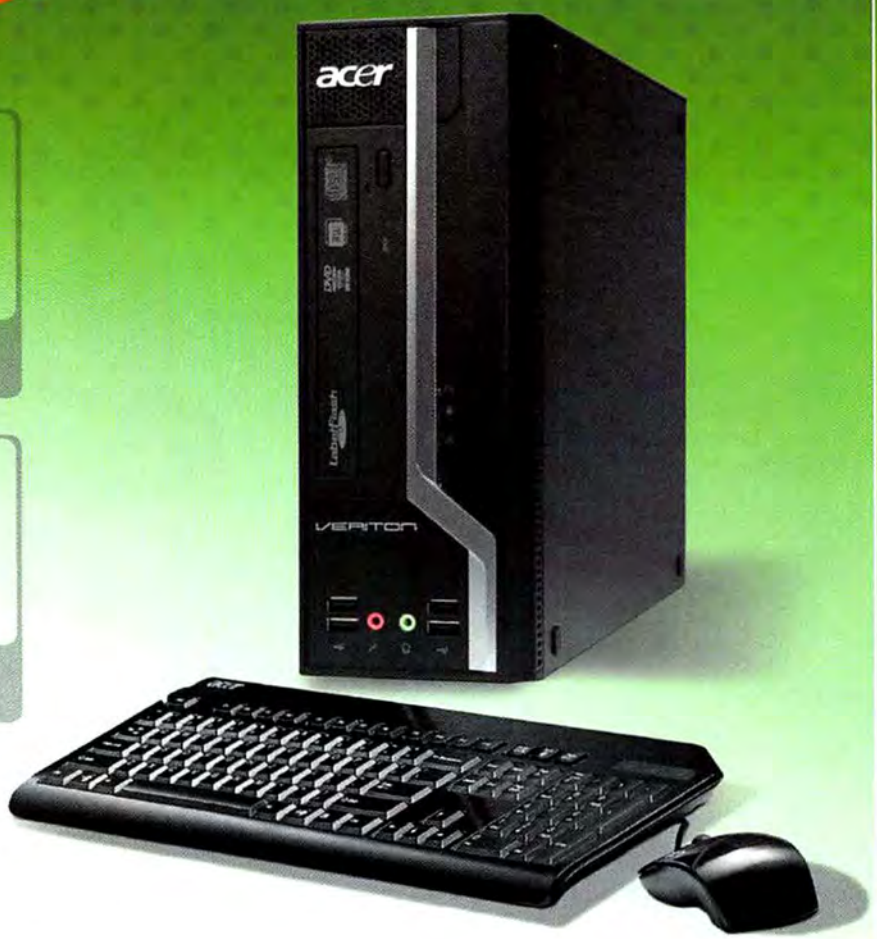
VX498G-Ui5650C (PS.VAW03.002)

$699

Acer Veriton X498G
- Genuine Windows® 7 Professional
- Intel® Core™ i3-540 Processor
- 2GB DDR3 SDRAM
- 320GB[1] SATA hard drive

VX498G-Ui3540C (PS.VAW03.001)

$599



Acer T230H bmidh
- 23" wide-screen TFT LCD
- Touch-screen capable[6]
- 1920 x 1080 maximum resolution
- 80000:1 dynamic contrast ratio
- 160°/160° horizontal/vertical viewing angles
- VGA, DVI (HDCP), HDMI™ signal connectors
- 300 cd/m² brightness
- 2ms gray-to-gray response time
- One 1.5W integrated speaker
- Height, tilt and swivel adjustments

(ET.VT0HP.001)

$379

Windows®. Life without Walls™.
Acer recommends Windows 7.

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Acer® TravelMate® 4740

- Genuine Windows® 7 Professional
- Downgrade right to Windows® XP Professional[2]
- 14.0" display, 1366 x 768 resolution
- 2GB DDR3 1066 SDRAM
- 250GB[1] hard drive
- Integrated Super-Multi drive
- 5-in-1 card reader
- 802.11b/g/n WLAN, Bluetooth®, gigabit LAN
- Integrated webcam
- One-year limited warranty[3]

LED-Backlit Display

Genius Buy

Acer TravelMate 4740

- Genuine Windows® 7 Professional
- Intel® Core™ i3-350M Processor

TM4740-5261 (LX.TVQ03.079)

$699

Protect Your Investment with an Acer Notebook Service Upgrade

The Acer notebooks and netbooks featured in this insert come with a one-year standard limited warranty.[3] For extra protection and peace of mind, consider the Total Protection Upgrade, which covers the cost of a replacement unit if, as determined by Acer, your covered notebook or netbook cannot be repaired. On-site service is available, too, for TravelMate notebooks.[7]

2-Year Extension of Limited Warranty (146.AB820.EX2)
For Acer Notebooks and Netbooks with 1-Year Limited Warranty
$99

2-Year Extension of Limited Warranty + 3-Year Total Protection Upgrade (146.AD077.002)
for Acer Notebooks and Netbooks with 1-Year Limited Warranty (Total Protection Upgrade runs concurrently with limited warranty and limited warranty extension.)
$199

2-Year Extension of Limited Warranty + 3-Year Limited On-Site Service (146.AD362.001)
for TravelMate Notebooks with 1-Year Limited Warranty (On-site service runs concurrently with limited warranty and limited warranty extension.)
$149

2-Year Extension of Limited Warranty + 3-Year Limited On-Site Service + 3-Year Total Protection Upgrade (146.AD362.002)
for TravelMate Notebooks with 1-Year Limited Warranty (On-site service and Total Protection Upgrade run concurrently with limited warranty and limited warranty extension.)
$299

[1] When referring to storage capacity, GB stands for one billion bytes. Some utilities may indicate varying storage capacities. Total user-accessible capacity may vary depending on operating environments.
[2] The alternate operating system can be installed in place of, not in addition to, the pre-loaded operating system.
[3] 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 76503.
[4] Six-cell, 4400mAh lithium ion battery, up to 8.0 hours life depending on configuration and usage.
[5] 3D content, 3D glasses and an appropriately equipped PC are also required to display 3D images.
[6] Touch-screen capability requires appropriate software installed on the PC connected to the display. This software does not come with the display.
[7] 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.

acer **acer.com/us**

For the name of a reseller near you or further information, please visit our Web site or call **800-571-2237**

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Pistol-Grip Camcorder Is Slow on Draw

SONY'S $200 Bloggie MHS-CM5 has a pistol-grip design and a 5X-optical-zoom lens; its dual memory-card slot accepts both SD/SDHC and Memory Stick. A built-in USB connector swings out from a side compartment.

The Bloggie shoots 1080p MPEG-4 video at 30 frames per second—plus 720p video at 60 fps and 30 fps, 640-by-480 VGA video at 30 fps, and 5-megapixel still photos. A 1-second shutter lag makes image capture an adventure, but picture quality is okay and the unit's SteadyShot digital stabilization reduces incidental shakiness.

Video capture works fine in well-lit settings. In bright indoor lighting, the Bloggie's 1080p video is a bit darker and less sharp than we'd have liked. The 5X-optical-zoom lens is a great spec for a pocket camcorder. Autofocus struggled a bit at the telephoto end of the zoom, but it locked on a sharp image after a second or so of searching. The zoom was by far the smoothest we've ever seen on a pocket camcorder.

In low light, the Bloggie produced grainy footage that had a yellow tint, with poor color accuracy.

The Bloggie reproduced clear sound, but the built-in microphone remains sensitive to wind, and overall audio sounds a bit hollow. The Bloggie doesn't offer an external mic-in capability.

Flipping the 2.5-inch LCD screen open powers on the camcorder, and flipping it closed turns it off—a neat (and fast) trick. The camcorder's face-detection option allows you to optimize in-camera exposure settings, and its SteadyShot stabilization worked extremely well.

The Bloggie's impressive design and spec sheet, however, don't place this pocket camcorder with the best competing models, owing to its mediocre video quality in bright light and low light.

—Tim Moynihan

THE BLOGGIE HAS a full-size camcorder's shape in miniature.

★★★½☆ VERY GOOD

Bloggie MHS-CM5 | Sony

Mediocre image quality negates the excellent zoom and other features.

List: $200

find.pcworld.com/70075

Mobile TV Set Lets You Pick Up Shows on the Road

THE $200 FLO TV Personal Television PTV 350 receives the Qualcomm-developed mobile Flo TV service, available on some cell phones too.

The PTV 350 offers 15 channels of nationwide programming (including live broadcasts of CNN, Comedy Central, Disney, and ESPN, and mobile versions of ABC, CBS, and NBC), with room for 5 more. When you buy a PTV 350, you get six months of free Flo TV service; thereafter, you pay $15 a month.

THE PTV 350 tunes in mobile broadcasts from major networks.

The 4.4-by-3.0-by-0.5-inch, 5.4-ounce PTV 350 is a bit larger than a deck of cards. It comes with a built-in antenna and stereo speakers, a mini headphone jack, and a flip-down adjustable stand. On the left side of the screen, a button opens a program guide. The 3.5-inch touchscreen displays programs at 320-by-240-pixel resolution.

Flo TV's terrestrial network is a broadcast system, so it won't work on commercial airline flights, but it won't become overloaded either.

The existing network covers the 20 largest markets in the country, the company says. But there are still lots of gaps between cities.

For several of the stations that I tuned in, Flo TV delivered the same programming simultaneously available on cable for regular TV sets, but other showtimes differ.

The set's small screen and middling image quality are inherent limitations; still, picture quality was adequate for news and cartoons.

In my tests, the built-in speakers produced enough volume to overcome city and highway road noise, and the device's battery supported better than 6 hours of viewing on a single charge.

—John R. Quain

★★★☆☆ GOOD

Personal Television PTV 350

Flo TV

Spotty service coverage outside big cities limits mobile TV's appeal.

List: $200

find.pcworld.com/70103

Midpriced MFPs Meet Different Users' Needs

COLOR INKJET multifunction printers come in many shapes and sizes. Canon's Pixma MX870 and Kodak's ESP 7250 show how much you can expect to get for $200. Both models offer wireless networking, automatic duplexing, and inexpensive inks. The Canon's features and speed suit it for a small or home office, while the Kodak aims for home and leisure-time entertainment.

THE PIXMA MX870's control panel has a numeric keypad.

Canon Pixma MX870

Canon's well-equipped MFP has a 35-sheet automatic document feeder (ADF) that unfolds from the top, a letter-size flatbed scanner below the ADF, and two 150-sheet inputs. The control panel hosts a numeric keypad, large buttons for major functions, a 2.5-inch color LCD for showing menus, and a combination rocker button and scrollwheel for navigation.

In PCWorld Labs tests, the MX870 printed crisp, black plain-text pages at 6.2 pages per minute, and generated bright and smooth full-color, 4-by-6-inch photos (on Canon's own photo paper) at 1.3 ppm. Copies resembled their originals nicely. Scanned images were smooth, but dark.

Ink costs for the Canon's five separate inks are low. A page of plain black text costs 4.6 cents; a four-color page runs about 12 cents.

LOW INK COSTS are among the ESP 7250's appealing features.

Kodak ESP 7250

Kodak's ESP 7250 is easy to use, from its quick setup process to its comprehensive Home Center software for printing, copying, and scanning. The front control panel has a 2.4-inch color LCD for displaying menus, which you navigate by using a four-way rocker button. A nice bonus: You can print photos directly from an Apple iPhone or iPod Touch, or from a Wi-Fi–enabled BlackBerry. The features are otherwise minimal: just a 100-sheet main paper tray along with a 40-sheet photo tray. Kodak includes a letter-size flatbed scanner with the ESP 7250, but no ADF.

Kodak's ink costs are very low: 2.35 cents per page for a standard (420-page) black cartridge; 2.2 cents per page for a high-yield (770-page) black cartridge; and 6.6 cents for a tricolor cartridge.

Photo quality is the ESP 7250's strong point, though photos printed slowly (at a rate of 1.2 ppm in our tests). On photo paper, images of people were natural and detailed; still and moving objects seemed a bit light and slightly grainy. On plain paper, photos looked faded, yellowy, and grainy. Text pages printed at 4.6 ppm, with crisp print quality but dark gray (not black) text. Monochrome scans and copies looked good, but color images came out choppy, cartoonish, and off-color.

The Canon Pixma MX870 is a better deal overall, due to its good performance and many features. Kodak's ESP 7250 offers attractive photo quality and friendly features for home and student users.

—Jon L. Jacobi and Melissa Riofrio

★★★★☆ VERY GOOD

Pixma MX870 | Canon

All-purpose small-office device offers good speed and features.

Street: $200

find.pcworld.com/70117

★★★½☆ VERY GOOD

ESP 7250 | Kodak

Entertainment-oriented MFP handles color photos especially well.

Street: $200

find.pcworld.com/70118

PHOTOGRAPHS: ROBERT CARDIN

You're about to spread a virus through your social network page. Is that what friends are for?

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Norton from symantec

Players Master Blu-ray, Struggle With Upscaling

ASIDE FROM handling Blu-ray discs, Sony's BDP-S570 and Vizio's VBR200W focus on streaming video and Web services. Still, each player has strengths and weaknesses.

Sony BDP-S570

The BDP-S570 ($225) earned high marks for image quality on our test color Blu-ray discs. But in our black-and-white Blu-ray test, images looked flat and dull; and in our color DVD test, the picture appeared soft, with flat, uninteresting colors.

The small, unexceptional remote control is neither backlit nor programmable, but its smallish buttons are well positioned and soon become easy to find by touch.

SONY'S BDP-S570 started to play a disc in just 26 seconds.

The BDP-S570 comes with two USB ports: a back one for BD-Live storage, and a front one for multimedia. Physically, it's a nicely designed machine; the buttons are easy to see and press, and they provide a good degree of tactile feedback.

A final strong point is the player's responsiveness: It started playing a test Blu-ray disc just 26 seconds after we inserted it. Most units we've tested take over a minute.

Vizio VBR200W

The $190 Vizio VBR200W is a fairly standard Blu-ray Disc player that outputs attractive Blu-ray images—both color and black-and-white—to an HDTV. But it stumbles at the task of upscaling DVDs. And although its Internet capabilities let you stream videos from Netflix and Vudu, the VBR200W doesn't support YouTube playback—a feature that many comparably priced models offer.

Admittedly, no player can make an upscaled 480p image look like native 1080p, but the VBR200W did a particularly bad job of upscaling. If you buy a VBR200W, consider playing DVDs at 480p and letting your HDTV do the upscaling.

Like most Blu-ray players today, the VBR200W lets you plug a flash drive into its USB port to listen to music, view photos, and watch videos. The music will continue to play as you look through your photos, which makes adding background music to a slideshow a snap. Unfortunately, the player's only USB port is on the back.

YOU CAN'T FIND the VBR200W's pressure-sensitive buttons by touch.

Another physical design problem is the failure of the front-panel buttons to provide any tactile feedback.

The player's icon-centric menu system is well labeled, and Vizio also supplies an excellent reference manual.

A sensibly large Play/Pause button dominates the included remote control, with commonly used buttons, such as Skip and Stop, conveniently arranged around it. The remote is neither backlit nor programmable.

The VBR200W started playing our test Blu-ray disc in 50 seconds—significantly better than average, but much longer than the Sony BDP-S570's 26 seconds.

—Lincoln Spector

★★★½☆ **VERY GOOD**

BDP-S570 | Sony

Unit looks great on paper, but its on-screen test results were mixed.

Street: $225

find.pcworld.com/70114

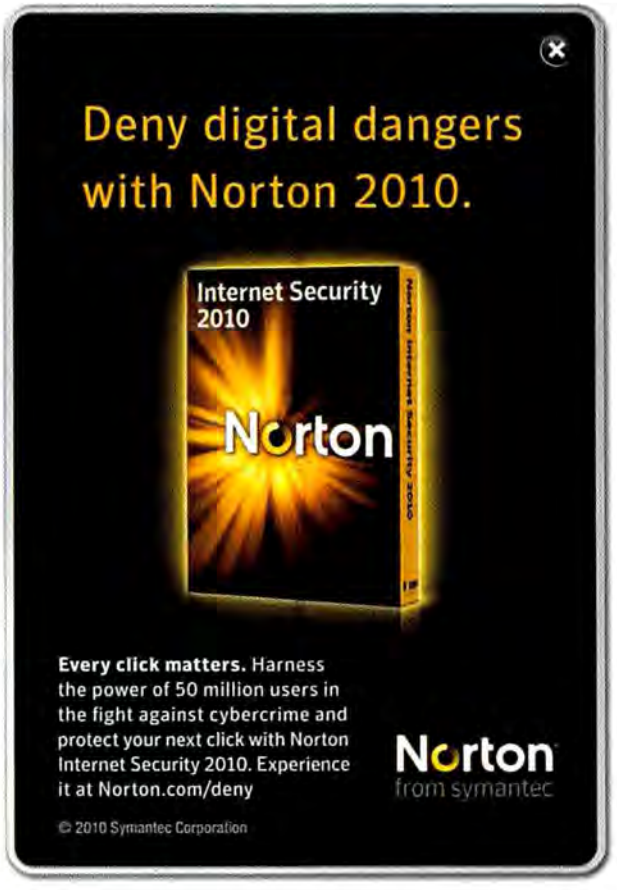
★★★½☆ **VERY GOOD**

VBR200W | Vizio

Very good image quality is undone by design and upscaling woes.

Street: $190

find.pcworld.com/70115



WinZip Pro Introduces an Efficient Ribbon Interface

WINZIP PRO 14.5 adds lots of useful features to the program's roster of tools, most notably a Microsoft Office–style ribbon that puts all of the program's options within easy reach so you can start tasks with a simple click. Ribbon haters can opt for the earlier WinZip interface.

Among the software's new features are a Zip-file previewer (for looking inside Zip files when you use Windows Explorer or Microsoft Outlook) and the ability to back up files to phones and digital cameras in .zip format.

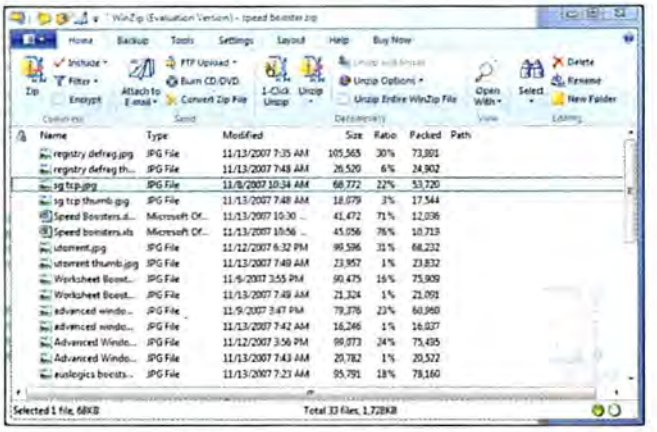
Goodies specific to Windows 7 include integration with the OS's libraries and jump lists to perform many Zip-related tasks, such as opening a Zip archive and creating a new Zip archive.

WinZip Pro 14.5 offers improved security for encrypted files. It will automatically destroy temporary, created-for-viewing copies of encrypted files, and work with Intel-based hardware that uses built-in AES encryption. In addition, it can easily zip and mail files, and extract files from .iso images.

Also new to this version of WinZip Pro is support for the .zipx compression standard, which compresses files more efficiently than did the previous standard (.zip).

If using Zip archives isn't part of your routine, there's no compelling reason to buy WinZip Pro 14.5; Windows does simple jobs perfectly well. But if you want a ribbon interface, higher compression ratios, better integration with Windows 7, and useful extra features, the new WinZip Pro is worth buying.

—Preston Gralla



ON WINZIP PRO'S ribbon interface, many tasks are just a click away.

★★★★½ SUPERIOR

WinZip Pro 14.5 | WinZip

Venerable compression program adds Office-style options ribbon.

List: $50

find.pcworld.com/70104

PowerDVD Gets 3D Support, Interface Refresh

THE MOST stable and powerful DVD and Blu-ray movie player available, CyberLink's PowerDVD 10 Ultra ($100) offers an array of new features, including 3D support.

The changes start with the interface. Across the top of the player, just beneath the menu, are tabs for movies, video, and music. The latter two sections' panes appear as file browsers. Unfortunately, the program is slow to enumerate files when you browse a media-filled folder.

CyberLink touts the new PowerDVD as a universal player, thanks to its support for Real Media, .mkv, .flv, .3gp, and .3g2 files. Even so, it couldn't handle an h.263-codec-based .flv file, nor could it recognize my Ogg Theora files, even with a DirectShow filter installed.

In other respects, playback was excellent. Behind the scenes (or via adjustable controls), PowerDVD offers tools for upscaling 480p video to 1080p, increasing frame rates to smooth HD pans, and compensating for excessively dark scenes.

Another new feature is the ability to upscale 2D to 3D. The results were passable, though early 3D-encoded content does appear sharper. A future free upgrade will fully support the 3D Blu-ray titles coming this summer.

PowerDVD 10 Ultra adds social features, too, such as uploading videos to YouTube; integrating with Windows 7 libraries; and sharing comments via Facebook, MoovieLive, and Twitter.

The addition of 3D makes PowerDVD 10 Ultra a worthy upgrade, and other enhancements round out the application nicely. The only dramatic improvements, however, involve image stabilization and support for the new media formats.

—Jon L. Jacobi

THE NEW TABBED interface is a major improvement in PowerDVD 10.

★★★★½ SUPERIOR

PowerDVD 10 Ultra | CyberLink

Video stabilization and a new interface highlight this major revision.

Street: $100

find.pcworld.com/70109

Sherwood's Home-Theater Receiver for the Digital Age

THE SHERWOOD NetBoxx R-904N is not your father's 7.1, 700-watt home-theater receiver. Outfitted with a full array of digital and analog audiovisual inputs, it's also a network appliance that can stream high-def media from sources on your home network and the Web. At $650, however, it's pricey. Also, its media streaming is far less impressive than its audio processing, and its user interface can be daunting.

THE SHERWOOD NETBOXX is especially good at delivering audio.

At 17 by 2.8 by 12 inches, the shiny black NetBoxx (a white version is available) should blend in with most home entertainment setups. Inputs include three HDMI, two component, and two composite video ports, as well as an optical audio port and a CD stereo port. As for outputs, it supports component video, two composite video cables, and HDMI.

You connect the NetBoxx to your network via either its ethernet port or an included 802.11g Wi-Fi USB adapter that doubles as a flash memory drive.

The remote control can be hard to use. It's supposed to be a universal remote, but its codes don't cover some devices.

As a home-theater audio receiver, the NetBoxx is quite capable, with features you don't always see in a midrange product. Even without making adjustments, I was impressed by the sound emanating from my 5.1 speakers, and Blu-ray movies looked great.

Apart from audio, however, I found the NetBoxx only so-so as a media streamer.

—Yardena Arar

★★★★☆ **VERY GOOD**

NetBoxx R-904N | Sherwood

Receiver produces terrific audio but so-so Internet media streaming.

List: $650

find.pcworld.com/70112

PHOTOGRAPH: ROBERT CARDIN

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Precise File Syncing With PCsync 6.0

LAPLINK'S PCsync version 6.0 lets you synchronize folders and individual files on multiple computers automatically, manually, or in a combo of the two. You can synchronize via a network, a Laplink USB cable, or a Windows Easy Transfer cable. It also lets you synchronize to external hard drives and USB drives, so you can use it as a backup program as well.

Version 6.0 works with Macs and with Windows XP, Server 2003, Vista, and 7 PCs. Even though it's a 32-bit app, it is compatible with 32-bit and 64-bit Windows versions.

PCSYNC CAN synchronize files and folders on multiple systems.

PCsync faces stiff competition from two free apps—SugarSync and Microsoft's Windows Live Sync—but neither offers PCsync 6.0's level of fine-grained control over files and folders.

—Preston Gralla

★★★½☆ **VERY GOOD**

PCsync 6.0 | Laplink

Pricey but fine-grained control over file and folder synchronization.

List: $40 (download)

find.pcworld.com/70101

DOWNLOAD THIS

Get What You Need From Your PC and the Web

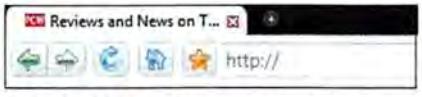
OBTAINING DATA from your PC or the Web isn't as safe or easy as it should be. These programs improve Web privacy, download speed, and searching power. Each is free to download.

SHARE FILES QUICKLY and easily with the Gygan stand-alone client.

Comodo Dragon

In Comodo Dragon you'll find an Incognito Mode that allows you to Web surf without leaving any trace of your existence. This is handy for browsing in physical settings where security is an issue (over free public Wi-Fi, say) or where you share a group or guest login. Instead of relying on you to delete your cookies afterward, Incognito Mode blocks cookies in the first place. Comodo Dragon's interface is minimalist, leaving a lot of room for the screen, and it renders pages quickly while using little RAM and CPU power. find.pcworld.com/70124

—Steve Horton



COMODO DRAGON'S Incognito Mode lets you surf safely in otherwise nonsecure locales.

Gygan

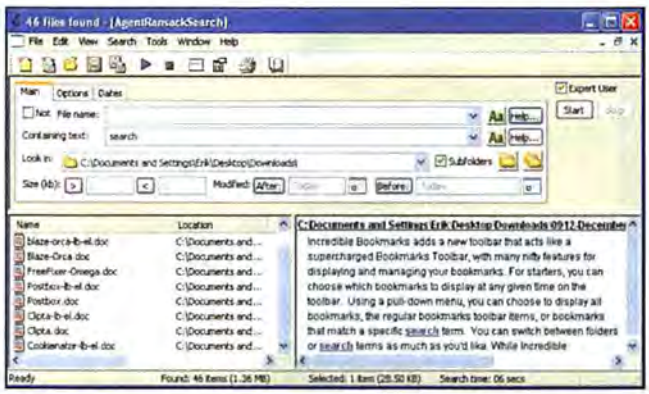
Though Gygan isn't a revolutionary file-sharing service, it does fill a niche: It combines some of the best features of RapidShare and Usenet in an easy-to-use stand-alone client. Like RapidShare, Gygan is built around users' uploading content to their specific service, stored in a private sharing network on Usenet. It isn't a peer-to-peer setup, though: Gygan provides indirect access to Usenet via its own servers. This makes fast downloads and uploads possible, but it's also why you have to start paying after 1GB of free downloads. Although Gygan won't overtake BitTorrent anytime soon, it may be the right fit for you. find.pcworld.com/70125

—Gabe Gralla

Agent Ransack

With Agent Ransack you can create customized system searches that go well beyond basic Windows searches. Its most powerful features are intended for programmers and other techies. Basic searches are relatively easy: You choose all or part of a file name to search for, optional text within a file, and the drive or directory to search. Agent Ransack can dig into binary files, including .exe files, to pull out matching text; but it can't search within .zip files or other archives (the paid version of the software, FileLocator Pro, does that). find.pcworld.com/70126

—Erik Larkin



AGENT RANSACK CONDUCTS more-precise and more-sophisticated searches of your system's files than Windows' built-in tool does.

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Where the

ILLUSTRATION BY RICHARD MIA

Deals Are

We shopped our way across the country to see which retailer has the best selection, service, and prices on cameras, PCs, TVs, and more.

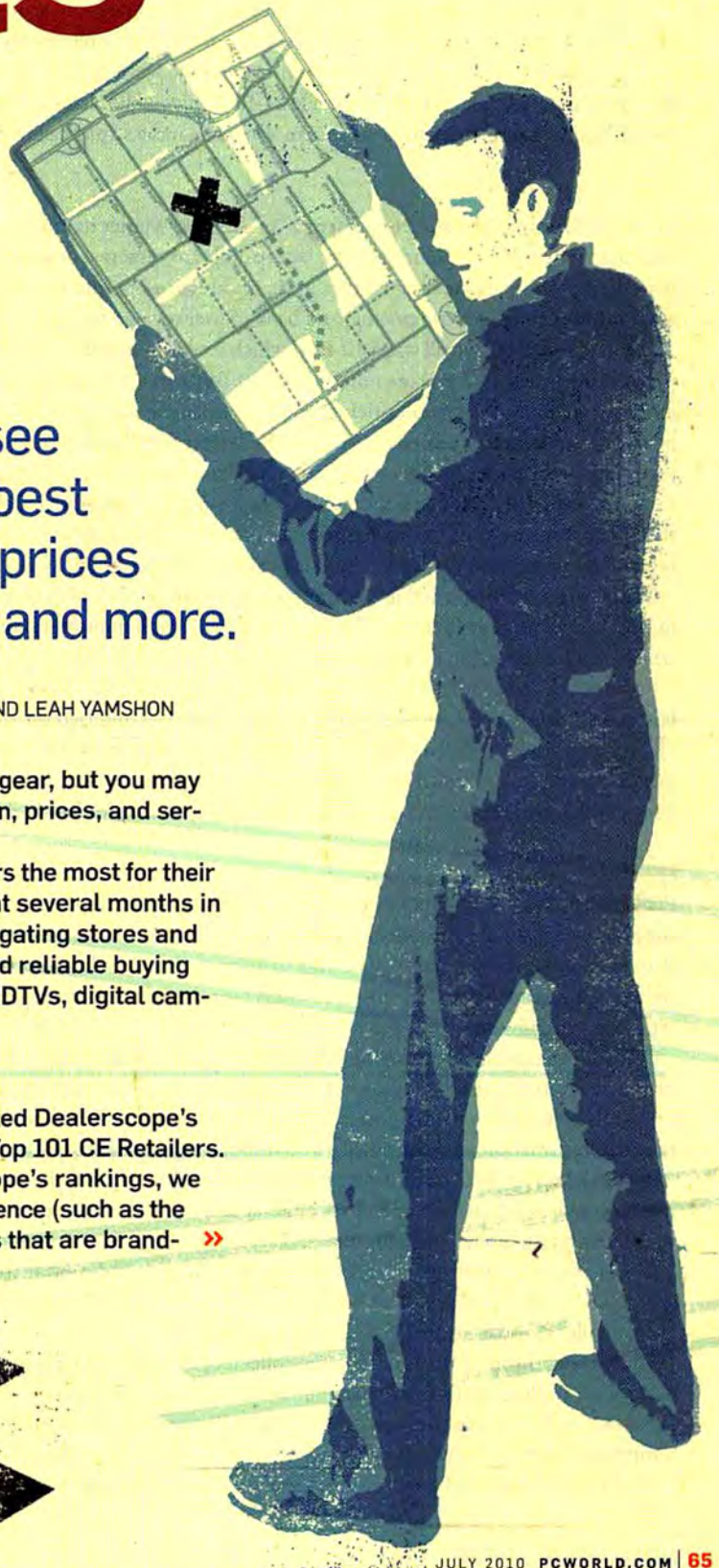
BY PCWORLD STAFF | RESEARCH BY RACHEL SADON AND LEAH YAMSHON

YOU SHELL OUT BIG BUCKS to buy your tech gear, but you may not be getting the best combination of selection, prices, and service from your local electronics emporium.

To find out which tech retailers give consumers the most for their money, PCWorld researchers and editors spent several months in the field, on the phone, and on the Web, investigating stores and sites in search of attractive product options and reliable buying advice in six purchasing categories: laptops, HDTVs, digital cameras, desktops, hard drives, and printers.

The Stores We Evaluated

In selecting retailers for this story, we consulted Dealerscope's most recent (March 2010) annual study of the Top 101 CE Retailers. Of the top 20 companies included in Dealerscope's rankings, we eliminated the retailers that lack a national presence (such as the California-based Fry's Electronics), the sellers that are brand- »



Overall Winners

Online retailer:
Amazon.com
Brick-and-mortar retailer:
Best Buy

specific (such as Dell and Apple), the businesses that cater to a specialized market (such as GameStop), and the companies that charge membership fees (such as Costco and Sam's Club).

That left us with a manageable group of ten finalists. Four of them are online-only sellers: Amazon.com, CDW, Newegg, and TigerDirect. The other six are brick-and-mortar retailers—Best Buy, RadioShack, Sears, Staples, Target, and Walmart—though each of them also maintains a strong online presence.

Best in Show

In our evaluations, Amazon.com emerged as the clear winner in most categories, finishing in first place in four of them: laptops, digital cameras, desktop PCs, and hard drives. Our participating editors in these categories pointed to Amazon's great selection, competitive pricing, and bank of user reviews for purchase research.

Coming in second overall was Best Buy, which took top honors in the HDTV and printer categories. Our editors noted that Best Buy had a good range of products in these two categories, good pricing, and—especially in the case of HDTVs—the most knowledgeable salespeople we consulted. Best Buy finished in second place (by itself) in the desktop PCs category, and tied for second place in laptops, digital cameras, and hard drives. In our calls and in-store visits, we found that Best Buy did the best job of answering our tech questions correctly. It was the top finisher among brick-and-mortar retailers, and its online performance was good, as well.

Other retailers that turned in strong showings were CDW, which tied for second in laptops and printers; Staples, which also tied for second in printers; and Newegg, which tied for second in digital cameras and hard drives.

RadioShack ended up with the weakest performance ranking overall, finishing last in our survey in the hard-drive and printer categories and tied for last in the rankings for desktop PCs and laptops. Other chains that earned relatively low marks were Walmart, which tied for last place in cameras, desktops, and laptops; Sears, which tied for last in laptops; and Target, which tied for last in desktop PCs.

How We Did It

PCWorld editors picked four key products to shop for in each category, and also supplied our team of researchers with a tech-specific question for each product that a technology seller ought to be able to answer. (For details about the products we went shopping for and the test questions we asked the various retailers' sales reps in researching this story, see find.pcworld.com/70127.)

Our editors examined the online stores' Websites in detail to assess the overall product selection in each category, along with pricing, availability of the products on our list, the sites' return policies, the presence of user reviews and detailed product information, and the quality of the shopping experience on each site.

In all, our researchers made more than 200 calls to branches of the six brick-and-mortar retailers we investigated in six cities across the United States: Boston, Denver, Phoenix, Memphis, Minneapolis, and Washington, D.C.

We also made in-store spot checks at a number of brick-and-mortar stores in seven U.S. cities: Brooklyn, New York; Chicago; Fairfield, California; Houston; Jacksonville, Florida; Seattle; and Vallejo, California.

After sifting through all of the data we collected, we rated each retailer in four categories: In-Store Selection (or Online Store Selection, as appropriate); Return Policies; Quality of Staff Response to PCWorld Phone Calls; and Quality of Overall Shopping Experience. Averaging these numbers yielded an overall mark.

So that's how we rated them. Now let's take a closer look at how each of them did.

Laptops

Shopping for a new laptop can be a dizzying experience, what with countless individual models, a dozen top brands, and sometimes only minor differences between them. And once you've chosen a model, you may have to sort through dozens of configuration options before you can close the deal. So we were particularly interested to see which major resellers would help us find and buy a suitable laptop with the least hassle.

Prices for the laptops we targeted were similar at the stores in our test group. The prices at Newegg were often a bit lower than average, while Amazon and Walmart tended to have slightly higher prices. Price differences varied from model to model, however, and variables such as shipping costs and taxes made comparisons even more complicated.

Best Buy and Staples may be the best places to start looking if you aren't sure of what you want. The salespeople at those two retailers were leagues ahead of the others in their knowledge of various laptop models and their included technology. Identify the features you want and the tasks you need done, and the people at Best Buy or Staples will at least point you in the right direction.

Sears doesn't carry laptops in its physical stores, so we couldn't fairly expect staffers to answer questions about them; RadioShack and Walmart reps were generally not well-informed about laptops.

Our in-store shopping venture at Target confirmed the need to do your research before you arrive. At the stores we visited, the absence of information cards for the PCs and of a knowledgeable staffer to discuss finer points of the two relevant models that the store carried left us feeling adrift.

After spending a little hands-on time in the store with a laptop you like, check online to see whether a reputable online store offers that model at a lower price. You may find a nearly identical laptop online that costs less, or you may be able to add one or two minor features

that will suit your needs even better.

Hands down, Amazon had the broadest array of laptops of any online retailer we examined—an advantage strengthened by the site's useful, easy-to-find reader reviews and ratings. But after you visit Amazon, take a look at online stores that specialize in electronics, like CDW, Newegg, and TigerDirect. They can't match Amazon's selection, but they do offer plenty of choices, and they make it easy to narrow down your choices to the laptops you're most interested in.

The Sears online store lists a huge selection, but third-party vendors fulfill most of the laptop offerings. Worse, shopping on the Sears site is a nightmare: Accessories such as replacement LCD screens, batteries, and luggage are interspersed with the laptop search results, forcing you to wade through a flood of irrelevant content.

Don't forget to check the online stores for Best Buy and Staples, too. They carry a host of models that aren't on display in the brick-and-mortar stores. Often you can avoid a shipping charge by buying a system online and having it shipped to a local store for pickup; and if you later have a problem with the laptop, you can return it to the store nearby instead of shipping it back to the company's warehouse at your own expense.

TEST QUESTION

Q How does an LED backlit screen differ from a regular LCD-type laptop screen?

A The LED screen saves power and can have better color and contrast, but you don't need one unless you like the way it looks.

—Jason Cross

HDTVs

A large HDTV is one of the bulkiest and most expensive electronics purchases you can make, so you'll want to make the right choice from the get-go. Prices online tend to be lower than those at brick-and-mortar stores, but we did find some attractive in-store deals as well.

Start by visiting a store, and test-view the TVs in action. Get a feel for the various sets' designs, and ask the salesperson questions. Then decide whether to buy in the store (where you'll pay sales tax and sometimes—but not always—get free delivery) or look for deals online (where you can often get free shipping and usually not pay sales tax).

Nationally, our highest-ranked retailer for large HDTVs was Best Buy, which impressed us with its range of selections. The Best Buy salespeople we spoke to earned high marks for their answers to our HDTV questions. The best information came from staffers who worked in the store's television department; they usually explained technical details—such as refresh rate and contrast ratio—with accuracy, clarity, and patience.

Some models that Best Buy sells are available only at its stores, where regular prices tend to be higher (by as much as $200 or $300) than the ones at online retailers. In-store sale prices are more »

Amazon Ranks Highest for Laptops

Best Buy and CDW also receive good marks; RadioShack, Sears, and Walmart languish.

	STORE	Overall rating	In-store selection	Online store selection	Return policies (in-store & online)	Quality of staff responses to phone inquiries	Quality of overall shopping experience
1	Amazon.com (online only)	4.5	n/a	5	3	n/a	4.5
2	Best Buy (stores & online)	3.5	3.5	2.5	2.5	3	3.5
3	CDW (online only)	3.5	n/a	4	3	n/a	3
4	Newegg (online only)	3	n/a	2	3	n/a	4
5	TigerDirect (online only)	3	n/a	3.5	3	n/a	3
6	Staples (stores & online)	2.5	2.5	1.5	2.5	2.5	3
7	Target (stores & online)	2.5	[1]	3	4	2	2
8	RadioShack (stores & online)	2	[1]	1.5	3	1.5	2.5
9	Sears (stores & online)	2	[2]	3	2.5	[2]	2
10	Walmart (stores & online)	2	[1]	2.5	3	0.5	2

CHART NOTE: n/a = not applicable. FOOTNOTES: [1] Retailer did not carry our test models in its stores. [2] Retailer does not carry laptops in its stores.

Best Buy Offers Solid HDTV Shopping

Hands-on opportunities and knowledgeable staff help it finish slightly ahead of Amazon.

	STORE	Overall rating	In-store selection	Online store selection	Return policies (in-store & online)	Quality of staff responses to phone inquiries	Quality of overall shopping experience
1	Best Buy (stores & online)	★★★★½	★★★★☆	★★★★☆	★★★★½	★★★★½	★★★★½
2	Amazon.com (online only)	★★★★☆	n/a	★★★★★	★★★½☆	n/a	★★★★☆
3	CDW (online only)	★★★½☆	n/a	★★★☆☆	★★★½☆	n/a	★★★½☆
4	Newegg (online only)	★★★½☆	n/a	★★★½☆	★★★½☆	n/a	★★★½☆
5	Sears (stores & online)	★★★½☆	★★★½☆	★★★★½	★★★☆☆	★★★★☆	★★★½☆
6	Target (stores & online)	★★★☆☆	★★☆☆☆	★½☆☆☆	★★★★½	★★★☆☆	★★★☆☆
7	TigerDirect (online only)	★★★☆☆	n/a	★★★☆☆	★★★½☆	n/a	★★★☆☆
8	Walmart (stores & online)	★★★☆☆	★★★☆☆	★★★☆☆	★★★★½	★★½☆☆	★★½☆☆
9	RadioShack (stores & online)	★★½☆☆	[1]	★½☆☆☆	★★★½☆	[1]	★★☆☆☆

CHART NOTE: Staples is not included in this chart's rankings because the retailer does not sell HDTVs in stores or online. n/a = not applicable. FOOTNOTE: [1]Retailer did not carry our test models in its stores.

competitive, but they may still be higher when you factor in the sales tax and possible delivery and setup fees.

Amazon was the top online-only retailer of HDTVs in our research, thanks in large part to having the best, most diverse selection of models and manufacturers.

Amazon's Website is easy to use, but the store and its many third-party retailers may have different sales policies. If you buy a 40-inch or larger TV directly from Amazon, you receive free delivery and unboxing in your home, along with Amazon's 30-day return policy and (maybe) no sales tax. If you buy from one of Amazon's third-party partners, the shipping fee, return policy, and sales tax will depend on the vendor.

Both Newegg and TigerDirect have a reasonable selection of HDTV models and regularly offer good deals. Again, pay close attention to shipping costs and return policies. A helpful guide on Newegg's site helps you narrow your selection down based on screen type and size. We found TigerDirect's site more difficult to navigate, and its presentation of available models is somewhat sloppy and hard to read. CDW had a decent array of TVs, too, but its site is also hard to navigate, and some item listings lacked significant feature details.

In our research, most Sears employees impressed us with their polite, professional attitude. Calling the in-store service center ensures that you'll have an operator's full attention—but the person you speak to may not be well-informed about the product. The in-store electronics department at the outlets we checked offered a smaller selection than we had hoped, and some of the employees on the floor had limited knowledge of HDTVs. For its part, Sears.com has extensive product options, thanks largely to its Amazon-like Marketplace section.

Target and Walmart are best left to consumers who seek smaller sets (32 inches and under) and aren't looking for answers to tech questions. The models that the two retailers carried came from the value lines of mainstream vendors such as Sony and Vizio or of less dominant vendors such as Memorex and Philips. Walmart's service in the phone portion of our research did not impress us. Though the retail giant's selection was adequate, the employees we spoke to rarely knew much about HDTVs, and they often seemed rushed or impolite.

RadioShack has a quite limited selection of HDTVs. Its stores don't carry sets with screens larger than 32 inches, and its online selection is relatively small. That said, the RadioShack Website was well laid out and fairly easy to use. The tenth retailer that we tracked—Staples—doesn't sell HDTVs at all.

Wherever you choose to shop, keep an eye out for sales. You can consult PCWorld.com and Pricegrabber.com to compare prices from numerous sellers. Also, Camelcamelcamel.com can help you track pricing and sales on Amazon.

—Nick Mediati

TEST QUESTION

Q What is the practical value of 60Hz versus 120Hz versus 240Hz refresh rates in LCD TVs?

A The refresh rate indicates how well a display handles fast motion—an important criterion if you enjoy watching sports or action movies. In general, the higher the refresh rate, the smoother the motion.

Digital Cameras

Unless you shop at a local camera specialty store, your best bet for buying a digital camera is to seal the deal online. Your neighborhood electronics emporium may not have the camera you're looking for in-house, but you can likely find that model on the store's Website. Web-only outlets fared even better in our research, with Amazon leading the pack in selection and pricing.

We saw significant price differentiation among the outlets, too. Walmart generally had the lowest prices of the brick-and-mortar-backed Websites; Amazon offered good deals among online-only stores. Camera prices were higher at RadioShack and CDW than elsewhere on the products we shopped for.

In terms of in-store buying advice and knowledge of specific products, Best Buy outperformed its brick-and-mortar competitors. For instance, one Memphis Best Buy employee correctly answered our questions about the four cameras on our shopping list over the phone in just 5 minutes. A Best Buy staffer in Phoenix sensibly asked numerous questions about my specific camera needs before making any recommendations.

The results of our spot check of in-store camera shopping in a large RadioShack in downtown Seattle were far less positive. Our shopper found that the store maintained a limited stock of cameras and that the sales staff wasn't very knowledgeable or helpful. When the shopper expressed an interest in specific cameras, staffers did not offer to help him by performing an online search at the store.

One dark cloud that hangs ominously over every purchase—whether online or in a physical store—is the prospect that you may be charged a restocking fee if you later return a camera you buy. The odds of being charged a fee when returning a camera lessens greatly when the box is unopened or includes all the original materials—but even then, many retailers' restocking policies are vague.

From our research, we recommend that you make your camera purchase online, and that you make Amazon your first stop. But before you buy, call up your local mega-retailer and ask whether it has the camera you like in-house. Even if you don't end up buying it there, you can spend some hands-on time with the camera and confirm that it's the one you want before you pull out your credit card. Camera specialty stores are another good option: They usually have extremely knowledgeable staff, a wider selection of models than the mega-retailers, and sometimes better prices.

—Tim Moynihan »

TEST QUESTION

Q What's more important to picture quality: megapixels or sensor size?

A In general, a larger sensor translates into better photo quality more reliably than a higher megapixel count does.

Camera Sellers Have Varied Strengths

Amazon has more models than anyone else; Best Buy lets you try before you buy.

	STORE	Overall rating	In-store selection	Online store selection	Return policies (in-store & online)	Quality of staff responses to phone inquiries	Quality of overall shopping experience
1	Amazon.com (online only)	★★★★½	n/a	★★★★★	★★★★☆	n/a	★★★★★
2	Best Buy (stores & online)	★★★★☆	★★★★½	★★★☆☆	★★★☆☆	★★★★☆	★★★★½
3	Newegg (online only)	★★★★☆	n/a	★★★★½	★★★½☆	n/a	★★★★☆
4	CDW (online only)	★★★½☆	n/a	★★★★☆	★★★☆☆	n/a	★★★★☆
5	Staples (stores & online)	★★★½☆	★★★½☆	★★½☆☆	★★★½☆	★★★☆☆	★★★★☆
6	Target (stores & online)	★★★½☆	★★★☆☆	★★★½☆	★★★½☆	★★★☆☆	★★★½☆
7	Sears (stores & online)	★★★☆☆	★★★½☆	★★★★½	★★★½☆	★★½☆☆	★★½☆☆
8	TigerDirect (online only)	★★★☆☆	n/a	★★★☆☆	★★★☆☆	n/a	★★½☆☆
9	RadioShack (stores & online)	★★½☆☆	★½☆☆☆	★★★☆☆	★★★★☆	★★½☆☆	★★☆☆☆
10	Walmart (stores & online)	★★½☆☆	★★☆☆☆	★★★½☆	★★★★½	★★☆☆☆	★★☆☆☆

CHART NOTE: n/a = not applicable.

Desktops by Brand
- Acer
- Apple
- ASUS
- CyberpowerPC
- Dell

All-in-One Desktops
- Acer
- Apple
- ASUS
- Dell
- eMachines

Gaming Desktops
- CyberpowerPC
- Gateway
- iBUYPOWER
- Velocity Micro

Desktop PCs

Not surprisingly, Amazon took first place among retailers in the desktop PCs category. It has the largest array of desktops available anywhere and one of the easiest-to-use Websites.

Though prices were consistent across most of the retailers we looked at, Amazon's massive selection increases your odds of finding the best possible deal. Indeed, on some models we checked, prices were $75 to $100 below what you'd pay at the manufacturer's site.

Amazon offers free (albeit unhurried) shipping on all orders, and it doesn't charge sales tax in many states. Still, we recommend shopping around to discover a store's particular policies.

Online-only shops CDW, Newegg, and TigerDirect carried lots of PCs, but navigating the listings was harder than at Amazon, and the systems available were from smaller manufacturers.

Best Buy's online store earned the next-best overall rating after Amazon's. If you like to spend hands-on time with a PC before buying, its in-store experience is your best bet. Its staff ranked among the most helpful of the retailers we investigated. Reps answered our test questions accurately and often made alternative recommendations, based on our family-use scenarios.

The online presentation at Sears.com was poorly thought out, and the customer service that we encountered at physical Sears stores was unpredictable at best. The retailer's phone system directs calls to the Sears Store Support Center, where an operator answers questions about basic product information and pricing. Still, a salesperson in Minneapolis thoroughly answered our questions and recommended a capable (and less expensive) family-friendly PC similar to one on our shopping list.

Staples generally gave solid advice over the phone. Its in-store array of PC models was smallish but adequate; its Website's selection was far more limited than many competitors'.

RadioShack and Target carry few desktops online and none in their stores. When consulted by phone, Walmart's sales clerks had to shuffle to and from stockrooms to check on availability; this led to aggravatingly long hold times and (in some instances) less than cordial assistance. Walmart's Web presence was a bit better organized, but it offered the smallest selection we saw.

If you're in the market for a desktop PC, think about what you want it to do. And if you have questions, ask them.

—Nate Ralph »

TEST QUESTION

Q Which version of Windows 7 is right for me?

A Windows 7 Home Premium offers media-sharing and user account protection suitable for users who don't need the business-oriented security and encryption features of high-end Windows OSs.

Amazon's Desktop PC Selection Is Best

Best Buy ranks second overall on the strength of its well-informed in-store sales staff.

	STORE	Overall rating	In-store selection	Online store selection	Return policies (in-store & online)	Quality of staff responses to phone inquiries	Quality of overall shopping experience
1	Amazon.com (online only)	4	n/a	5	3	n/a	5
2	Best Buy (stores & online)	3.5	2.5	3	2.5	4	4
3	CDW (online only)	3	n/a	3.5	2.5	n/a	3.5
4	TigerDirect (online only)	3	n/a	3.5	3	n/a	2
5	Sears (stores & online)	3	¹	5	2.5	2	2.5
6	Staples (stores & online)	2.5	1.5	1.5	3.5	3.5	2.5
7	Newegg (online only)	2.5	n/a	3	2	n/a	3
8	Walmart (stores & online)	2	0.5	2.5	4	1.5	2
9	Target (stores & online)	2	¹	1.5	4	¹	1
10	RadioShack (stores & online)	2	¹	1	2.5	¹	1

CHART NOTE: n/a = not applicable. FOOTNOTE: ¹Retailer does not carry desktop PCs in its stores.

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Amazon Rules Among Hard-Drive Sellers

Massive selection and attractive shipping policies help it slip past Best Buy and Newegg.

	STORE	Overall rating	In-store selection	Online store selection	Return policies (in-store & online)	Quality of staff responses to phone inquiries	Quality of overall shopping experience
1	Amazon.com (online only)	4.5	n/a	5	4	n/a	4
2	Best Buy (stores & online)	4	2.5	3	3.5	3.5	4
3	Newegg (online only)	4	n/a	5	3	n/a	4.5
4	CDW (online only)	3.5	n/a	4	4	n/a	3
5	Staples (stores & online)	3	3	3	3.5	3.5	2.5
6	Walmart (stores & online)	2.5	1	2.5	4.5	0.5	3
7	Target (stores & online)	2	1.5	1	3.5	1.5	2.5
8	TigerDirect (online only)	2	n/a	1	3	n/a	2
9	Sears (stores & online)	2	[2]	2	2.5	[2]	1
10	RadioShack (stores & online)	1.5	[1]	1	3.5	1.5	2

CHART NOTE: n/a = not applicable. FOOTNOTES: [1] Retailer did not carry our test models in its stores. [2] Retailer does not carry hard drives in its stores.

Hard Drives

The key factors in buying a hard drive are drive type (internal, external, portable, network-attached, or solid-state) and capacity. Beyond that, most shoppers look at price, not at extra features.

Online, Amazon and Newegg scored very high on hard-drive selection and price; in fact, models often sold for $20 to $30 less at Amazon and Newegg than at other stores and Websites.

CDW offers a wide selection of drives; but the site is a bit too detailed to be easy to use, and its prices tended to be high. Best Buy and Target have fewer options at their Websites, and their pricing online is the same as at their physical stores.

Best Buy's hard-drive prices were often higher than those at top online retailers. But we found the 640GB My Passport Elite (including a drive dock) on special sale at Best Buy for $100, down from $140; Amazon's price is $119.

In its stores, Best Buy again delivered the best overall shopping experience. Best Buy employees generally answered our questions accurately or admitted that they didn't have an answer.

At the other end of the spectrum, RadioShack carries almost no hard drives, and Sears sells most of its drives through third-party partners via its convoluted, poorly designed Website.

Most online retailers inundate you with hard-drive options. The top-rated sellers—Amazon, Best Buy, Newegg, CDW, and Staples—had selections of 400 to more than 1000 drive models.

Staples finished ahead of Best Buy for in-store selection: One store we visited had especially strong offerings of portable and desktop external drives, as well as several single-bay network-attached drives. Other Staples stores we checked were less well-stocked, however.

Both Walmart and Target offered a modest selection of drives in-store—usually limited to models from two or three manufacturers (Hewlett-Packard, Seagate, and Western Digital).

Relying on your local megastore is chancy. For instance, a California Walmart we visited had several Seagate and Western Digital drives in stock, but a Florida Walmart had fewer options and its shelves looked picked over. Other Walmarts couldn't answer our questions or had no drives in stock and referred us online. Walmart's Web store makes getting to options easy; but browsing by price or capacity is harder.

For the widest selection of hard-drive brands, colors, and capacities, your best course is to buy online. And if you want a NAS drive, a solid-state drive, or an internal drive, you have little choice but to head for the Web, since those types of drives are not widely available in physical stores, anyway.

—Melissa Perenson »

TEST QUESTION

Q Will this hard drive work properly with a Mac?

A Maybe. It will if it's formatted for the Mac HFS+ file system or if it's formatted as FAT32, which works with both Macs and PCs. Most often, a drive comes formatted for Windows' NTFS file system and is PC-compatible only. You can reformat any drive, but the process isn't dead simple.

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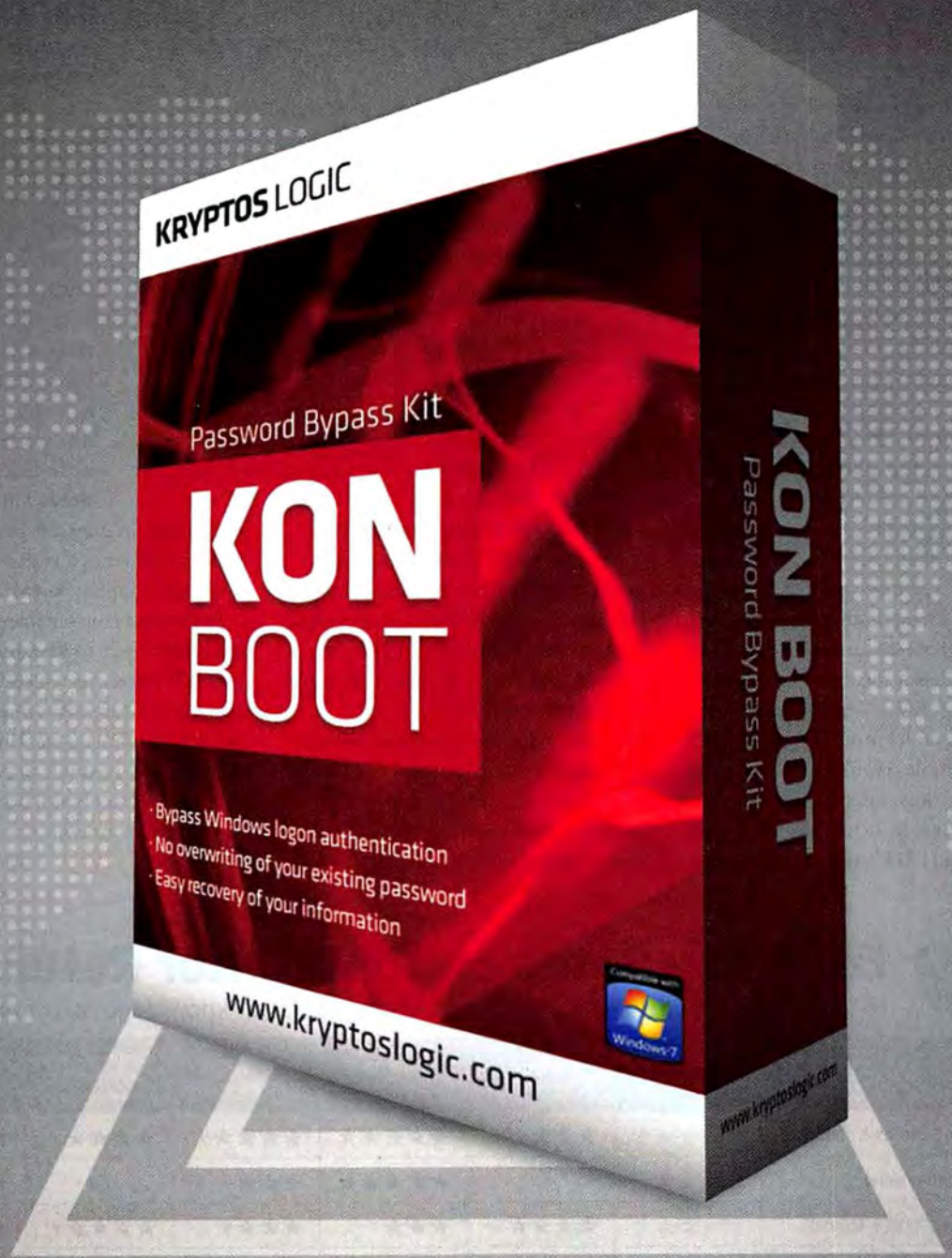

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Printers

One challenge in buying a printer is factoring in the cost of ink and paper. In this regard, consulting an in-store expert can make your life dramatically less confusing (and less expensive).

We asked salespeople questions that tested their knowledge of printers in general and of some specific models.

Best Buy stores have a good selection of printers and, overall, well-informed salespeople. During a 25-minute phone call we made to a Minneapolis Best Buy, the sales rep asked insightful questions, made sound recommendations, and remained upbeat and enthusiastic throughout the process. Online, Best Buy offers even more printer models, along with useful product information, even though its ink-cartridge data was not conveniently located.

Similarly, CDW's Website had a vast inventory, and its product listings included multiple photos, specifications, and ink-cartridge information.

Staples came in a close third behind Best Buy and CDW in the printers category. Its in-store staff gave fairly knowledgeable responses to our test questions. Its Website was easy to use, but the selection was smaller than the two higher-rated sellers'.

Amazon.com earned a middling grade for its offerings. Because Amazon (like Sears.com) aggregates third-party retailers, it can present a larger selection than many other retailers can, which makes comparing prices much simpler. But aggregating also makes the data less consistent and forces you to dig deeper to find the shipping and return policies that apply to your particular purchase.

Though we found the Sears Website to be an acceptable place to shop for a printer, at least one of the retailer's brick-and-mortar stores was not. Our in-store shopper found minimal inventory on the premises, and none of the specific products we targeted. When asked for advice, the store assistant relied on personal experience, rather than hard data, for recommendations.

Our least favorite retailers for printers were RadioShack (in-store and online) and TigerDirect (online only). RadioShack had sparse inventories, and many items listed at the site weren't in stock. TigerDirect had an okay inventory and useful product data, but a cluttered interface and high shipping costs turned us off.

The cost of consumables is the hardest printer spec to identify, so the most useful Websites provided links to the relevant ink cartridges directly from the printer's product page. Unfortunately, all too often, cost-per-page information was difficult to obtain, both online and in conversations with store staff.

—Melissa Riofrio

TEST QUESTION

Q How can I determine this printer's print cost per page?

A Find the printer's ink or toner cartridge prices, and go online to look up its page yields. Divide price by page yield to calculate the relevant cost per page.

Best Buy Rates as Top Printer Retailer

High marks for model selection, return policies, and staff knowledge help it win out.

	STORE	Overall rating	In-store selection	Online store selection	Return policies (in-store & online)	Quality of staff responses to phone inquiries	Quality of overall shopping experience
1	Best Buy (stores & online)	★★★★½	★★★½	★★★★★	★★★★½	★★★★	★★★★½
2	CDW (online only)	★★★★	n/a	★★★★★	★★★	n/a	★★★★★
3	Staples (stores & online)	★★★★	★★★★	★★★	★★★½	★★★★½	★★★★½
4	Amazon.com (online only)	★★★½	n/a	★★★	★★★½	n/a	★★★★
5	Newegg (online only)	★★★½	n/a	★★★	★★★½	n/a	★★★★
6	Sears (stores & online)	★★★½	[1]	★★★★★	★★★½	[1]	★★
7	TigerDirect (online only)	★★★	n/a	★★★	★★★★	n/a	★★½
8	Walmart (stores & online)	★★★	★½	★★★	★★★★½	★★½	★★★
9	Target (stores & online)	★★½	★½	★★	★★★★½	★★★	★★
10	RadioShack (stores & online)	★★	[1]	★	★★★★	[1]	★½

CHART NOTE: n/a = not applicable. FOOTNOTE: [1] Retailer did not carry our test models in its stores.

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inside OFFICE 2010

Web-based apps and robust collaboration tools in Microsoft's new Office suite give users good reasons to upgrade. »

BY YARDENA ARAR

ILLUSTRATION BY KEITH NEGLEY

everyone is still reeling from the recession, and cash is tight—not, perhaps, the best time for Microsoft to launch a new version of its ubiquitous Office productivity suite. Nevertheless, with Office 2010, Microsoft continues to refine the dramatic overhaul that it began with the 2007 editions, while adding a few nifty new features with marquee appeal—all at prices much lower than we saw for similar Office 2007 packages.

The most immediately visible innovation is a set of Web-based applications—online versions of Word, Excel, PowerPoint, and OneNote—that are slated to appear on Windows Live when the desktop editions ship (around the time you read this). For businesses that wish to host their own Office Web Apps privately, Microsoft will also offer SharePoint versions of the online suite.

But though Office Web Apps permit at least some collaboration—and though they shine at maintaining document formatting that competing, third-party Web-based apps tend to mangle—they are unlikely to bowl over anyone who has enjoyed the rich features available in Google Docs, Zoho Office, and various other Web-based productivity tools (see "Microsoft's Web Apps: Easy Access and Limited Functionality" on the facing page). In fact, they're not intended to: Microsoft has clearly stated that it created Office Web Apps as companions to, rather than replacements for, their desktop counterparts.

Still, we probably can thank the online competition for the significant declines in Office suite prices: Three years ago, the Standard Edition (containing Word, Excel, PowerPoint, and Outlook) debuted with a suggested retail price of $399; the price for Office 2010 Home and Business, which includes those four apps plus the note-taking program OneNote, can be as low as $199 (see "Suite Deals: Skip the CD, Get a Discount" on page 80). OneNote is now present in all editions of Office, and Microsoft has tightened that program's integration with the other apps to make transferring material to OneNote easier.

word
Backstage view gives you access to useful info and functions.

Suitewide Updates

In general, the shipping version of the Office 2010 suite isn't much different from the beta version we evaluated and wrote about last year (find.pcworld.com/64142). Some of the package's additional features should impress even jaded Office users; PowerPoint's new Broadcast Slide Show function, which permits you to show your presentation remotely to anyone who uses a major Web browser, heads the list.

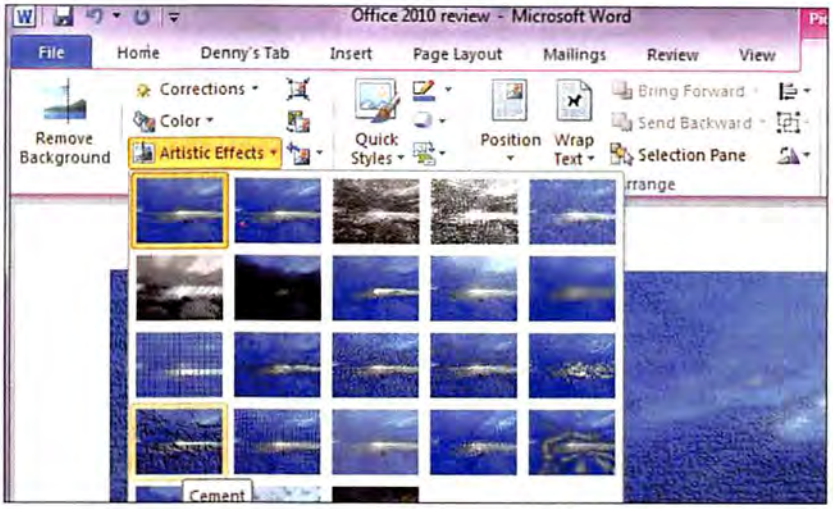
Improved customization features for the ribbon interface, which premiered in the key Office 2007 programs and is now present suitewide, could mollify some of the ribbon's critics: You can now assemble the commands you use most frequently—regardless of where they normally reside—in tabs and groups of your own creation.

Overall, the suite's look is more consistent from one app to another—and it's more subdued than its predecessor, primarily because Microsoft opted for a palette of mostly gray and white, versus the sky blue of Office 2007.

Gone is the big and somewhat ungainly Office button that appeared in the upper left of each window. Instead, clicking on the File tab now brings up a new window (called Backstage view) with a slew of options for creating, saving, sharing, and printing, as well as for accessing recent versions of the current document—or easily opening others via a handy list of recent documents. This window also leads you to menus containing application-specific options.

In addition, Office 2010 introduces a nice little refinement to the most basic of all content-creation tasks: pasting material you've cut or copied. In addition to letting you opt to retain the source formatting, merge with destination formatting, or transfer text, the new Live Preview for paste allows you to see what your choice will look like before you commit to it—much the

way the ribbon permits you to try out formats by hovering your mouse pointer over them.



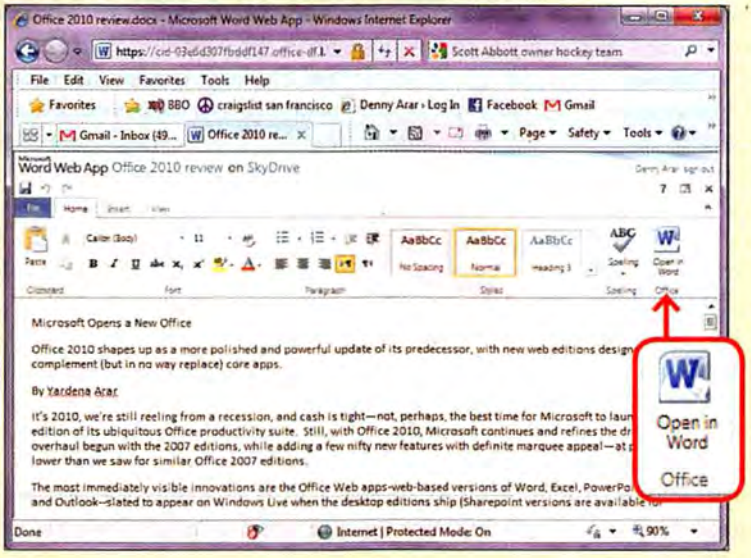
word ▶ **Image-editing tools let you apply effects that once required a third-party program.**

The suite also now boasts some fairly sophisticated image- and video-editing tools that could, for many users, eliminate the need to process media components with third-party applications before using them in Office documents.

Responding to the burgeoning »

Microsoft's Web Apps:
EASY ACCESS AND LIMITED FUNCTIONALITY

IT SHOULD come as no great surprise that the initial foray by Microsoft into Web-based Office applications has produced skeletal shadows of the company's desktop offerings. Even if you have great bandwidth, the best apps available on the Web can't really match the rich functionality and speed of Office's robust and mature desktop programs.



▲ **word web app** **Online, Word has basic formatting options, plus a button that leads to the desktop program.**

What Microsoft is doing with Office Web Apps appears to be little more than an effort to fend off Google Docs and other online-apps competitors by giving users who collaborate on documents—or individuals who need access to their files from several Office-equipped computers—a basic, Microsoft-supplied alternative.

Supporting evidence for this theory: Office Web Apps can edit documents only in the XML-based file formats introduced in Office 2007 (if you try to edit a document made in an earlier format, you get a prompt to create an XML-based copy). And all of the Web-based applications have handy buttons that allow you to open the document at hand in the corresponding desktop program, in case you find yourself bumping up against the online versions' limits.

Most glaringly absent in the Web versions, however, is support for the desktop apps' revision modes. In my tests of the Web apps, I wasn't able to open documents with revision-mode changes for editing; I could only view them. You also don't get support for video.

You can, at least, create new Word, Excel, PowerPoint, and OneNote documents online, via the Office menu item that appears on your Windows Live home page when the apps launch (Microsoft says that this function will be available in June, when the desktop suite goes on sale). And saving items to SkyDrive, the repository for Office documents in Windows Live, is a straightforward, one-click affair in the Backstage view of the 2010 apps.

The new version of Hotmail provides Web-app support, as well: Users will be able to open and view Office-format attachments in the browser (avoiding the download step previously required to open the files in a desktop app). You can edit Office XML documents in the browser too; Hotmail offers to convert non-XML docs if you try to edit them. Of course, you'll still have the desktop option if you want more functionality.

The other benefit of Microsoft's Web apps is that they don't break Office formatting. Whatever changes you make to a file on the Web, you're unlikely to be surprised by the results when you bring the file to your desktop. Given the formatting issues that often arise with Office docs in rival Web apps, this is no small achievement.

problem of malware that arrives in files downloaded from the Web, the programs now by default open downloaded Office documents in a protected view, with editing disabled until you explicitly authorize it by clicking a button in a highly visible warning that appears at the top of the window.

Some other new features work only with other Microsoft applications. One such addition is a presence indicator that allows you to see which of your Windows Live Messenger contacts are online and to initiate conversations from within various suite applications.

64-Bit Options

Office 2010 is the first iteration of the productivity suite to arrive in both 32- and 64-bit versions. The 64-bit edition, however, does not have the full functionality of the 32-bit suite: Among other things, third-party Outlook Social Connector add-ons (for displaying updates from popular social networks within Outlook) are not immediately available for x64 (Microsoft says that they will arrive eventually).

The 64-bit editions of Excel and Microsoft Project can use x64's ability to address more memory to run massive spreadsheets or project models, respectively (though strangely the same does not hold true for work with large Access databases). Unless you bump into limits with the 32-bit version of these applications, however, Microsoft recommends that you stick with the 32-bit edition of Office, even if your computer runs a 64-bit operating system.

A Useful Update

Overall, Office 2010 shapes up as a pleasing and, in many ways, useful successor to Office 2007. Microsoft isn't offering upgrade pricing, but the Product Key Card versions aren't outrageously expensive, and many people will be fine with either the four-app (Word, Excel, PowerPoint, and OneNote) Home and Student edition, for as little as $119, or—if Outlook is a must—the $199 Home and Business suite. Especially if you skipped Office 2007, a switch to Office 2010 is worth considering, even in a recession.

Word 2010

Apart from the suitewide alterations detailed above, Word's changes focus on design tools. First among them are new OpenType features that let you apply artistic effects ranging from ligatures to glows to beveled edges, all from the Fonts pop-up window.

In longer documents with subheads, the navigation pane (accessible from the View tab) makes skipping between sections easy. The new Insert Screenshot feature (under the Insert tab) allows you to add an image of any open, non-minimized window on your desktop; without exiting the document, you can even add just a region of an open window, which you can define on the fly.

New image-editing tools within Word allow for a wide range of adjustments and effects, including a compression feature to help keep overall file size down.

Unfortunately, Word has become such a powerful document-creation tool that its online counterpart is all the more

Suite Deals: SKIP THE CD, GET A DISCOUNT

THE BIG NEWS in Office 2010 pricing is not only that prices are down in general but also that you can get a significant additional discount if you forgo buying a physical disc, opting instead to download the software, acquire a trial version on a new PC, or install it from a previously purchased CD. In any of those scenarios, you'll be able to purchase a **card with a product key** (pictured) that you can use to activate the software.

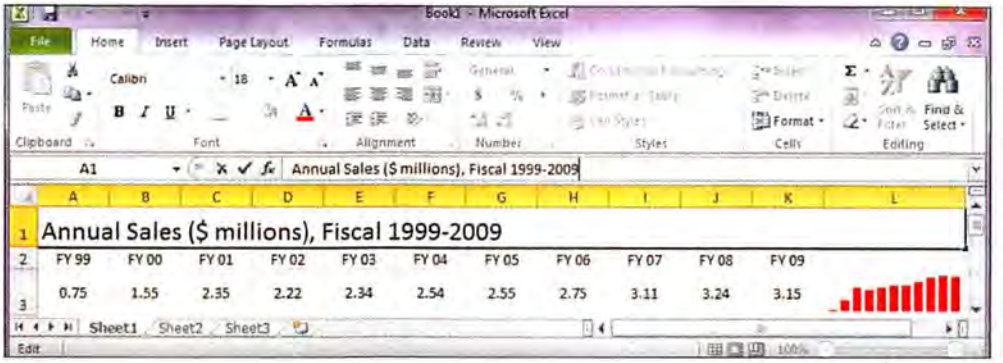
The version lineup is pared down, with only three editions to choose from at retail (versus five available for Office 2007), and the price reductions are significant. For example, the $199 Home and Business edition (Product Key Card price) includes the same four apps as the $399 Standard edition of Office 2007 does—and it adds OneNote. But if you spent a fortune on Office 2007 and were hoping for a break on the new version, forget it: Microsoft is not offering upgrade discounts this time around.

Whether you purchase one of the desktop Office 2010 editions or not, you'll be able to use Office Web Apps free of charge—but you'll need a Windows Live account either way.

EDITION	Included programs	Cost with disc	Cost with Product Key Card
Office Home and Student	Word, Excel, PowerPoint, OneNote	$149	$119
Office Home and Business	Word, Excel, PowerPoint, OneNote, Outlook	$279	$199
Office Professional	Word, Excel, PowerPoint, OneNote, Outlook, Publisher, Access	$499	$349
Office Professional Academic[1]	Word, Excel, PowerPoint, OneNote, Outlook, Publisher, Access	$99	n/a

FOOTNOTE: [1] Office Professional Academic is available only through academic resellers. n/a = not applicable.

disappointing. Using the Web application isn't difficult: The Save & Send screen has a convenient 'Save to SkyDrive' option, and I didn't mind not having all of the rich media tools. But the Web app's lack of support for Word's own revision toolset seems unpardonable, since one of the best reasons to have a Web version is to simplify collaboration. (As for simultaneous editing, both Word and PowerPoint require the desktop app; OneNote supports coediting either on the desktop or in the Web app. Coediting an Excel spreadsheet, in contrast, can occur only in the Web app.)



excel

The Sparklines feature creates simple graphs in a cell to illustrate trends.

Excel 2010

The eye-popping chart graphics introduced in Office 2007 are a hard act to follow, and aside from the suitewide image-editing, OneNote integration, and paste-preview features, the new Excel doesn't offer a lot to brag about. As in the beta release, the most eye-catching innovation is the addition of Sparklines, a feature that allows you to create tiny charts in a single cell to illustrate trends in a row of figures.

Power users who own the 64-bit edition stand to benefit from the ability to manipulate vastly larger amounts of data thanks to that version's much-increased addressing of memory. Excel jockeys also will want to download the free PowerPivot for Excel 2010 add-on (available at powerpivot.com), which lets you gather and analyze huge quantities of data from multiple sources.

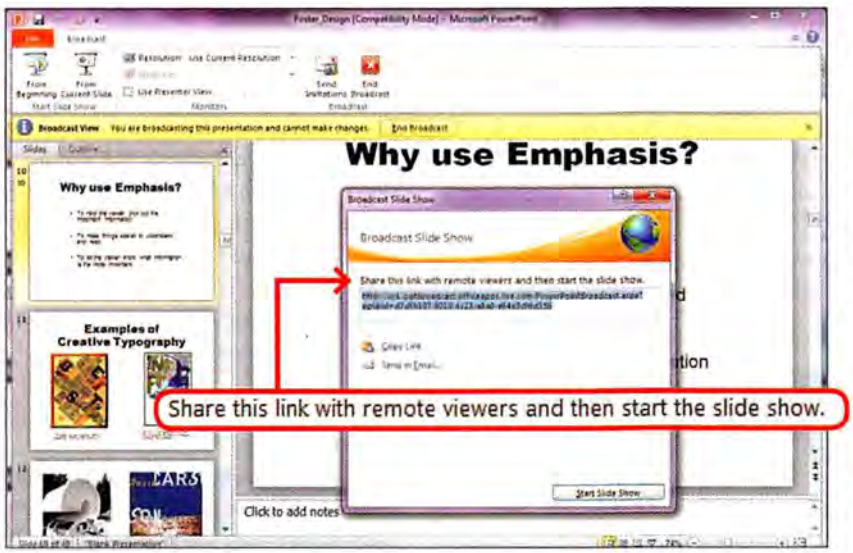
Enabling users to save such complex spreadsheets to the Web, open and edit them in the Web version of Excel, and return them to the desktop without encountering formatting issues is probably one of the strongest achievements of Office Web Apps. Anyone who has attempted to do this kind of thing with third-party Web services knows just how difficult it can be. But as with Word, functionality in the Web edition of Excel is severely limited, offering no charting tools whatsoever.

On the Web, you can use functions (they appear in a pop-up menu near the cell where the result will go), insert a table or hyperlink, and refresh data from outside sources. But in my tests the app's performance was painfully slow.

PowerPoint 2010

Have I mentioned how cool Broadcast Slide Show is? It bears repeating, as everyone I tried the feature out with was impressed. Yes, you can run remote presentations, not to mention live demos and more, with services such as WebEx—but if all you want to do is share your slides (presumably in tandem with a conference call), nothing beats the sheer simplicity of doing so straight from your desktop. My only quibble: As when you use a projector, you can't see your speaker notes while broadcasting unless you have a second monitor—you can see only what your audience sees. This is something for Microsoft to work on next time.

Other PowerPoint improvements include fairly robust built-in video-editing features that not only let you trim your embedded video but also bundle it up so that it travels with your presentation. You can import video from the Web on the fly, too, and all the neat image-acquisition and editing features available in Word apply here as well. »



powerpoint

With a free Windows Live account, you can use the Broadcast Slide Show feature to run presentations remotely on most Web browsers.

Love and Hate:
THE PROS AND CONS OF OFFICE 2010

5 THINGS TO LOVE

1. **PowerPoint Broadcast:** Use this to show presentations remotely to anyone who uses a major Web browser.
2. **Live Preview for paste:** Save clicks by checking to see what different paste options look like before you commit.
3. **User-created Ribbon tabs:** Collect and arrange your most frequently used commands in one place.
4. **Lowest Office prices ever:** Product Key Card discounts reduce some bundle prices to half the 2007 levels.
5. **Neat multimedia tricks:** In many cases users will be able to embed images and videos the way they want them, without leaving the Office program.

5 THINGS TO HATE

1. **Office Web Apps:** They are disappointingly anemic—skimpy in features, and lacking support for revision mode. Though they're free, anyone seeking no-cost Web-based productivity tools can do much better with Google or Zoho apps, which aren't limited to editing Office's XML file formats.
2. **OneNote everywhere:** Microsoft's note-taking program is in all versions of the suite, and almost all apps can send material to it at the click of a button. But its new level of organizing options can be confusing, and it isn't always the most intuitive collaboration tool.
3. **64-bit edition:** It lacks some 32-bit features (for example, third-party add-on support for Outlook Social Connector), and even Microsoft advises most customers with 64-bit PCs and operating systems to get the 32-bit Office unless they absolutely need 64-bit's superior memory capacity for Excel and Project. (Oddly, the increased memory capacity doesn't apply to the 64-bit Access.)
4. **No speaker notes in PowerPoint Broadcast:** This is a minor disappointment in an otherwise cool new feature.
5. **No 2007 upgrade pricing:** I realize that the new editions aren't expensive, but the people who invested in Office 2007 really should get a break.

Like previous versions of the program, PowerPoint 2010 enlarges the arsenal of transitions and themes with new eye candy, including a generous selection of 3D effects. A new animation painter lets you apply animation that you have created for objects in one slide to objects in other slides. And a new automatic save capability will surely rescue more than one work in progress from oblivion after an unexpected crash.

Similar to the other online applications, the Web-based version of PowerPoint is embarrassingly skimpy—not just in comparison to its desktop sibling, but to online competitors such as Google Presentations and Zoho Show. The slides you create can contain only text, still images, and smart art (Google's app at least lets you insert a video); in addition, you get relatively few image style tools, and no animations or transitions. I found working in the PowerPoint Web app frustratingly slow, too.

Outlook 2010

The latest edition of Outlook delivers new layout options and features designed to put more information than ever at your fingertips. Change is always tricky with popular software, however. One feature introduced in the beta—conversation view, in which all of the messages in an e-mail thread are gathered together regardless of when they were sent (à la Gmail)—is turned off by default in the shipping version of the program, following complaints from some beta testers. (You can switch the view back on by clicking a button.)

To the existing panes (folders, messages, reading, and calendar), the default mail view adds a people pane that shows your recent interactions with the sender of whatever message appears in the reading pane. The people pane is one of the benefits of the most interesting new feature in the beta, Outlook Social Connector, which also lets you view updates from popular social networks for contacts who are members. This function, however, works only with social networks that support it with a downloadable add-on (at this writing, only LinkedIn and MySpace provide add-ons; Microsoft says that Facebook and, oddly, Windows Live add-ons are due soon).

I liked Outlook's new Quick Steps feature, which is basically an easy way of creating rules and applying them to specific messages (as opposed to using filters, which perform actions on a set of rule-defined messages). The application comes with a few predefined Quick Steps, but creating a new one took only a few seconds and a couple of clicks.

Myriad other tweaks simplify setting up meetings from within e-mail, creating a team calendar, finding a room »

outlook

The main screen has a people pane that shows recent interactions with the contact whose e-mail you're previewing.

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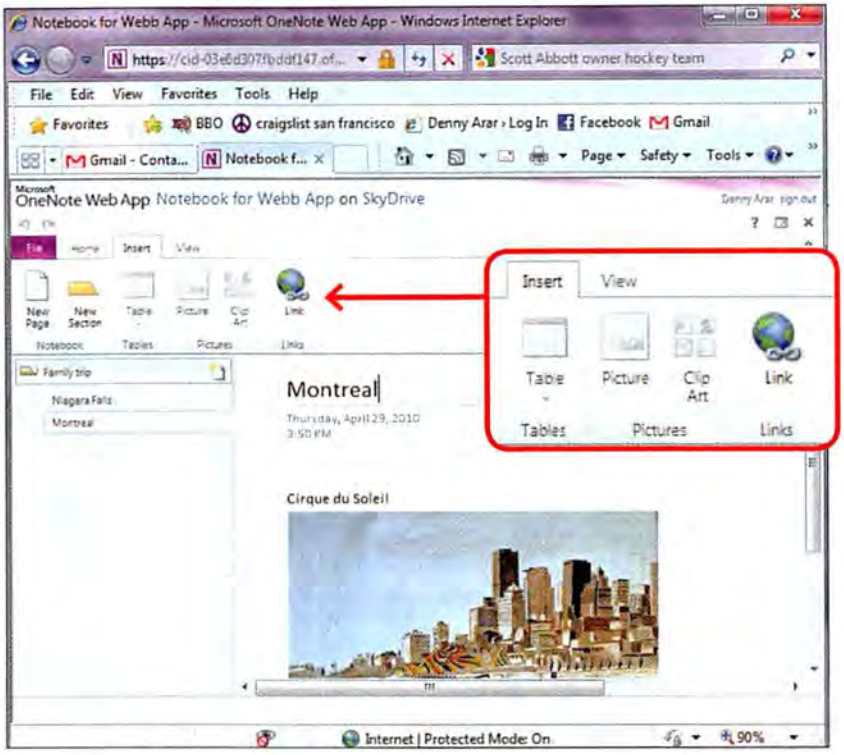
for a meeting, and other routine tasks. As is the case with the other Office 2010 applications, simply clicking the OneNote button in Outlook's ribbon sends the item at hand (contact, e-mail message, or whatever it may be) to any particular notebook you specify.

onenote ▶
The Web app lets you insert images, tables, and links; the desktop app supports many more elements.



OneNote 2010

If Office users everywhere don't start using OneNote to take notes (typed or, in settings where digital ink is supported, handwritten), to gather and organize thoughts and information from various sources, and to share everything with colleagues, it won't be for lack of trying on Microsoft's part. The 2010 version of OneNote, now a component of all Office editions, adds some powerful tools, including an improved search function, the ability to turn handwritten math equations into text, and—for shared notebooks—visual cues to show what new content has been added since you last opened the document.

I was especially impressed by the ability of OneNote to record audio while you're taking notes—and then to let you use the notes to play back the audio it captured as you were writing them. On the other hand, I found the program's new layers of note organization confusing: You can now create tabs and sections on three of the application window's four sides, but their hierarchy isn't immediately obvious. ●

Beyond the Core Apps:
OTHER OFFICE PROGRAMS RECEIVE AN OVERHAUL

IN ADDITION TO improving the core programs of Office (Word, Excel, PowerPoint, Outlook, and OneNote), Microsoft is continuing to bring the look and feel of the 2007 overhaul to Office family members that appear in corporate or volume-license bundles (InfoPath, Access, and Publisher) or are sold as stand-alone apps (Project and Visio). These revamped applications are slated to hit shelves at the same time as the rest of the Office 2010 suite.

All of them now have ribbon interfaces with Backstage view. **Publisher** benefits most from the suitewide improvements to formatting tools. New alignment technology makes it easier than ever to position design elements precisely, and a Hide Scratch feature lets you see how items that bleed off the edges of pages will look when the page is trimmed. Publisher users will also appreciate the addition of Live Preview capabilities to the application.

Access users, meanwhile, get an extensible Backstage view that permits IT types to incorporate their workflow into the program. A new Add Application Parts feature has the potential to simplify database creation by allowing you to reuse custom components (yours or a colleague's) across the suite. Similarly, the program's new Quick Start feature allows you to add fields or groups of fields to your database easily. Navigation Form, meanwhile, provides simple-to-use tools for creating a layout from your elements; improved conditional formatting and the addition of data bars also help to give your databases visual panache.

The 2010 versions of **Project** (Standard and Professional) provide enhanced visual features—for example, a Timeline view—to assist in creating schedules, assigning resources, and identifying potential problems. The Professional version adds team-oriented features such as the ability to incorporate SharePoint Foundation 2010 task lists and to publish project plans back to SharePoint Foundation.

Improved drawing tools in **Visio 2010** (the new AutoConnect, for instance, and the QuickShapes floating minitoolbar) should make creating business diagrams effortless. Auto-alignment technology will help you arrange elements the way you like them, too.

Finally, for Windows Phone users, Microsoft is also launching a 2010 version of **Office Mobile**, consisting of Word, Excel, PowerPoint, Outlook, OneNote, and even a new SharePoint Mobile app to facilitate syncing and collaboration on the go.

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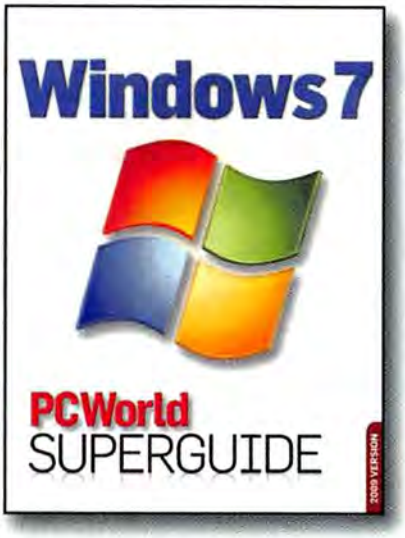

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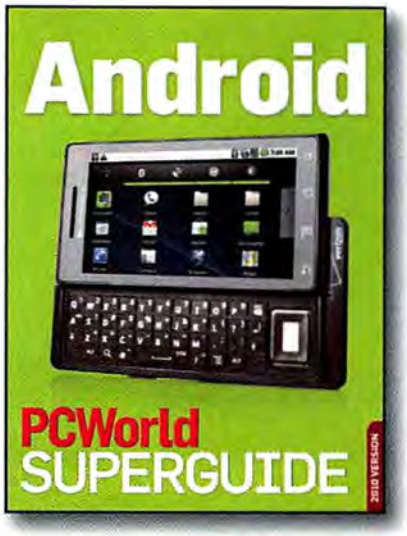

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BEST DESIGN:
Lenovo IdeaPad S10-3
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The Netbook You Need

Want a great netbook for video, music, and light gaming? Or a machine with all-day battery life? Or maybe just a cool companion PC on the cheap? Look no further: We've uncovered suitable netbooks for all sorts of users. »

PHOTOGRAPHS BY ROBERT CARDIN

A quick glance at the specs of the current crop of netbooks might lead you to believe that they're more alike than different. Nearly all of them are based on the same Intel Atom CPU (the N450), with 1GB or 2GB of RAM, no optical drive, and similar battery-life claims. But look closer, and you can see that various models are designed with different people in mind.

If you're interested in using your netbook for entertainment, such as watching high-def video or playing the occasional game, you'll want a model with a larger screen and a good graphics processor (nVidia's Ion or AMD's low-power platform with ATI graphics). You'll pay more and give up some battery life, though.

If you frequently take long business trips or need to get a little work done on the train or plane, you'll want a netbook that maximizes battery life to obviate the need for an outlet until you get home for the evening. As a business traveler, you may find on-the-go connectivity, rugged design, and a terrific keyboard and touchpad to be more important than raw performance.

Maybe performance and price don't matter to you as much as a netbook that looks good and has first-rate design, even if you have to pay more to get it. Perhaps you find yourself on the other side of that coin, looking for the least expensive netbook that will get the job done, as a companion to your everyday PC.

Whether you're looking for a netbook with lengthy battery life, useful business features, a small price tag, innovative design, or great entertainment capabilities, read on for our top choices in each category.

Do you just want a good all-around workhorse? Our *Top 10 Netbooks* chart on page 93 will tell you which netbooks we think are the best overall.

BEST DESIGN:

Lenovo IdeaPad S10-3

Everything Lenovo sells, including the $369 IdeaPad S10-3 netbook, appears to be intended for the boardroom or meeting room. This 2.6-pound, business-oriented model is a bit pricier for its specs than the competition. Most other 10.1-inch, 1024-by-600-resolution netbooks with the same 1GB Intel N450 CPU and 3150 GPU combination sell for $10 to $50 less; they also have a more-capacious 250GB hard drive (the S10-3's is 160GB). While 160GB is more than enough for most users, you are still getting a little less of the basics and paying a bit extra for the business features and software.

Or is it the ergonomics you're paying for? The innovative multitouch combination of touchpad and rocker button on the S10-3 is a relief for anyone (including this writer) who hates inadvertently tapping while dragging or hunting for buttons. Simply apply a little pressure to the bottom left or right corner of the device, and you have your click.

Another time-honored Lenovo strength is the keyboard, and the S10-3 doesn't disappoint there either. The typing feel is as good as you'll find on a netbook, with no scrunched or misplaced keys. Working with this netbook feels less like using a netbook than doing so with any other 10.1-incher I've ever tried.

Lenovo's IdeaPad S10-3 is designed for business users, with a great keyboard and a multitouch touchpad.

Lenovo also bundles some interesting software. Most of it, such as the VeriFace facial recognition security, is aimed squarely

at business users. Lock down the system with a password, and VeriFace will log you on by scanning your mug using the Webcam. It works rather well, and is fun. But logging on this way is slow and gets tiring after a while.

Additional apps include DirectShare, which syncs files and folders across your network, and OneKey Recovery, which images your hard drive for disaster recovery (though Windows can do this). Unfortunately, you don't get even Microsoft Works. No doubt Lenovo thought business users would have their own productivity suite, or would activate the Office 2007 trial.

Other specs are standard for netbooks. You get three USB ports: one on the left with the VGA port and SDHC slot, and two on the right with the ethernet and audio input and output. The AC port and a wireless switch are on the left. The hard drive, memory, and free Mini PCI Express slot are easily accessible via a removable panel on the bottom.

The Lenovo IdeaPad S10-3 ran for 8 hours, 27 minutes in our battery tests, but its performance score of 31 on WorldBench 6 is subpar even for a netbook, and the Windows 7 Starter operating system feels sluggish (Lenovo piles on background processes via software that duplicates Windows capabilities). Uninstalling unnecessary apps helps quite a bit.

Regrettably, 720p HD video played smoothly only when transcoded to the very efficient QuickTime MP4 codec. WMV was a complete fail, and other MP4 implementations continually stuttered or stalled. On the other hand, audio through the S10-3's speakers sounded better than on most netbooks.

Though it's pricier, slightly less well-configured, and slower out of the box than much of its competition, Lenovo's IdeaPad S10-3 is a netbook that remains more than the sum of its parts. Give its ergonomics a try. *—Jon L. Jacobi*

BEST BATTERY LIFE:

Gateway LT2118u

You'll be amazed at the run time of the $350 Gateway LT2118u. With Intel's Atom N450 CPU and 3150 GPU at its heart, as well as 1GB of memory, a 250GB hard drive, and a 10.1-inch, 1024-by-600-resolution display, Gateway's pride and joy carried on for an astounding 11 hours, 17 minutes in the PCWorld Labs' battery tests.

But how can a netbook that supposedly differs from its LT2120u sibling only in color run more than an hour and a half longer? As it turns out, the LT2118u uses a UMO9H36, 5600-milliamp-hour/63-watt-hour battery—while the LT2120u uses a UMO9H56, 5800-milliamp-hour/63-watt-hour model. From those specs, you would expect the UMO9H56 to run longer, but we found no other difference in the BIOS or components, so apparently the UMO9H36 is the better option.

The Gateway LT2118u can run for a staggering 11-plus hours on its six-cell battery—plus, it's stylish and easy to upgrade.

The LT2118u's upper cover is a rich red with the rest of the unit in dark grays—a surprisingly classy look. The ports are standard for a netbook: two USB ones on the left, along with the AC jack and a VGA port, plus one USB port on the right with the audio in/out and a 10/100 ethernet port. A Kensington lock port is also on the right edge, as is an SD Card slot.

At 2.7 pounds, this netbook has about average heft for a 10.1-inch system with a six-cell battery. The hard drive and memory module are both accessible via screw-secured access panels on the bottom. A vacant Mini PCI Express slot is underneath the hard-drive panel for a possible broadband or other upgrade. Overall, the unit is a hardware tweaker's delight.

The LT2118u played high-def 720p WMV, QuickTime, and MP4 videos smoothly, though online Flash video and Flash-based gaming were noticeably jerky—extremely so with content at higher resolutions. Audio was fine through headphones, and decent enough through the speakers. The 640-by-480 Webcam's images and recording were exceptionally smooth, and a pop-up Webcam utility appears when you roll over it with the mouse at the top of the screen.

The LT2118u, though it handled video a bit better than the average N450/3150-based netbook, scored the same 33 »

points on WorldBench 6 that most netbooks do—including its aforementioned sibling, the LT2120u. Overall, this gives the unit the same less-than-snappy but workable feel we've become used to with Windows 7 Starter netbooks.

Most people should adapt to the LT2118u's keyboard just fine, as the majority of the keys are where you'd expect them; the feel, while a tad light, lends itself to touch-typing. One caveat: A large gap between the keys leaves a ton of space for dust and particles to collect. Vacuum this puppy regularly.

The touchpad is stylish, and has raised bumps that make it easy to find by feel while remaining unobtrusive.

You'll want to spend a few minutes ditching the preloaded software flotsam—with innumerable icons blanketing the desktop—but dig around a bit, and you'll also find a copy of the ever-useful Microsoft Works.

The LT2118u is all about style and endurance. It's a cut above the average netbook in looks and is easy to upgrade—and if you tend to have pretty long workdays, you'll love the machine's 11-plus hours of run time. *—Jon L. Jacobi*

BEST ON A BUDGET:

Asus Eee PC 1001P-MU17

In a sea of nearly interchangeable 10.1-inch netbooks, the modestly priced ($299) Asus Eee PC 1001P-MU17 stands out for one thing: Express Gate, a nearly instant-on auxiliary operating system that allows quick access to the Web, online gaming, Skype, IM, and your photos. To boot to Express Gate, you start the 1001P-MU17 using a secondary power button (which has no light) on the upper left of the keyboard deck. You boot to the regular Windows 7 Starter OS via the normal lighted power button on the upper-right side.

Beyond Express Gate, the 1001P-MU17 leans mostly toward the mundane. You get the current popular netbook components: an Intel Atom N450 processor with an integrated 3150 GPU, 1GB of DDR2 memory, and a 160GB hard drive. The ports are also typical for a 10.1-inch unit: three USB, one VGA, one AC, one 10/100 ethernet jack, a single SDHC slot, plus audio in/out and a Kensington lock port.

The Eee PC 1001P-MU17 is styled in an all-black color scheme broken up only by a silver rocker button for the touchpad and a checkerboard pattern on the upper shell and lower deck. It looks as if it would be more at home in a boardroom than in a coffee shop. That's not a complaint, just a caution to anyone who might want to wow style-conscious friends.

The netbook weighs 2.8 pounds, about average for this category of netbook with a six-cell battery. If weight is more of a concern than run time, you can drop that to 2.24 pounds with a three-cell battery. However, if you plan to upgrade your machine's performance with an SSD, you might want to skip the 1001P-MU17: Unlike most netbooks, it has no access panel for the hard drive. But it does have an access panel to the memory if you want to upgrade that module.

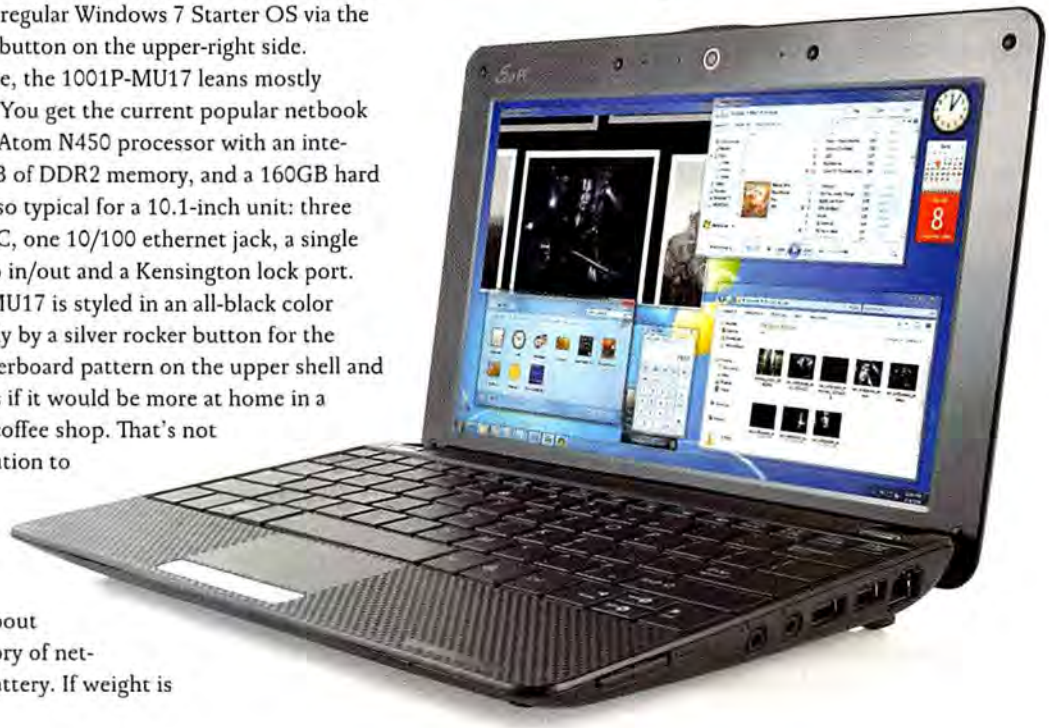
Overall, the 1001P-MU17 felt as snappy as an N450-based netbook can when running Windows 7—you can live with it, but that's all. The WorldBench 6 score of 34, while a point higher than most, bears that out. Video performance was a touch worse than average. The Webcam's image was decently smooth, and the unit had no problem playing QuickTime or Flash HD video locally. But MP4 and WMV were a stuttering mess, as was online Flash video. Online Flash gaming was jerky to the point of distraction. Battery life was a solid 6 hours, 50 minutes—not the best we've seen, but more than enough to get you from coast to coast.

The keyboard has a crisp feel, and for some users the oversize left/right cursor keys might eliminate some hunting. The touchpad was also exceptionally well adjusted for tapping.

The Asus Eee PC 1001P-MU17 comes with a quick-start auxiliary OS called Express Gate, and it costs a mere $299.

The model comes with Microsoft Works, which should cover most users' needs adequately (a 60-day trial version of Office 2007 is also included), and Skype is installed, as well. Asus has also refrained from placing useless software on the desktop.

The Asus Eee PC 1001P-MU17 is a solid effort from the com-

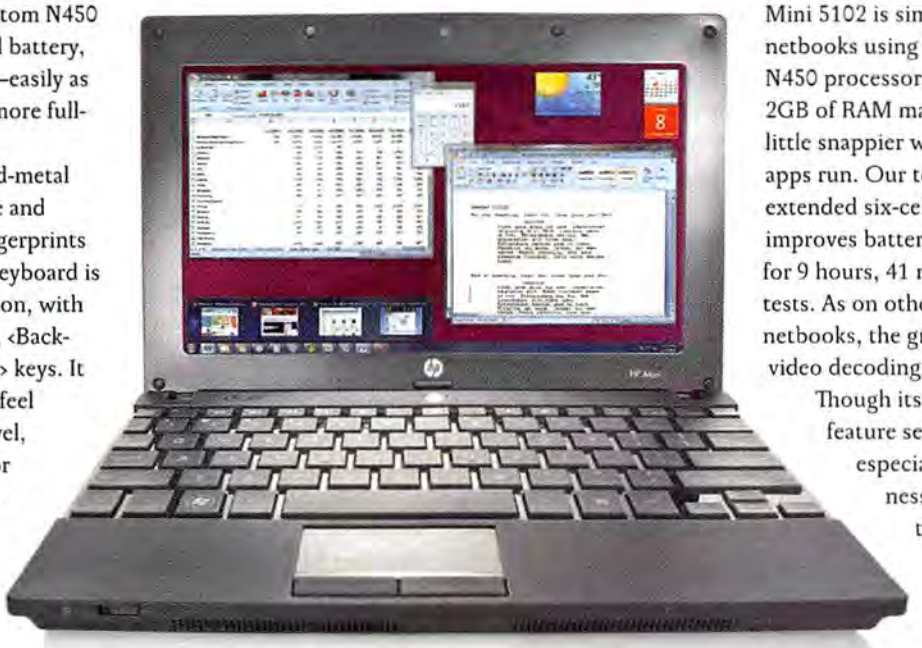


pany that started the whole netbook craze, offering a very nice keyboard, a particularly well-adjusted touchpad, and a sedately handsome look. If you regularly need quick access to the Web, the Express Gate OS can be handy indeed. Plus, you can get the unit for just under $300. *—Jon L. Jacobi*

BEST FOR BUSINESS:
HP Mini 5102

The Mini 5102 is HP's latest business-optimized netbook, with a ruggedized metal chassis and design elements tailored for the business traveler. Though packed with features that business users want, it's expensive: The configuration we reviewed, with a touchscreen, 2GB of RAM, an Atom N450 CPU, and a six-cell battery, costs about $729—easily as much as a larger, more full-featured laptop.

HP's Mini 5102 is optimized for business—and its pricing, depending on the options that you select, is steep.



The lid's brushed-metal finish is handsome and doesn't attract fingerprints or smudges. The keyboard is quite easy to type on, with extra-wide <Shift>, <Backspace>, and <Enter> keys. It has a good, clicky feel with plenty of travel, but no backlight or keyboard light for working in the dark. The touchpad looks a little small (common on netbooks), but in practice it isn't much of a problem. It tracks well, and the buttons are separate, distinct, and easy to use accurately without looking at them.

The machine's display quality is slightly better than average, with decent contrast and viewing angles, but the 10.1-inch screen has a resolution of 1024 by 600, which isn't a lot of desktop real estate—it results in frequent scrolling. You can pay a bit extra for a higher-resolution, 1366-by-768 display, and it's probably worth it; that option isn't available, however, if you go for a multitouch screen.

Two USB ports are on the front left edge; on the back left edge is a VGA port. An ethernet port and a third USB port are on the back of the right edge, with headphone and microphone jacks in the middle, and a card reader up front. The front edge has only a Wi-Fi switch. Above the keyboard, you'll find a power button and two quick-launch buttons.

Both 802.11n wireless networking and Bluetooth are standard. Mobile broadband with GPS by Gobi is a $125 option, but it can't be combined with some other options.

You can choose from several operating systems: SUSE Linux, Windows XP, Windows 7 Starter, and even Windows 7 Professional. Hard-drive options range from the 160GB drive of our test unit up to 320GB, or an 80GB or 120GB solid-state drive. If you deck out the system with all of the most expensive options you can combine, you'd push the price over $1100. The base model with 1GB of RAM and a four-cell battery costs $415.

With a WorldBench 6 score of 34, the performance of the Mini 5102 is similar to other netbooks using the Atom N450 processor, though the 2GB of RAM makes things a little snappier when multiple apps run. Our test unit's extended six-cell battery improves battery life: It ran for 9 hours, 41 minutes in our tests. As on other Atom-based netbooks, the graphics and video decoding is quite poor.

Though its design and feature set are good, especially for business users, all but the barest configurations of the HP Mini 5102 cost as much as many full-size laptops that perform much better. The Mini 5102 is a great netbook for simple note-taking and document editing on the go, as well as for long business flights, but if you just want an inexpensive companion PC, you'll be better off considering less-pricey models. *—Jason Cross*

BEST FOR ENTERTAINMENT:
Asus Eee PC 1201N

Would you spend almost $500 for a netbook—even a top-of-the-line one, like the Asus Eee PC 1201N? At first blush, the 1201N physically resembles more-conventional thin-and-light laptops based on low-voltage (CULV) mainstream CPUs. It's certainly priced in that ballpark, at $480 to $499; it has both a crisp, 12.1-inch, 1366-by-768-resolution display and one of the better keyboards that I've seen on a netbook, too. It »

also has a 1.6GHz Intel Atom N330 processor—one, however, that is hosted by the capable nVidia Ion chipset.

The Ion's video capability, Asus hopes, is what will bring buyers to the table. In our tests, its video performance and image quality were definitely a cut above those of Atom CPUs using the stock Intel chipset. The Ion chipset delivers robust video quality, giving smooth performance and downscaling with 1080p WMV files. The Ion's 3D gaming performance was also better, but this is not a gaming system.

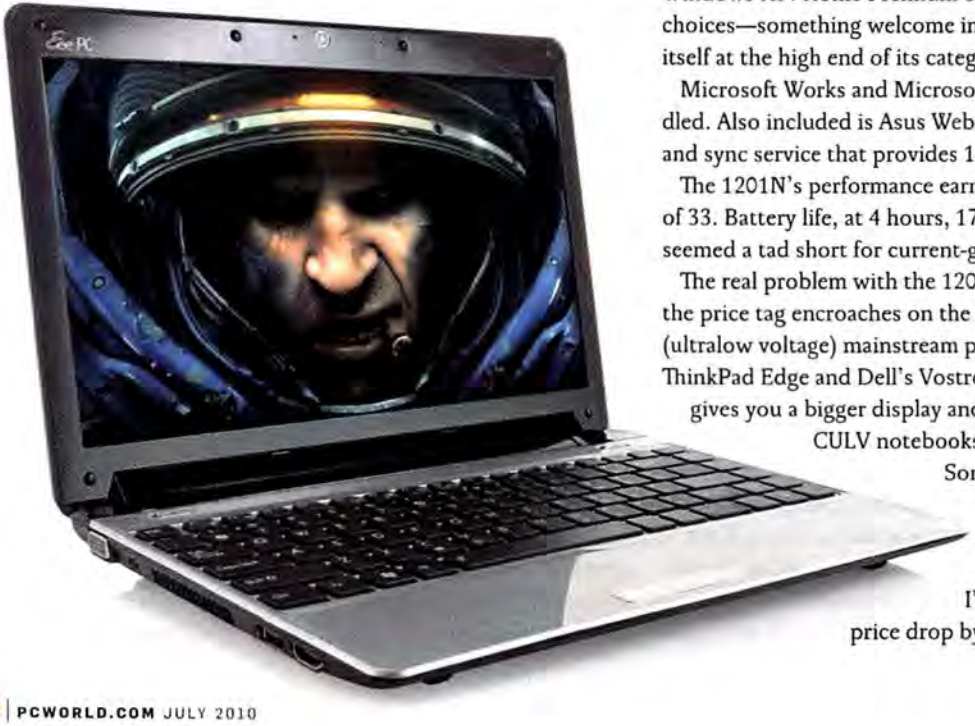
The bigger display means slightly larger dimensions than many netbooks have, giving the keyboard a more usable layout than those of many netbooks with a 10-inch screen. And the larger display with its higher pixel count makes for a more productive working environment—you spend less time scrolling and more time reading Web pages and documents.

The ports are typical for a netbook, consisting of three USB ports, an HDMI digital video port, and a VGA analog graphics connector, plus, on the right side, an ethernet jack, audio in/out, and a multiformat flash memory reader.

This Eee PC ships with SRS audio and the full Realtek HD audio suite, allowing you to set specific equalization settings and to spread out the sound field a bit. I found that enabling these features muddied the sound quality, however, so I usually left the settings on standard stereo. The system's built-in speakers won't make you cringe, but you'll enjoy better sound by using headphones.

The Asus Eee PC 1201N offers a bigger, better screen and keyboard than you'll find on most netbooks.

The LCD screen offers better-than-adequate image quality, but it's also very sensitive to viewing angles. That can make casual video viewing on your couch a little frustrating, as you must either stay in the same position or constantly adjust the display to the appropriate angle every time you shift your body.



Asus ships the machine with Windows 7 Home Premium instead of the more typical Windows 7 Starter Edition or Windows XP. Home Premium offers more customization choices—something welcome in a product that positions itself at the high end of its category.

Microsoft Works and Microsoft Office trialware come bundled. Also included is Asus Webstorage, an online file backup and sync service that provides 1GB of free storage.

The 1201N's performance earned it a WorldBench 6 score of 33. Battery life, at 4 hours, 17 minutes in our testing, seemed a tad short for current-generation netbooks.

The real problem with the 1201N is its cost. At nearly $500, the price tag encroaches on the cost of laptops with CULV (ultralow voltage) mainstream processors, such as Lenovo's ThinkPad Edge and Dell's Vostro V13. Though this Eee PC gives you a bigger display and a more usable keyboard, CULV notebooks are likely to outperform it.

Some people will find the Asus Eee PC 1201N's video performance and 12-inch display to be compelling. But I'd still like to see the netbook's price drop by about $100. *—Loyd Case*

CHECK OUT THESE, TOO

HERE ARE ALTERNATIVE netbook models—one in each of our five categories—that are also worth your consideration.

DESIGN: Samsung N210

Sold only at Best Buy, this all-white, $379 model is one of the better-looking netbooks we've seen, and it has a comfortable keyboard and a quick-start feature. find.pcworld.com/70049

BATTERY LIFE: Gateway LT2120u

This $350, Windows 7 Starter netbook lasted an impressive 9 hours, 40 minutes in our battery tests; it's also relatively good at handling video. find.pcworld.com/70050

BUDGET: Toshiba Mini NB305-N310

Priced at just $349, this model offers good battery life, a keyboard with large keys, a touchpad that supports multitouch gestures, and a nice software bundle. find.pcworld.com/70047

BUSINESS: Lenovo ThinkPad X100e

With faster performance, a bigger hard drive, and a larger, higher-resolution screen than most netbooks, this model costs more, as well (prices start at $499). find.pcworld.com/70044

ENTERTAINMENT: MSI Wind12 U230

This $430 model with Windows 7 Home Premium has the performance of an ultraportable in the chassis of a netbook—but its battery life is short. find.pcworld.com/70077

Top 10 Netbooks Overall

LAB TESTED

An Asus model heads our list of the best all-around netbooks that you can get today.

	MODEL	Rating	Performance	Features and specifications
1	Asus Eee PC 1201N $499 find.pcworld.com/70043	★★★★☆ VERY GOOD	• WorldBench 6 score: 33 Poor • Overall design: Very Good • Tested battery life: 4:17	• 1.66GHz Atom N330 • 12.1-inch widescreen • 3.2 pounds • 250GB hard drive
	▸ The Eee PC 1201N offers better video performance and a bigger screen than most netbooks—at a steeper price.			
2	Lenovo ThinkPad X100e $599 find.pcworld.com/70044	★★★★☆ VERY GOOD	• WorldBench 6 score: 52 Fair • Overall design: Very Good • Tested battery life: 5:28	• 1.6GHz Athlon Neo MV-40 • 11.6-inch widescreen • 3.3 pounds • 320GB solid-state drive
	▸ AMD's Neo processor makes the X100e a speedy netbook, but forget about working all day on a single charge.			
3	HP Mini 5102 $729 find.pcworld.com/70045	★★★½☆ VERY GOOD	• WorldBench 6 score: 34 Poor • Overall design: Very Good • Tested battery life: 9:41	• 1.66GHz Atom N450 • 10.1-inch touchscreen • 2.8 pounds • 160GB hard drive
	▸ The design of the HP Mini 5102 is great for business users, but the high price doesn't buy you extra performance.			
4	BEST BUY Gateway LT2118u $350 find.pcworld.com/70046	★★★½☆ VERY GOOD	• WorldBench 6 score: 33 Poor • Overall design: Very Good • Tested battery life: 11:17	• 1.66GHz Atom N450 • 10.1-inch touchscreen • 2.7 pounds • 250GB hard drive
	▸ The Gateway LT2118u is an easily upgradable netbook with a nice sense of style and exceptional battery life.			
5	Toshiba Mini NB305-N310 $349 find.pcworld.com/70047	★★★☆☆ GOOD	• WorldBench 6 score: 37 Poor • Overall design: Good • Tested battery life: 9:32	• 1.66GHz Atom N450 • 10.1-inch touchscreen • 2.9 pounds • 160GB hard drive
	▸ Though this Toshiba netbook has a comfortable keyboard and a huge touchpad, it's not great for watching Web videos.			
6	Lenovo IdeaPad S10-3 $369 find.pcworld.com/70048	★★★☆☆ GOOD	• WorldBench 6 score: 31 Poor • Overall design: Very Good • Tested battery life: 8:27	• 1.66GHz Atom N450 • 10.1-inch touchscreen • 2.6 pounds • 160GB hard drive
	▸ Superior input ergonomics—including a multitouch touchpad—sell this comparatively overpriced netbook.			
7	Samsung N210 $379 find.pcworld.com/70049	★★★☆☆ GOOD	• WorldBench 6 score: 38 Poor • Overall design: Good • Tested battery life: 6:43	• 1.66GHz Atom N450 • 10.1-inch touchscreen • 2.9 pounds • 250GB hard drive
	▸ The Samsung N210's matte screen is easy to see in various lighting conditions, but the colors are a little washed out.			
8	Gateway LT2120u $350 find.pcworld.com/70050	★★★☆☆ GOOD	• WorldBench 6 score: 33 Poor • Overall design: Good • Tested battery life: 9:40	• 1.66GHz Atom N450 • 10.1-inch touchscreen • 2.7 pounds • 250GB hard drive
	▸ Similar to the LT2118u, this inexpensive, Atom N450-based, 10.1-inch netbook has good battery life and is a solid choice.			
9	Asus Eee PC 1001P-MU17 $299 find.pcworld.com/70051	★★★☆☆ GOOD	• WorldBench 6 score: 34 Poor • Overall design: Good • Tested battery life: 6:50	• 1.66GHz Atom N450 • 10.1-inch touchscreen • 2.8 pounds • 160GB hard drive
	▸ A capability for near-instant access to the Web highlights this otherwise ordinary, very low-cost netbook.			
10	Toshiba NB305-N410 $399 find.pcworld.com/70052	★★★☆☆ GOOD	• WorldBench 6 score: 32 Poor • Overall design: Good • Tested battery life: 9:02	• 1.66GHz Atom N450 • 10.1-inch touchscreen • 2.9 pounds • 250GB hard drive
	▸ The Toshiba NB305-N410 has decent battery life and a great screen; but its keyboard, while pretty, is a bit of a disappointment.			

CHART NOTES: Ratings are as of 5/5/10. Tested battery life is expressed in hours:minutes.

MORE ONLINE Visit find.pcworld.com/70078 to see in-depth reviews, full test results, and detailed specs for all netbooks on this chart.

Here's How

How to Stay Safe on Public Wi-Fi

Wi-Fi makes it easier for you to work on the go—and easier for other people to peek at your data. We'll show you how to remain secure.

BY STEVEN ANDRÉS

PICTURE THIS: YOU'RE at a café with your laptop and latte in hand, getting ready to review new sales leads and the quarterly financial projections. First you hop on the free Wi-Fi service that the coffee shop's management provides. Then you connect your laptop to a projector so that the entire café can get a good look, and finally you hand out some printed copies of your confidential product specifications to the other patrons so that they can follow along.

That scenario may sound ridiculous, but if you use public-access Wi-Fi without taking the proper security precautions, you effectively invite your coffee compatriots to partake in confidential company information.

Nothing Is Private on Open Wi-Fi

Today, most tech users know how (and why) to secure their home wireless routers. Windows 7 and Vista now pop up a dialog box to warn you when you are connecting to an unencrypted wireless network.

In a coffee shop, an airport lounge, or a library, however, people frequently connect to the network without thinking twice—and though using an unencrypted connection to check a baseball score or a flight status might be acceptable, using it to read e-mail or perform any Web activity that requires a login is akin to activating your speakerphone in the middle of a crowd.

So why don't all businesses encrypt their public Wi-Fi networks? The answer lies in the difficult key distribution system in the IEEE 802.11 design specification: To encrypt traffic, the network owner or manager must first select a password, also known as a "network key." The arrangement requires one password per network, shared among all of the users whether the owner has selected the less secure, outdated WEP or the more secure WPA or WPA2.

At home, all you have to do is set up the security measures once, tell your family the password, and surf worry-free from a poolside lounge chair. In a coffee shop, the barista would have to tell each patron the password (or the 26-character hexadecimal WEP key) and perhaps even troubleshoot their connection—definitely not a chore that your typical java slinger would relish. In that situation, nothing beats a blank password for ease of use.

USING WPA2 or other encryption types requires setting a password and giving it to every user.

Even if the network is encrypted, however, you're still not fully protected. Once your computer knows the password, your communication is safe only from people who aren't on the network; all the other customers sitting

ILLUSTRATION: ANDREW RAE

in the café can see your traffic because they are using the same password.

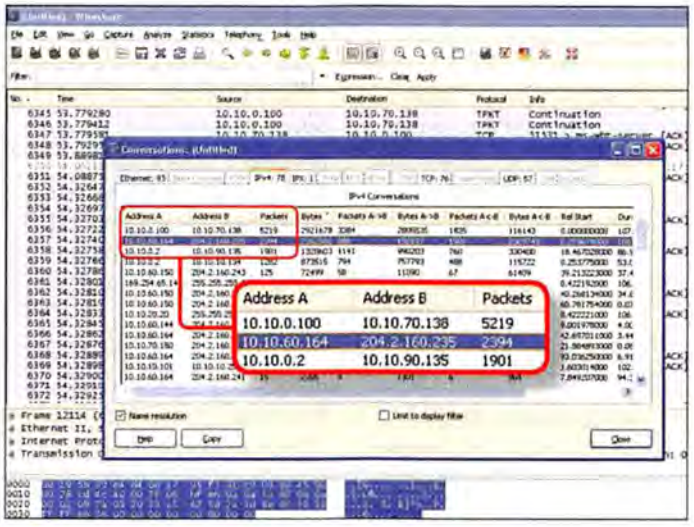
Your Business Is Your Rivals' Business

But what if you think your data isn't important enough for someone to snoop on? Perhaps you are just browsing sites, without logging in to any e-mail systems or Web applications that require passwords. Your system should be safe then, right? Not necessarily.

Imagine that you're using airport Wi-Fi while returning from a trade show. Instead of checking the hundreds of e-mail messages waiting for you (unlikely, right?), you decide to browse your competitors' Websites, looking for ideas. Or maybe you elect to research potential acquisition targets.

In the background, however, your e-mail software detects an Internet connection and starts to download your e-mail. A colleague back at headquarters sees your instant-messenger status change to 'online' and sends you a panicked plea: "Huge problem @ factory. Possible recall. Call Bob ASAP!"

Armed with nothing more than wireless packet analyzer software, a fellow conference attendee in the same seating area may be able to glean competitive intelligence based solely on the Websites that you visit and the (probably unencrypted) instant messages you receive—not to mention the personal e-mail from the recruiter indicating that you're ready to jump ship, or the notes reflecting your relationship problems with your significant other. In short, the "other guy" is reading your personal messages before you are, and you didn't even do anything.

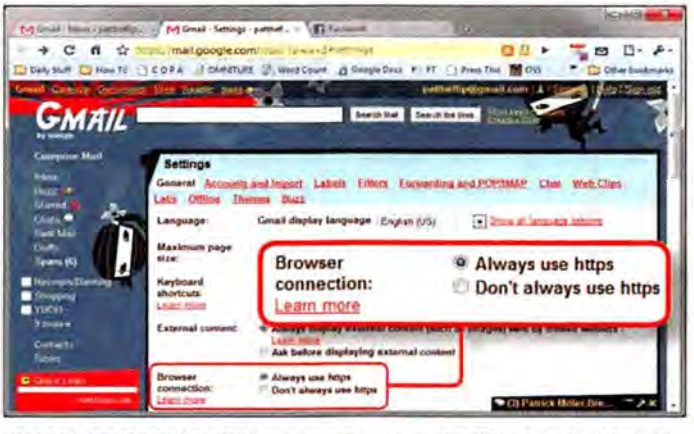


WIRESHARK IS AN example of a packet analyzer program. Such apps can help you troubleshoot networks—or help other people sniff your wireless info.

Stick to a Secure Webmail Connection

First, to combat e-mail snoops, use a Webmail system with HTTPS for the whole session. Almost all Webmail systems use HTTPS when asking you to log in, so your password is transmitted securely. After authentication, however, they usually switch back to HTTP because it reduces the computational strain on their servers and makes serving advertisements easier.

That means that everyone who is on the same wireless network (either unencrypted or with a shared password) can read the content of your e-mail. In certain cases, a person can even steal your session cookie and log in to your Webmail session without your password. (That is, until you click the 'Logout' link—which you make sure to do every time, right?)



GMAIL'S DEFAULT SETTING now uses the secure HTTPS connection throughout your mail session, keeping your messages safe from nearby spies.

Two very notable exceptions are Gmail and your corporate e-mail system (such as Outlook Web Access). Earlier this year, Gmail switched from the common practice of using HTTPS just for logins to using HTTPS throughout the entire Webmail session.

Previously, Google Apps users could opt in to this feature, but it is now the default setting, with the ability to opt out (if you hate security). This change, combined with Google's new suspicious-login detection algorithms, makes Gmail a standout among free Webmail providers. If you were looking for a reason to switch from your AOL, Hotmail, or Yahoo account, you've found it.

Your company's Webmail system is also likely protected by HTTPS at all times, because that is the default configuration for most systems. Note, however, that if you check your work messages using local software (Outlook, Thunderbird, Mac OS X's Mail) instead of HTTPS Web-based e-mail, you may or may not be using encryption.

Paid Hotspots: Safety Not Included

While researching this article, I encountered a common misconception among business travelers and coffee enthusiasts—namely, the idea that commercial hotspots that require pay-per-hour or monthly subscription fees (AT&T, Boingo, »

GoGo, T-Mobile) are more secure than their free counterparts because a payment and a password are involved.

In fact, these hotspots are almost always unencrypted, and they employ what is called a "captive Web portal" only to prevent access to the Internet until you enter a payment method (or a subscriber password). Though this "gateway" Web portal is usually delivered over HTTPS (to protect the credit card information or the password), all the post-authentication traffic on the wireless network is unencrypted.

As a result, paying the service's $10 monthly fee gives you access but not security. In fact, due to the nature of radio frequency transmissions, another person—even someone who isn't a subscriber to the service—can view any unencrypted traffic you send, just by joining the same wireless network.

This means that outsiders can easily observe and capture any regular HTTP Websites you visit, any unencrypted POP3 e-mail you access, and any FTP transfers you make. Talented hackers can even modify their own wireless card to clone the identity of your wireless card, thus obtaining free access through a commercial hotspot by "piggybacking" on your signals.

Use Your VPN

If your company offers a VPN (virtual private network) connection with Internet access, you should take advantage of that functionality when using either free or subscription Wi-Fi hotspots in public. By enabling the VPN function on your laptop, you ensure that all of your communication is encrypted with high-strength ciphers and tunneled from the wireless hotspot, across the Internet, and into your company's data center, where the information is then unpacked and sent out on the company's Internet connection.

This is a secure method of accessing company resources (e-mail, databases, intranet) because no matter who else is also on the shared wireless network, you have a private tunnel back to your company. In some businesses' VPN configurations, you can browse the Internet in addition to accessing company resources.

Such an arrangement may be slightly slower than regular, unencrypted Web browsing, but the enhanced security makes it worthwhile. In addition, if you are traveling in a country (such as China or Egypt) that restricts Internet access domestically, you can tunnel your traffic back through your U.S.-based VPN connection and reach sites as if you were stateside.

If your company doesn't offer a VPN service or if it provides a "split tunneling" VPN (in which only requests to company resources travel through the encrypted tunnel, while all other traffic is transmitted in unencrypted form directly to the target), don't worry—you can still be safe on a public network.

Try out Hotspot Shield (find.pcworld.com/70053), a no-cost VPN service from AnchorFree. The company offers its own VPN software that you can install on your laptop prior to using public Wi-Fi. Once you enable the software and service, it encrypts all of your traffic and transmits it through a tunnel to the Hotspot Shield data center and then out to the Internet, in much the same way that a company's VPN server does. Hotspot Shield even offers mobile VPN settings (with no downloads necessary on your end) to protect any Web surfing you do on your iPhone using the built-in Cisco VPN client software that Apple provides.

By using a such a service, you make your connection secure all the way from the coffee shop to the AnchorFree data center in Northern California. Once there, your traffic travels unencrypted to its final destination on the Internet, as if you were browsing from a laptop plugged directly into the company's data center.

This arrangement isn't perfectly secure, since the encrypted tunnel does not extend all the way to the Website you visit. However, it's certainly more secure than a setup with no VPN at all; to get in, would-be data thieves would need access to the AnchorFree data center, not just to the wireless network that you're using.

USE THE FREE Hotspot Shield virtual private network software on your laptop to protect and encrypt your personal data.

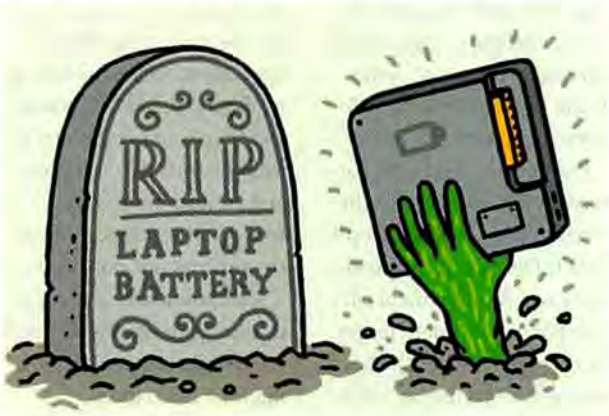
Wireless Surfing Safety Summary

Here's a quick recap.

1. If your company has a VPN that you can use for Web browsing, use it.
2. If you can't use a company VPN, take the free Hotspot Shield for a spin.
3. Don't equate subscription (paid-for) Wi-Fi Internet with secure browsing.
4. On unencrypted wireless networks, everyone around you can see where you are surfing (except on HTTPS Websites).
5. On encrypted wireless networks, everyone with the password can see where you are surfing (this could be a handful of people in your house or hundreds of people in an airport).
6. If you must use a Wi-Fi hotspot without any form of VPN, imagine that your laptop is connected to a stadium Jumbotron. Don't visit any Websites that you wouldn't visit with 80,000 people looking over your shoulder.

Breathe New Life Into Your Laptop's Battery

With these tips, you can keep your aging battery working for years (and for hours between charges).



EVENTUALLY AND unavoidably, laptop batteries die. And they don't obey Moore's Law: Next year's batteries are unlikely to last twice as long as this year's. Battery technology may improve a bit over time, but don't expect major battery breakthroughs in the near future.

Proper care can delay the inevitable. With luck, your battery could last until you need to replace your aging notebook (perhaps with a laptop that has longer battery life). I've also included a few tips on keeping the battery going longer between charges, so you can work longer without AC power.

Don't Run It Down

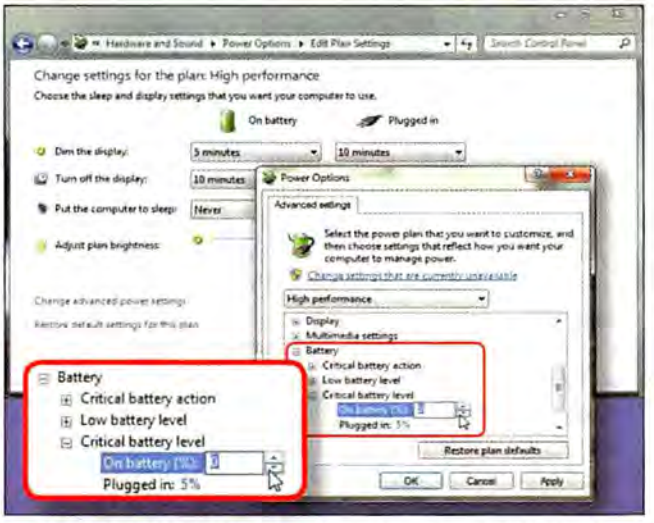
Squeezing every drop of juice out of a lithium ion battery (the type used in today's laptops) strains and weakens it. Doing this just once or twice won't kill the battery, but the cumulative effect of frequently emptying your notebook's battery will be to shorten its life span. (For the one exception to this rule, see "Heal a Sick Battery" on the next page.)

The good news is, you probably can't run down the battery, anyway—at least not without going to a lot of trouble. Most modern laptop models are designed to shut down before the battery is completely exhausted; in fact, both Vista and Windows 7 come with a setting created expressly for this purpose. To see it, click *Start*, type **power**, and select *Power Options*. Click any one of the 'Change plan settings' links, and then click the *Change advanced power settings* link. In the resulting dialog box, scroll down to and expand the *Battery* option, and then expand *Critical battery level*. The setting you see there will probably be about 5 percent, which is a good place to leave it.

For its part, Windows XP offers no such native setting, although your laptop might carry a vendor-supplied tool that does the same job.

Myth: *You should never recharge your battery all the way.*

Considerable controversy surrounds this issue, and I have interviewed experts both in favor and opposed. But I've come down on the side of recharging a notebook's battery all the way. The advantages of leaving home armed with a fully charged battery—you can use your PC longer without AC power—are worth the slight risk of doing damage.



MOST LAPTOPS PROBABLY won't permit you to set their critical battery level at 0 percent—and you shouldn't attempt to do so.

ILLUSTRATION: ANDREW RAE

Keep It Cool

Heat breaks down the battery and reduces its overall life. When you use your laptop, make sure that the vents are unblocked. Never work with the laptop on pillows or cushions. If possible, put it on a raised stand that permits plenty of airflow.

Also, clean the vents every so often with a can of compressed air; you can buy one for a few dollars at any computer store. Be sure to follow the directions on the can, and do this only when the notebook is turned off.

Give It a Rest

If you're going to be working exclusively on AC power for a week or more, remove the laptop's battery first.

Otherwise, you'll wear out the battery—constantly charging and discharging it—at a time when you don't need to use it at all. You'll also heat the battery up (see "Keep It Cool" above).

You don't want it to be too empty when you take it out. An unused battery loses power over time, and you don't want all the power to drain away, so make sure the battery is at least half-charged when you remove it. »

Never remove the battery while the PC is on, or even in standby or sleep mode; doing so will crash your system and possibly damage the hardware. Even inserting a battery into a running laptop can harm the system. Remove or reinsert the battery only when the laptop is completely off or hibernating.

If you've never removed your laptop's battery, consult its documentation. (If you don't have that, you can probably find the details online.) The instructions typically involve turning the laptop upside-down and holding a button while you slide the battery out.

Don't allow the battery to go too long without exercise or to run out of juice entirely. If you go without the battery for more than two months, put it in the PC and use it for several hours, and then remove it again. Also, before you take the laptop on the road, reinsert the battery and let it charge for a few hours before you unplug the machine. Allow the battery time to obtain a full charge before you remove the AC power.

Heal a Sick Battery

Myth: *You can rejuvenate a worn-out battery.*

This isn't the case, strictly speaking. You can't make degraded lithium hold more electrons than it does now. But if the battery is running out unexpectedly fast, or if your laptop is having trouble figuring out how much power it has left, you may be able to fix the battery's "gas gauge" so that it gives you a more accurate reading.

If you suspect that the battery can't determine whether it's charged or not, run it through a couple of cycles: Drain it, recharge it to 100 percent, and then repeat.

How do you drain the battery? Don't bother with the settings described in "Don't Run It Down" on the previous page. Altering them isn't safe (since you might forget to change them back), they may not be getting an accurate reading, and they quite possibly won't let you set the critical battery level to 0 percent. (If they did, Windows would likely crash.)

Instead, unplug the AC power and keep your laptop running (you can work on it if you like) until it automatically hibernates. Then reboot the PC and go directly to the system setup program. I can't tell you how to find your way there; each computer is different. Turn on the PC and look for a message that says something like 'Press the *X* key for setup.' Immediately press the designated key.

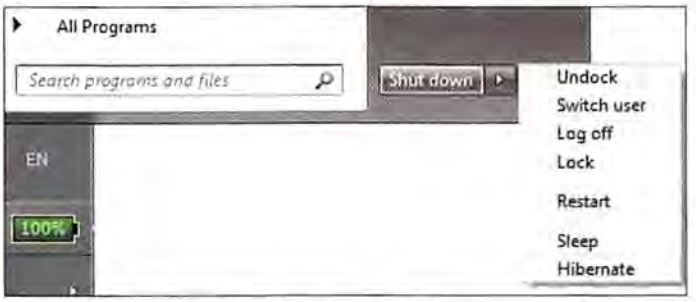
Getting the timing right may take a couple of tries. If the PC doesn't have enough power to boot, plug in AC until you're at the setup program, and then unplug it.

Leave the notebook on until it shuts off. This can take some time (45 minutes on my laptop); setup uses a lot less power than Windows does. Once the laptop is off, plug in the AC power, and then wait a few hours before rebooting to Windows and confirming that you have a full recharge. Repeat the process once or twice.

With some luck and proper care, your battery will still be useful when you're looking for a new laptop.

Extend a Battery's Life Between Charges

The tips I've outlined above should lengthen the amount of time before you need to replace your laptop's battery. On a day-to-day basis, however, you should be far more concerned with another type of battery life: how long you can keep your laptop running without AC power. You may know most of the following tips already, but it never hurts to refresh (or recharge) your memory.



THE SLEEP AND Hibernate modes affect a laptop's power usage differently.

Dim your screen: Your laptop's backlight uses a lot of juice. Keep it as dim yet readable as you comfortably can.

Shut off unneeded hardware: Turn off Bluetooth. If you're not using the Internet, turn off the laptop's Wi-Fi receiver, as well. Don't use an external mouse or other device. And finally, mute the notebook's sound system; this not only saves power but also avoids annoying everyone else in the café.

Avoid multimedia: Save hefty chores such as photo editing and watching videos for when your system has AC power. If you must listen to music, use your iPod (or a similar dedicated device).

Know when to sleep and when to hibernate: You need to think about when you want to save power by sending your laptop into Standby or Sleep mode, and when you want to hibernate it.

There is a difference. XP's Standby mode and Vista and Windows 7's Sleep mode keep your PC on, using some power, but less of it than in normal use. Hibernate saves the PC's state to the hard drive, and then shuts it off entirely so that the system uses no power.

Regrettably, Windows takes much longer—sometimes minutes—to enter and leave hibernation. And during those minutes, the battery is draining heavily and you can't work.

Windows XP's Standby mode isn't really all that efficient. If you know that your XP laptop will be inactive for more than about half an hour, hibernate it. Otherwise, use Standby.

Vista and Windows 7 do a much better job with their Sleep mode. Don't bother hibernating your notebook unless you think that you'll be going more than 2 or 3 hours without using it.

—Lincoln Spector

Five Simple Tips for Better Flash Photography

IN THEORY, using your camera's flash is simple: You use it when you can't go by natural light alone. And since most cameras have an automatic flash mode, taking low-light photos should be a breeze. But it isn't. Here are some things you can do to take great flash photos.

1. Know when to use a flash: Some people tend to leave their camera's flash on constantly, which can result in its firing unnecessarily. Others turn it off and never use it. I leave my flash off most of the time, but I switch it on when the occasion warrants.

Most cameras warn the user with an icon in the viewfinder when the light is too low for a good photo without the flash. Read your user guide to see how to interpret such messages. You can also check the shutter speed your camera is trying to use; anything under 1/60 second is probably too slow. Either increase the ISO (which raises the sensitivity of the sensor), or turn on the flash.

2. Know your flash modes: Your flash probably has settings beyond on and off; see find.pcworld.com/70055 for a primer. Learn when to switch over to fill flash (for avoiding harsh shadows when taking pictures of people outdoors in direct sunlight) and when to use red-eye reduction (for indoor, low-light shots).

3. Use an external flash: A built-in flash has a limited range—in most cases it illuminates subjects up to about 10 feet away from your camera. If you need to shoot across longer distances, consider adding an external flash to your camera if it has a hot-shoe attachment. That will extend your range to 30, 40, or even 50 feet.

4. Bounce the light: Direct flash illumination is harsh and cold; if you use an external flash, bouncing the light can soften and humanize photos. You can bounce the light off the ceiling or use a bounce card, which diffuses and redirects the light. Try, for example, the DIY bounce card at Make (find.pcworld.com/70056). Print the PDF, cut it out, and attach it to your flash with a rubber band.

5. Illuminate a large scene: Want to take a picture of a large room? You'll need an external flash. Don't mount it on the camera, however—just turn it on and hold it in your hand. Set the camera on a tripod and configure it for a long exposure, such as 30 seconds. Then walk around, manually firing the flash at different parts of the room. Don't allow the flash itself to appear in the scene, and never fire it at the camera—keep it pointed at the scene you want to illuminate.

—Dave Johnson

ILLUSTRATION: ANDREW RAE

ANSWER LINE

ASK YOUR QUESTION AT FORUMS.PCWORLD.COM

I have a large collection of photos. How do I organize the pictures by category?

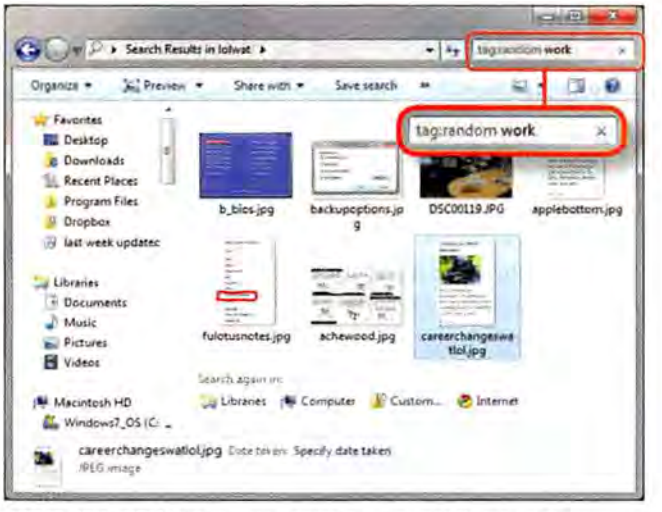
—Tom Guthrie, via e-mail

ORGANIZE YOUR PHOTOS with metadata. In Windows, you can get to a file's metadata (assuming the file format supports it) by right-clicking the file, selecting *Properties*, and clicking the *Details* tab. The most important field for organizing photos is the Tags field. Here you can enter names, places, events, or whatever will help you group your photos. Then you can search by the tags.

Vista and Windows 7 make tagging easy. In Windows Explorer, click the file and look in the window's bottom pane for the Tags field; select it and start typing. Separate multiple tags with semicolons.

To find photos, go to any search field (such as the one in Windows Explorer) and type **tag:** plus the tag name. Or, click the *Tags* column heading near the top of the Explorer window, wait for a list of available tags, and check the ones you want. If you don't see headers, right-click a blank spot in the folder and select *View•Details*.

XP users should grab a photo organizer—and frankly, so should Vista and Windows 7 users who have a lot of photos. The best ones are free, including my favorite, Microsoft's Windows Live Photo Gallery (find.pcworld.com/64075). The program lets you assign tags by dragging and dropping items into a folder-like panel; it makes tags hierarchical, too. An inferior but still quite good version of the app, Windows Photo Gallery, came with Vista. *—Lincoln Spector*



AFTER YOU APPLY tags to your photos, you can easily search in Windows Explorer for certain images by entering tag names.

Create Cool Videos Without Pricey Software

WANT TO MAKE a custom video, the kind with photos, music, and video clips? Normally, it's a time-consuming or expensive hassle.

You could use Microsoft's free Windows Live Movie Maker, but it's pretty limited (and kind of a pain in the neck, in my humble opinion).

Or you could spend about $100 on an editing app like Adobe Premiere Elements or Pinnacle Studio. But those are big and complex—and like Movie Maker, they have to be installed. Surely there must be some kind of cloud-based alternative?

There is, and it's called Animoto (animoto.com). This service (which we selected for last month's roundup of incredibly useful sites; see find.pcworld.com/70057) makes movie creation quick and easy, and the results look like something that took days or weeks to produce in a commercial editing program.

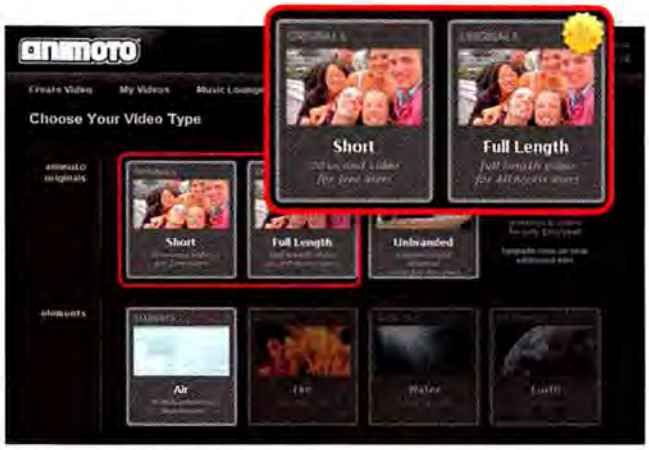
First, you upload photos and videos. If your media is already online somewhere, no problem: Animoto can pull from Facebook, Flickr, Picasa, and other sites. Second, you choose music. You can upload a favorite MP3 or choose a track from Animoto's extensive (but mostly indie) library. Finally, you select a pace: normal, half speed, or 2X speed.

With that done, Animoto assembles everything into a slick video, with titles, transitions, and special effects. Don't like the finished product? You can make changes manually or just let Animoto take another whack at it—the site will generate different results every time.

When you're satisfied, you can share the video via Facebook, Twitter, or e-mail, or download it for your use.

I like Animoto's pricing options. You can test-drive the service for free, but that limits you to a 30-second movie. You can buy a full-length (10-minute) flick for just $3. If you plan to use Animoto a lot, $30 pays for a one-year membership (and all the videos you can make).

—Rick Broida



ON THE ANIMOTO site you can easily create attractive 30-second videos for free, or longer productions for a reasonable charge.

ANSWER LINE

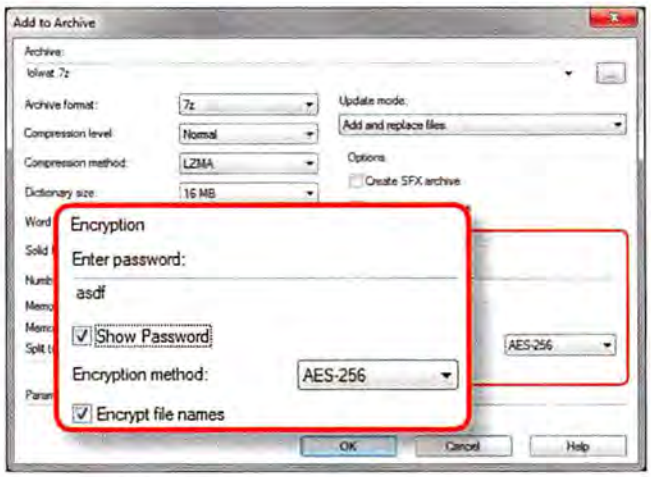
ASK YOUR QUESTION AT FORUMS.PCWORLD.COM

How can I safely e-mail passwords, account numbers, and other sensitive details? *—Michael Spector (the author's brother)*

YOU CAN'T TRUST e-mail with such information. As your message moves from one server to another, several people have the opportunity to read it. So what should you do? You have a few options.

Public/private key encryption: Outlook 2007 and other apps support this approach. The public key can encrypt but not decrypt, so you can share it. You keep the private key, which decrypts. Both sender and recipient must set up this type of encryption, and it isn't easy for the less technically adept. It's a good choice in a business environment where everyone has the help of an IT department.

Password-protected .zip files: Depending on what software you use to create .zip archives, you may have an option to password-protect them. Don't go this route, however, if the app doesn't support high-quality AES encryption; the .zip format's standard password protection is easy to hack. Many .zip programs do support AES encryption, including WinZip (find.pcworld.com/64000) and the free, open-source 7-Zip (find.pcworld.com/61828). Unfortunately, Windows' built-in .zip tool doesn't support AES, so you can't assume that your recipient will be able to open your encrypted archive.



TO PROTECT SENSITIVE information for e-mailing, you can put it into a compressed archive and apply a password and AES encryption.

Secure message and file-sending services: Instead of e-mailing the data, put it on a secure Website for the recipient to download. I recommend Send (www.sendinc.com). It's free, and you don't even have to share any passwords. When you post something on Send, the site e-mails a notice to the recipient, who will need their own free Send account to access your information. *—Lincoln Spector*

RICK BROIDA'S HASSLE-FREE PC

Simple Tricks for Saving Time and Avoiding Aggravation

WITH A LITTLE assistance from a no-cost Google service, an old Windows-shortcut standby, and a free printer (and convenient) utility, you can easily sidestep three common computing annoyances.

Streamline Google searches for your favorite topics, correct undesirable changes in an instant, and eliminate stubborn print jobs.

Use Google Alerts to Automate Web Searches

Tired of trawling the Web for the latest news on topics of interest? Why not let the results come to you, automatically, at designated times? Google Alerts (www.google.com/alerts), a free (natch) Google service, delivers topical search results to your inbox or RSS reader. The one and only requirement: a Gmail account.

IN GOOGLE ALERTS, you can determine how often your Google search results come to you.

To set up an alert, start by entering one or more search terms. Then, use the Type drop-down to specify what source Google should use: news, blogs, the Web, video, or Google Groups. For all of the above, choose *Comprehensive*.

Next, decide how often you want to receive alerts: as updates happen, once a day, or once a week. The first option is nice if you're following, say, a breaking news story, but keep in mind that it can lead to a huge influx of e-mail: You'll get an alert every single time Google finds a match to your search terms. Google also gives you a choice of e-mail length, up to 20 results or up to 50 results. I can't see much point in choosing the former, unless perhaps you're reading your mail on a mobile device.

Finally, decide whether you want the alerts to arrive via e-mail or RSS feed (the latter can travel to your Google Reader page or any other feed reader).

I've used Google Alerts for a few years, and I think it's one of the unsung heroes of the Google tool collection. It saves time, and it's a handy way to keep tabs on topics that interest you.

Reverse 'Uh-Oh' Moments With Undo, Part 2

About a year ago I introduced some of *PCWorld*'s less tech-savvy readers to the Undo function (find.pcworld.com/70058), which can be a lifesaver when you need to reverse whatever unintended (or unwanted) action you just took. Most often, the misstep is something straightforward like an accidental paragraph deletion in Word, or a click of the wrong option in a drop-down menu.

Recently I was reminded that Undo—by way of its universal keyboard shortcut, **<Ctrl>-Z**—can do more than merely fix typos and reverse errant clicks. For example, let's say you just deleted a file you didn't mean to kill. Instead of opening the Recycle Bin and poking around until you find the file, simply press **<Ctrl>-Z**; this should restore it to the folder window from which you deleted it. The same applies to batches of deleted files.

Another very common boo-boo involves inadvertently renaming a file. Can't remember the exact wording of the old file name? No problem at all: Just press **<Ctrl>-Z** (before you close the folder containing the file), and presto, it reverts to the original name.

Needless to say, Undo is your go-to function for reversing all sorts of unwanted actions and changes. Once you start using **<Ctrl>-Z** on a regular basis, you'll wonder how you got along without it.

Fix Print Jobs With Stalled Printer Repair

My wife's laptop suffers from a seriously annoying problem: Sometimes print jobs get stuck in the queue. I'm not sure if this is the result of a driver issue or if it happens because she's using a Wi-Fi connection to the printer—could be both. Even more vexing, Windows won't let her delete a stuck print job, which blocks subsequent items from printing. (Talk about something that should have been fixed back in the XP days, Microsoft.) Usually the only solution is to reboot, and no one should have to endure that kind of a hassle just to print a document.

THE NO-COST STALLED Printer Repair utility hunts down and zaps stuck print jobs at the click of a button.

Salvation! Stalled Printer Repair (find.pcworld.com/70059) is a free tool that detects and repairs stuck print jobs. Actually, it purges any stuck jobs it finds, meaning that you should be able to resume printing right away.

What I especially like about the utility is that it has nothing to install (if you download the .zip-file version, that is): Just run the app, click *Purge Print Jobs*, and you're done. That makes it a perfect addition to the flash drive you use for system-rescue utilities. (You do have one, I hope!)

If you've been plagued by stuck print jobs, I definitely recommend giving Stalled Printer Repair a try. ●

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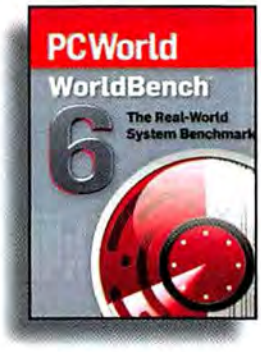

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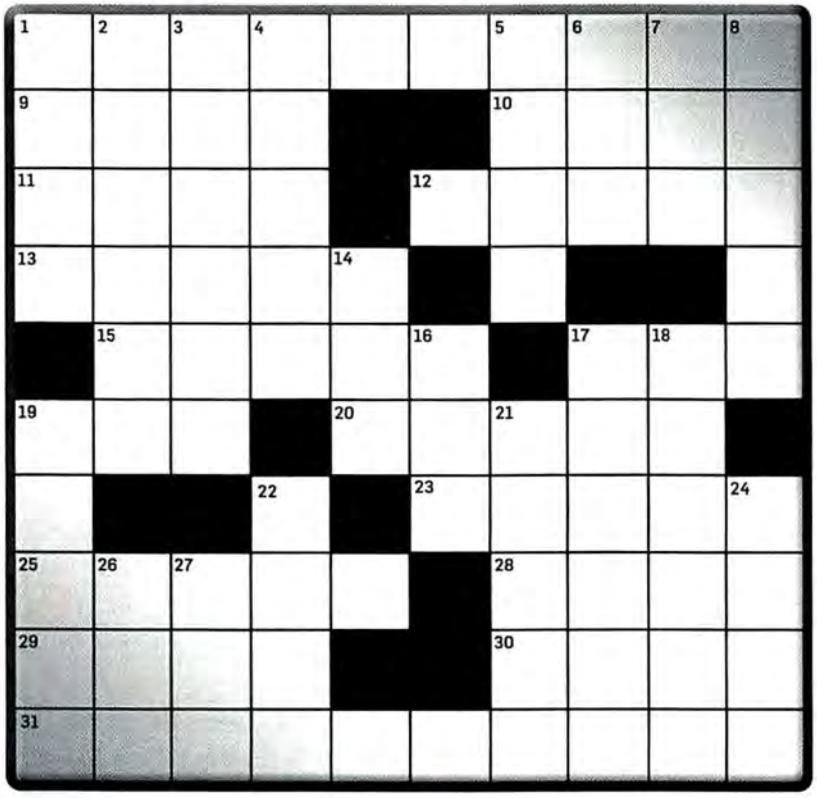
The Back Page

Talking Tech

You think you know technology? Take the PCWorld crossword challenge, and see how you stack up. *—Steve Fox*



ACROSS

1. No moving parts
9. Screen display favored by bullfighters
10. Not too manly operating system
11. E-mail standard for Marcel Marceau
12. Hodgman's line
13. Ahoy! It's an antivirus program
15. Don't call it "Return"
17. Broadband connection
19. Web language that might be popular at Niagara Falls
20. Evil spirit or e-mail automator (var.)
23. Mixer that refreshes
25. Stacks of printer paper
28. <Ctrl>-Z
29. Fed's ergonomics enforcer
30. Ooze
31. Smartphone for the all-thumbs set

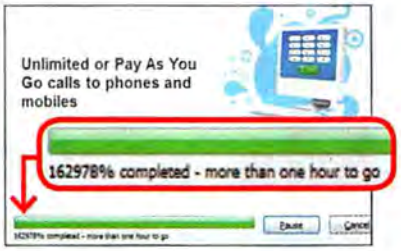
Answers at find.pcworld.com/70123.

DOWN

1. *Brave New World* nectar
2. They're often pressed
3. 24-hour *voiture* race
4. That is, in other words
5. Heartburn reliever
6. Japan Airlines competitor
7. PCWorld *Here's How* item specialty
8. It performs well in columns and rows
14. Conference for "ideas worth spreading"
16. Out of the biz (abbrev.)
17. 1846–47 party you wouldn't want to attend
18. More sarcastic, à la Twisted Sister
19. Chocolate substitute
21. Engelbart invention
22. An Apple for your teacher
24. <Ctrl>-C
26. It can give someone a new tongue
27. Eureka!

The Eternal Installation

Reader Jan Pingel just wanted to install a copy of Skype 4.2. In terms of effort, he gave it 100 percent. It seems Skype wanted more.



Plugged In

We Don't Like It Facebook has introduced a new Web-wide 'Like' button for its pages. It replaces a previously available feature called "privacy."

Boy, Oh Boy The Boy Scouts of America are offering a merit badge for video gaming. It comes with an honorary membership in the "Future Unemployables of America" club.

Seeing Triple Samsung says you shouldn't watch 3D TV if you're drunk, sleep-deprived, or pregnant. So much for the weekend plans. ●

—JR Raphael and Steve Fox

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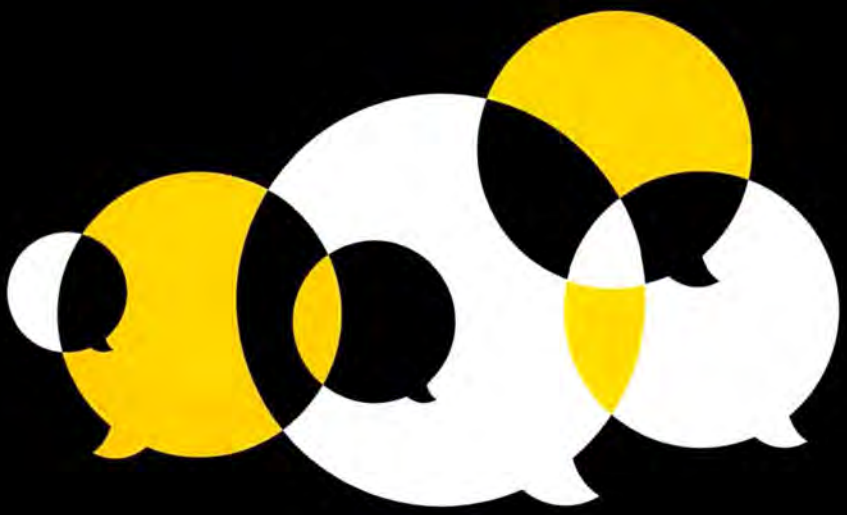

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