

DANGERO

PLAGES

Surprise! They're not the ones you'd suspect p.72



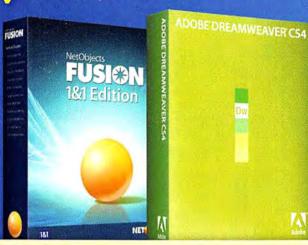
Tricks for getting the best pictures every time p. 82



JOIN THE MOBILE REVOLUTION WITH THE WO

More and more people are browsing the web on their phones. At 1&1, you get the software you need to create websites that are optimized for mobile viewing.

- Layouts, designs and wizards enhanced for the latest smartphones, like iPhone and BlackBerry®
- ✓ Compatible across multiple platforms
- ✓ Valued at up to \$479!





FREE SOFTWARE*

INCLUDED WITH 1&1 HOSTING PLANS. CHOOSE FROM:

NetObjects Fusion® 1&1 Edition is a website design application which creates sites that are optimized for mobile viewing. The 1&1 Edition was designed specifically to complement 1&1 web hosting packages and includes additional mobile templates as an extra bonus.

Adobe® Dreamweaver® CS4 is a sophisticated website design application for creating professional websites. Dreamweaver® includes the Adobe® Device Central module, enabling web designers to test their websites on mobile devices by emulating the latest smartphones.





RLD'S LARGEST WEB HOST. AT 1&1 INTERNET: GOOD TO BUILD GOOD TO B

HURRY - OFFERS END 10/31/2010!

1&1º HOME PACKAGE

- 2 Domain Names Included (.com, .net, .org, .info or .biz.)
- 150 GB Web Space
- **UNLIMITED Traffic**
- 10 FTP Accounts
- 25 MySOL Databases
- Extensive Programming Language Support: Perl, Python, PHP4, PHP5, PHP6 (beta) with Zend® Framework
- NetObjects Fusion® 1&1 Edition



1&1° BUSINESS PACKAGE

- 3 Domain Names Included (.com, .net, .org, .info or .biz.)
- 250 GB Web Space
- **UNLIMITED Traffic**
- 25 FTP Accounts
- 50 MySOL Databases
- Extensive Programming Language Support: Perl, Python, PHP4, PHP5, PHP6 (beta) with Zend® Framework
- NetObjects Fusion® 1&1 Edition or Adobe® Dreamweaver CS4



1&1® DEVELOPER PACKAGE

- 5 Domain Names Included (.com, .net, .org, .info or .biz.)
- 300 GB Web Space
- **UNLIMITED Traffic**
- 50 FTP Accounts
- 100 MySQL Databases
- Extensive Programming Language Support: Perl, Python, PHP4, PHP5, PHP6 (beta) with Zend® Framework
- NetObjects Fusion® 1&1 Edition or Adobe® Dreamweaver CS4



ALSO ON SALE:

.us domains \$0.99/first year*
.com domains \$7.99/first year*

Visit our website for a full list of special offers.



united internet

www.1and1.com

*Special offers valid through October 31, 2010. 12 month minimum contract term required for software offer. Setup fee and other terms and conditions may apply. Software available for download in the 181 Control Panel only. Domain offer valid first year only. After first year, standard pricing applies. Visit www.land1.com for full promotional offer details. Program and pricing specifications and availability subject to change without notice. 181 and the 181 logo are trademarks of 181 Internet AG, all other trademarks are the property of their respective owners. © 2010 181 Internet, Inc. All rights reserved.

FIRST RUNS ADOBE' FLASH:

FIRST LIKES FLASH BECAUSE 85 OF THE TOP 100 SITES USE FLASH.

FIRST HAS THE BODY OF A PHONE AND THE BRAINS OF A PC.

WHAT WILL YOU DO FIRST WITH **EVO, THE FIRST 4G PHONE?**





htc EVO 4G

sprint.com/firsts 1-800-SPRINT-1 (1-800-777-4681)

HTC EVOTM 4G: First 4G phone in the U.S. While supplies last. Phone requires a two-year Agreement and activation on a select service plan with Premium Data add-on. "85 of the Top 100 Sites Use Flash" Claim: Based on the following statistic from Adobte: 185 of the top 100 versibles use Another Eaghes act, including season of a selection of locations or for all phones/networks. Pricing, offer terms, fees and features may vary for existing customers not eligible for upgrade. Other restrictions apply. See store or sprint.com

for details. @2010 Sprint. Sprint and the logo are trademarks of Sprint. The HTC logo and HTC EVO are tracemarks of HTC Corporation. Adobe and Flash are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries. Other marks are the property of their respective owners.







PCWorld

NOVEMBER 2010

Volume 28 • Number 11 • pcworld.com



» FEATURES

72 The Most Dangerous Places on the Web

Yes, it's a minefield out thereso here's a guide to some of the hazards, the degree of danger they present, and how to stay safe.

82 Take Your Best Shot

Want to capture sharp close-ups, impressive fast action, beautiful night cityscapes, and other tricky shots? Use your camera's scene modes and manual adjustments.

93 All-in-Ones for Everyone

Stronger than netbooks, cheaper than comparable laptops, all-inone PCs are winning lots of fans. But the configuration to buy depends on your computing needs.

» DEPARTMENTS

- 7 Techlog
- 9 PCW Forum
- 120 The Back Page

» FORWARD

- 12 Mobile Web Annoyances Accessing the Web on the go can be convenient-or frustrating.
- 23 Beta Watch
- 25 GeekTech

» CONSUMER WATCH

- 27 The Google-Verizon Plan Will it undermine net neutrality?
- 28 Skeptical Shopper
- 30 On Your Side

» BUSINESS CENTER

- 33 Installing a Blade Server A blade system can save space and lower management costs.
- 34 Net Work
- 36 Tech Audit

» SECURITY ALERT

- 39 What Digital Photos Reveal Geotagged data in photos posted online may compromise privacy.
- 40 Bugs and Fixes
- 42 Privacy Watch

» REVIEWS AND RANKINGS

- 44 USB Storage-Sharing Devices Retrieve and share files over a network or online with these models.
- 58 Top 5 Inkjet Printers
- 60 Top 10 Mainstream Desktops
- 63 HP Envy 14
- 64 Top 10 Desktop Replacements
- 66 Top 5 Compact Cameras
- 70 Download This



» HERE'S HOW

- 104 Home Automation Projects Make the smart home of the future an affordable reality today.
- 112 Answer Line
- 116 Rick Broida's Hassle-Free PC





PCWorld

CONTACT INFORMATION

PHONE: 415/243-0500

FAX: 415/442-1891

E-MAIL:

letters@pcworld.com

MAIL: PCWorld Editorial 501 Second St. #600 San Francisco, CA 94107

STAFF E-MAIL ADDRESSES: To contact any PCWorld staff member, simply format the address as follows: firstinitial(astname@)

OTHER WAYS TO READ PCWORLD

RSS: pcworld.com/ resource/rss.html

pcworld.com

COMMUNITY:

forums.pcworld.com NEWSLETTERS: pcworld.com/ newsletters

TWITTER:

@pcworld

FACEBOOK: find.pcworld. com/80983

WIDGET: pcworld.com/ resource/widget.html



SOYINK

VP, EDITORIAL DIRECTOR Steve Fox EDITOR Edward N. Albro EXECUTIVE EDITOR Robert Strohmeyer MANAGING EDITOR Kimberly Brinson

EDITORIAL

SENIOR EDITORS

Jason Cross, Anne B. McDonald, Tim Moynihan, Melissa J. Perenson, Melissa Riofrio, Tom Spring, Mark Sullivan

SENIOR ASSOCIATE EDITOR Elsa Wenzel

ASSISTANT EDITORS Nick Mediati, Ginny Mies

STAFF EDITORS Patrick Miller, Nate Ralph

DOWNLOADS EDITOR Laura Blackwell

NEWSLETTER EDITOR Kim Saccio-Kent SENIOR COPY EDITORS

Stephen Compton, Steven Gray, Tracy Yee-Vaught

EDITORIAL ASSISTANT

EDITORIAL INTERN Brent W. Hopkins

ART AND DESIGN

DEPUTY ART DIRECTORS
Jeff Berlin, Beth Kamoroff

DIGITAL IMAGING SPECIALIST/ PHOTOGRAPHER Robert Cardin

IMAGING SPECIALIST/PREPRESS COLOR Marianna Whang

CONTRIBUTING EDITORS

Danny Allen, Yardena Arar, Rick Broida, Scott Dunn, Stuart J. Johnston, Erik Larkin, Stephen Manes, James A. Martin, Harry McCracken, Aoife M. McEvoy, Marta Miyashiro, David Murphy, JR Raphael, Scott Spanbauer, Lincoln Spector, Kirk Steers, Carla Thornton, Dan Tynan, Robert Vamosi, Peggy Watt

PCWORLD LABS

SENIOR LAB MANAGER Jim Galbraith

LAB MANAGER Tony K. Leung

MANAGER OF BENCHMARK DEVELOPMENT James Motch

DEVELOPMENT ANALYSTS Thomas Luong, William Wang

INTERN Armando Rodriguez

COMMUNITY

MODERATORS Richard Green, Michael-Paul Higgins, Charlie Spivey

MAILING LISTS

Occasionally we make our subscribers' names available to other firms whose products may interest you. To have your name excluded from these mailings, send a request and your mailing label to PCWorld Subscriber Services, P.O. Box 37571. Boone, IA 50037-0571, or e-mail us at maghelp@pcworld.com.

REPRINTS AND PERMISSIONS

You must have permission before reproducing any material from PCWorld. Send e-mail requests to permissions@ pcworld.com; please include a phone number in your message.

PCW COMMUNICATIONS

PRESIDENT, CEO Mike Kisseberth

SENIOR VP, COO/CFO Vicki Peilen

EXECUTIVE VP, GENERAL MANAGER, ONLINE Stephan Scherzer

VP. HUMAN RESOURCES Kate Coldwell

FOUNDERS

FOUNDER David Bunnell

FOUNDING EDITOR Andrew Fluegelman

INTERNATIONAL DATA GROUP, INC.

CHAIRMAN OF THE BOARD Patrick J. McGovern

CEO, IDG COMMUNICATIONS Bob Carrigan

SUBSCRIPTION SERVICES

Access your subscription account online—24 hours a day, 7 days a week— at poworld.com/customer. You can use online subscription services to view your account status, change your address, pay your bill, renew your subscription, report a missing or damaged issue, get the answers to frequently asked questions, and much more.

MAIL: PCWorld Subscriber Services, P.O. Box 37571, Boone, IA 50037-0571 (Include a mailing label with correspondence.)

WEB: pcworld.com/customer

E-MAIL: maghelp@pcworld.com (Send your full name and the address at which you subscribe; do not send attachments.)

PHONE: In the U.S. 800/234-3498 New orders 800/825-7595

AX: 515/432-6994

If the Postal Service alerts us that your magazine is undeliverable, we have no further obligation unless we receive a corrected address within one year.

QUESTIONS AND COLUMNS

Send material electronically to the appropriate online address listed below, or mail it to *PCWorld*. We reserve the right to edit letters.

ANSWER LINE: Visit forums.pcworld.com to ask your question in the Answer Line forum.

ON YOUR SIDE:

onyourside@pcworld.com

PCW FORUM: forums@pcworld.com

RICK BROIDA'S HASSLE-FREE PC: hasslefree@pcworld.com

THE BACK PAGE: thebackpage@pcworld.com

BACK ISSUES

Starting with the March 2003 issue of PCWorld, back issues are available at poworld.com/backissues. Back issues cost \$8 per issue for U.S. delivery, and \$12 for international delivery; prepayment in U.S. currency to PCWorld is required. Or send a check or money order to PCWorld Products, PO. Box 37781, Boone, 1A 50037-0781; phone 800/967-2083 (U.S. and Canada) or 515/243-3273 (atl other locations); or e-mail mw1prod@ cdsfulfillment.com.

To use any find.pcworld.com/xxxxx URL in the magazine, enter it as shown in your browser's address field.



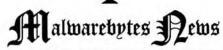


I want to make it great because I'm my favorite

B055

I'm Mark. I love wine, so I made it a full-time job. One of the things that helps me be the boss of my small business is this new feature in Excel® 2010 called Slicer. It lets me filter data so I know exactly what's selling. Note to self: order more Pinot.

> See how you can make it great with new Office 2010 at office.com/2010.



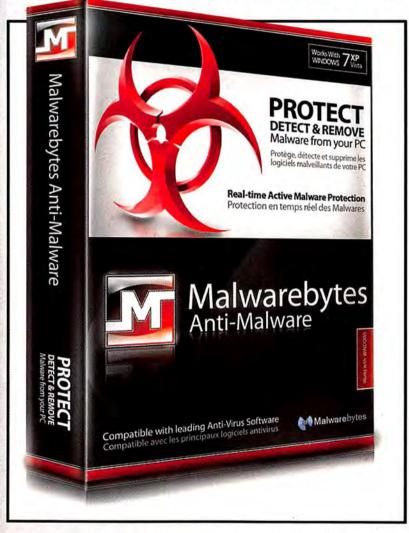
Special Edition Volume 1

Special

Malwarebytes Anti-Malware Software

2010 - 2011

THE SECRET IS OUT! 3.6 BILLION INFECTIONS STOPPED



Malwarebytes is now in retail stores!

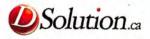
Available at: amazon.com













Android Love: It's Not Just About Phones

A CONFESSION: I have no sense of direction. I've spent my entire life getting hopelessly lost. It's genetic.

So there I am, on a recent Sunday afternoon, tooling down Highway 101, on my way to Lowe's, with the intention of buying a refrigerator. In the past, before embarking on such a perilous journey, I would have checked the address, Google-Mapped it, and printed out the directions.

For this adventure, though, I haven't even written down the store's address. All I have is a vague idea that it's located near the San Francisco airport. But am I, Mr. I-Could-Get-Lost-in-My-Own-Backyard, nervous?

Not at all. I have my beloved Android phone at my side. En route, I'll simply bark the words "Lowe's San Bruno" into the phone, get the location spoken back to me, and then use my favorite map app to direct me to my destination.

Well, that's the plan. Until disaster strikes. Picking up my Droid Incredible, I realize it is out of juice.

Suddenly I'm back in an all-too-familiar nightmare—overshooting off-ramps, making erratic lane changes, stopping at gas stations for directions. Frazzled and grumpy, I finally reach Lowe's. I purchase the fridge. I am not happy.

Back home, with my Droid Incredible recharged, I have two realizations: (1) I should be more diligent about charging my phone, and (2) this little Android-powered device has changed my life.

In three short months, it has altered my behavior in ways large and small. I rely on it completely. I'm hooked.

Apple-Like Devotion

I'm not alone. Many Apple iPhone users have long demonstrated a nearcultlike devotion to their handsets. For the first time, though, I'm seeing that same sort of affection for a device not In which our author gets lost on the way to a hardware store and reflects on the profound ways Android will change our lives.

blessed by Steve Jobs. Android is a huge hit, an open operating system that unlocks the creative power of hardware and software developers who would rather not work within the strictures of Apple's tightly controlled culture. Back in 1984, Apple touted the Mac as "the computer for the rest of



SCHEDULED FOR A fall release, the Galaxy Tab, an Android tablet from Samsung, will go head-to-head with the Apple iPad.

us." Today the tables are turned. Android is enabling the smartphone—a full-blown computer built into a small package—for the rest of us.

For PCWorld readers, most of whom are immune to Apple's seductive yet exclusionary charms, Android is the real deal. It beckons with promises of unlimited apps and unbridled excitement.

If Android were only about smartphones, I might be less gung-ho. But over the coming months and years, we will see Android in HDTVs, and in laptops and computing machines of all shapes and sizes. Case in point: the Samsung Galaxy Tab, a forthcoming Android tablet that has our reviewers oohing and aahing (see "Samsung's Galaxy Tab Aims to Battle the iPad," Forward, page 16, for a preview).

Targeting the niche created by the fast-selling iPad, Samsung's lighter and smaller tablet is packed with goodies that Apple's device can't touch, like a MicroSD slot for up to 32GB of added storage, phone capabilities, two cameras, Flash support, and availability from all the major carriers (not just AT&T).

Many people question the need for a third device, something between a laptop and a phone. And certainly a tablet PC isn't for everyone. Still, the iPad continues to add satisfied customers, suggesting that tablets are more than just a fad. If that's the case, the Tab—with its cleverly tweaked interface, ability to edit Microsoft Office documents and PDFs (through preinstalled software), and true multitasking—could push the iPad off its perch.

Despite the Galaxy Tab's superior specs and the vitality of the Android apps community, its fate will probably hinge on pricing. According to early rumors, an unsubsidized Tab could run as high as \$1000—absurdly overpriced. Carrier-subsidized units (with a service plan) are likely to be more reasonable, possibly \$300 or so. At that price, Samsung might have a hit on its hands.

But if the Tab doesn't capture the flag, then the next Android tablet, or the one after that, will. This tidal wave is simply unstoppable.

I can't wait. When I get one, I'll keep it in my car. It could come in handy next time I'm buying a fridge.

Steve Fox is editorial director of PCWorld.



Easy-to-Use Wireless Routers to Suit Any Networking Need.



Ultimate Wireless N Gigabit Router TL-WR1043ND

Super fast connections

to share media, stream in

HD or play your favorite









Great for wireless gaming and HD video streaming

300Mbps Wireless N Router

TL-WR941ND



300Mbps Wireless N Router TL-WR841N





Easy to set up and use, great for families and small office networks

150Mbps Wireless N Router TL-WR741ND





Excellent Upgrade from 11g wireless, stream video or browse the Web

Find these and other great TP-LINK products online through these vendors:



games lag-free











'Like' our page on Facebook for updates, promotions, and a chance to win great free products!

www.tp-link.com

Specifications are subject to change without notice. TP-LINK is a registered trademark of TP-LINK TECHNOLOGIES CO., LTD. Other brands and product marries are trademarks or registered trademarks of their respective holders Copyright © 2010 TP-LINK TECHNOLOGIES CO, LTD. All rights reserved.

PCW Forum

September's PCWorld was a fairly browserintensive issue, offering both our peek into the future ("Your Browser in Five Years") and our headto-head "Browser Blowout 2010" feature. Does an increasingly central role for Web browsers leave you uneasy? Share your thoughts at find.pcworld.com/70777.

Cloudy Future for Computing?

I read, with some concern, Jeff Bertolucci's "Your Browser in Five Years" [Forward, September].

Although having information always available in the "cloud" and having a single portal to the cloud (the browser) is appealing in some ways, Bertolucci did not discuss two important issues:

- 1. Accessibility: What would happen to a business (or person) if important documents were not available because servers were down somewhere in the cloud, or communications problems prevented accessing them? I used to subscribe to Comcast Internet, and lost my Internet connection with every moderate rainstorm.
- 2. Security: Even though many companies offer secure backups to the cloud, imagine a situation where a crook starts such a company and provides seemingly honest service, only to steal all the information after a few months. The crook may be caught after a while, but damages to people and businesses may be unrecoverable.

For these reasons, I think the cloud is being touted too hard, too soon. If storage on my PC were taken away from me, I'd have to resort to pen and paper.

Ori Steinberg, Exton, Pennsylvania

We went through this exact same hyperbole ten years ago. Remember when your stove was going to be "connected" and you could start cooking your food from work? Or dial up your coffeemaker from your mobile device on the way home?

Yes, the Web will continue to be offered in more devices. But the only time it will catch on is when it makes sense. I mean, who wants "widgets" on their printer? What's the point? This is just a gimmick, like a lot of the examples in this article.

BillHannah, PCWorld.com forums

Browser Blowout

Your September article "Browser Blowout 2010" prompted me to make the final move to Chrome as my browser of choice. I had sort of put up with Firefox for years, despite feeling that it wasn't really fast (regardless of the claims) but was always quirky. "Great add-ons and extensions," yeah, but they were like taking multiple drugs that didn't work well together.

I tried Chrome first on my old XP laptop with good results, then on my Ubuntu Linux notebook, noting that Chrome "just works," just like Linuxsimple and fast in doing the browsing

job. After these satisfactory tests, I have put Chrome on the Windows 7 machine. I got rid of all Firefox and Mozilla files. Now I am cruising with Chrome! Steve Garland, Brighton, Michigan

Privacy Concerns

The very serious privacy concerns in the article "Google Is Ginormous" [Consumer Watch, September] are at equally serious odds with the conclusions offered in the "Browser Blowout" comparison of Internet Explorer 8, Firefox, Chrome, Safari, and Opera, conclusions that favor Google's Chrome.

If PCWorld has continuing privacy concerns about Google's tracking and, more alarmingly, revealing users' contacts, why would you ever, ever recommend Chrome, a browser that could do

Re: 'Facebook, Google, Others Sued by Paul Allen' [find.pcworld. com/70778]: I'd like to see patent law completely gutted and done away with. It no longer does what it was intended to do.

SteveGerencser, PCWorld forums

(already does?) far worse damage to personal privacy? Tracking e-mail data is one thing; tracking browser history is quite another. To say the least.

Shame on PC World. Your paying subscribers deserve better!

> James Kemper Millard Lexington, Kentucky

Editor's response: In "Browser Blowout," we based our assessments on the merits of each browser. Sometimes a better user experience depends on giving up some privacy. This dilemma exists with many apps that integrate with online services. In Chrome, however, you can opt out of the bargain: Click the wrench icon in the toolbar and then Option in the menu; next, go to the 'Under the Hood' tab, and uncheck Use a suggestion service to help complete searches and URLs typed in the address bar.

PCW Forum

For more about Chrome's privacy options. click the Learn more link on the tab.

-Nick Mediati

What PC Users Should Know-Really?

Your questionnaire ["What's Your PC IQ?" September] is a travesty, equating Windows trivia with knowledge about computers and computing.

According to this test, the "Guru" knows everything about Microsoft and Windows, and the basics of using a PC. but nothing about other operating systems or programming languages.

I won't let your purported PC guru anywhere near my computer when I'm in trouble, unless he or she happens to know a lot more about how computers and operating systems actually work than this test demonstrates.

> Michael Feinberg Bala Cynwyd, Pennsylvania

> > СОМОДО

GeekBuddy"

PC Names and Numbers

Steve Fox is right on with his column about PC labeling with meaningless numbers ["PC Models That Sound Like Alphabet Soup," Techlog, September].

This is a big part of why I switched to Apple nearly three years ago, first buying a MacBook, then replacing it recently with a MacBook Pro. Sure, both computers have several options available on a custom-built model, but meaningless label numbers get left on

the factory floor. Oh, for the days of the 286, the 386, and the 486. With Intel's Pentium label, who now knows what the numbers and letters mean?

Chuck Garrity, Sammamish, Washington

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

CORRECTIONS

IN OCTOBER'S "HD Webcams for Videoconferencing" (Reviews and Rankings), we should have said that Logitech's C910 is not Skype-certified.

In October's "101 Essential Apps," we should have said that Evernote has an iPhone app, and that Google Voice is a Web-based service on the iPhone. Currently NPR News has no BlackBerry app, and the MapQuest 4 Mobile app is not offered for Android. Finally, while Pandora lacks an app for Symbian, it does provide a Windows Mobile app. PCWorld regrets the errors.

PC problem? Click a Geek.



GeekBuddy*

Live 24/7 PC Experts are just a click away!

GeekBuddy is the easiest way to get on-demand support with a variety of PC problems. From simple tasks to frustrating system errors, our Geeks are ready to help anytime!

Bonus Download Includes: Antivirus, System Cleaner, Backup Utility, TrustConnect, Secure Browser and more!

For a FREE TRIAL go to GeekBuddy.com/PCWorld

Now available at:

MICRO CENTER

amazon.com

OfficeMax.



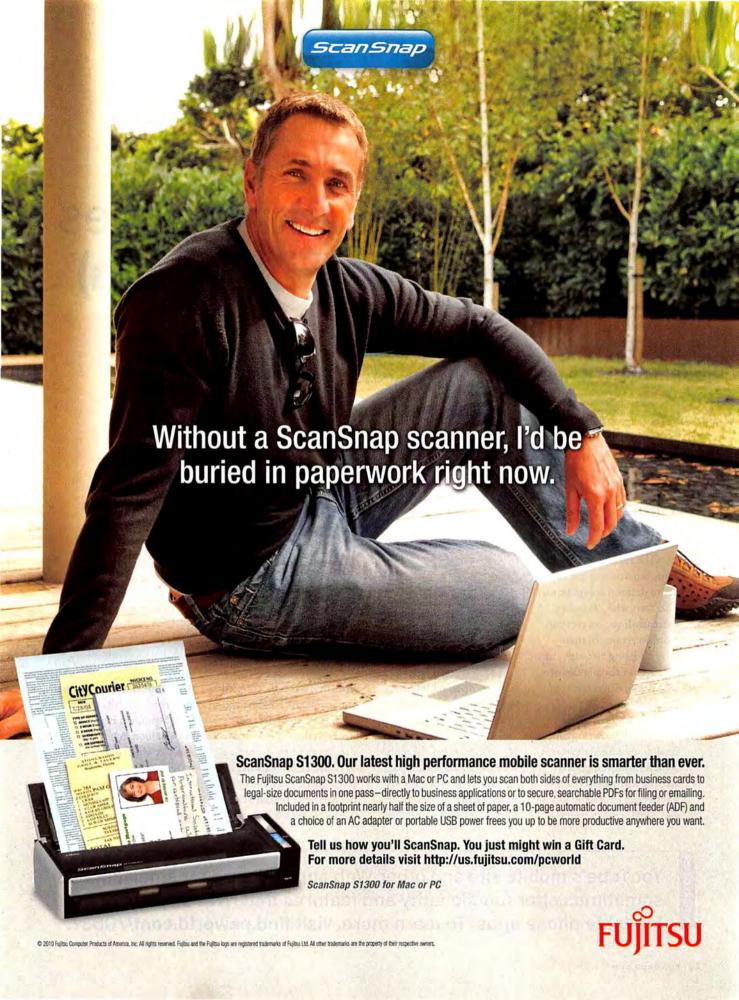






соморо Creating Trust Online®

GeekBuddy



Forward

11 Mobile Web Annoyances (And How to Fix Them)

Fitting the Web onto your phone can be frustrating when ads, 'back' buttons, and video don't cooperate. Here's our advice for dealing with the worst irritants.

BY JARED NEWMAN

IF THE INTERNET of the future is mobile, as some analysts predict, I'm betting it will be riddled with as many nuisances as the Internet of desktop computers is.

To start with, Websites currently insist on creating mobile versions of themselves, forcing bite-size samples upon smartphone users who want nothing less than the whole Internet in their pockets. Because the very idea of Web browsing on small touchscreen devices is so new, however, pocketsize browsing perfection doesn't yet exist. And when you consider that even the



desktop-oriented Internetwhich has been around for decades-is still loaded with annoyances such as pop-up ads, it's clear that the mobile Web has a long way to go.

A new crop of Web-ready phones (namely the iPhone, Android handsets, and the

BlackBerry Torch), coupled with the growth of fast and reliable wireless data networks, is driving mobile Web use, say experts. According to Nielsen Company market researchers, the number of people in the United States who accessed the Web via

smartphones grew by about 36 percent over the past year, from 56 million in July 2009 to 76 million in July 2010.

As for what kind of quality people get from the mobile Web, Nielsen doesn't know. My guess is, the experience remains frustrating for users.

ILLUSTRATION: JASON SCHNEIDER

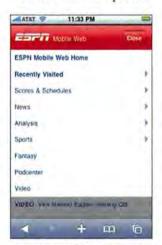
YouTube's mobile site and other Web apps tailored for smartphones sometimes offer functionality and features that rival those of downloadable phone apps. To learn more, visit find.pcworld.com/70837.

Until we live in a perfect world, here are 11 mobile Web annoyances, and how to work around, cope with, ignore, or fix them.

Lame Mobile Sites

Mobile phone users aren't primitive. Our devices may be tiny, but that doesn't mean we seek a lesser version of the Internet. So why do some Websites exclude or bury features that are found on their PC counterparts? Hey, ESPN, just because I'm visiting you on my iPhone's mobile Web browser, that doesn't mean I don't want to read page 2, get personalized headlines, or even see story photos. An annoyance within an annovance: the standard mobile site for every blog that uses Word-Press. No photos, comment counts, or full stories from the home page? No thanks.

The Fix: Your first option is



ESPN'S SITE OFFERS strippeddown content and omits photos and personalization features.

to check the bottom of any page you're on-if you're lucky, you'll see a way to switch to the full Website. Otherwise, browse as if you

were on your desktop: On the iPhone, Atomic Web Browser (find.pcworld.com/ 70840) lets you identify the browser as Firefox, Internet Explorer, or desktop Safari; on Android, Dolphin Browser HD (find.pcworld.com/70841) can identify as a desktop app, too. You'll never see a mobile Website again.

Browser Windows

Just like mobile Websites, mobile browsers wrongly assume that you'd sacrifice functionality for more screen real estate, so the standard browsers for Android and iPhone use windows, not tabs. Switching windows or opening new ones takes the focus away from what you were doing, almost defeating the purpose of having new windows in the first place.

The Fix: Get a different browser. On the iPhone. Atomic Web Browser and iCab Mobile (find.pcworld.com/ 70842) allow tabbed browsing, and Dolphin Browser does so on Android. Opera Mini (find.pcworld.com/70843), supported on multiple mobile platforms, provides browser tabs, as well.

Built-In Pop-Up Ads

Worse than traditional popup ads are the kind that appear as part of the Web page you're on-and they're even more annoying on cell phones, where hunting for the "X" is like some twisted minigame. As an online writer, I'm certainly aware that such marketing methods could be paying my bills at some point. That doesn't mean they don't aggravate



BUILT-IN POP-UP ADS are particularly obnoxious and hard to banish on the mobile Web.

me when I'm browsing.

The Fix: I don't condone ad-blocking (due to the aforementioned bill-paying), but if you must, alternative browsers can help. Atomic Web Browser has a blocker built in. Dolphin Browser has ad-blocking add-ons.

Filling Out Forms

Sometimes I wonder how many people avoid buying things or signing up for services simply because they hate filling out forms. On the cramped keyboards of mobile phones (whether physical or on-screen), the task is even worse, especially when mobile browsers don't fill out the information automatically.

The Fix: On the iPhone, mobile Safari does have a form auto-fill feature, but it's disabled by default. Head into the Safari section of your settings, and turn it on. You can even sync this feature with your contact information. LastPass (find. pcworld.com/70844), for various phones, will remember passwords and form information, but it costs \$12 per year. Opera Mini doesn't fill out complete forms, but it saves passwords, at least.

Redirect Hell, Part 1

You're on Facebook or Twitter, and someone links to what looks like the most interesting article ever-"Top 10 Most Questionable Gas Station Bathrooms," for example. So you get to the site, but it redirects you to the mobile homepage instead of the specific URL you were trying to reach. So much for the convenience of neat and tidy mobile sites.

The Fix: If you absolutely must see those bathrooms, try using the site's archives or a search function (if it wasn't scrapped per annoy-



LINKS TO WEB pages can be dead ends. Using a site's search engine can get you there faster.

ance number one). The story has to be there. Otherwise, revert to the first fix and hit the link again. Alternatively, e-mail the story link to yourself for later reading on a PC.

Redirect Hell, Part 2

So you've passed through a mobile Website redirect unscathed, the link intact. >>

Forward

Good luck returning via the back button to the site you were previously viewing. Mobile Web page redirects have a nasty habit of sending you forward every time you try the back button. Granted, my conclusion is a conspiracy theory-but I say it's all part of the Website's plan to trap you forever.

The Fix: Option number one is to use brute force. Keep pounding the back button until you've returned to safety. Failing that, dive into the browser's history to find the previous page.

Accidental Tapping

The harsh reality of touchscreens is that the actions of clicking and scrolling require contact from a finger. You're bound to mess up on occasion, clicking a link when you meant to drag, and vice versa.

The Fix: Not a fix, per se. but you can train yourself to avoid accidental tapping by always laying down your finger with a slight amount of motion so that it doesn't register as a click instead. And try to tend more toward



A WRONG FINGER movement on PopCap's site can trigger a window instead of scrolling down.

long, deliberate scrolling instead of quick flicks, which could register as taps.

Sites That Aren't Appworthy

Dear Website I Visit Maybe Four Times a Year: I'm impressed you have a native iPhone or Android app. Now please stop getting in my face about it as I try to navigate your Website. (I'm looking at you, Digg, Village Voice, and Yelp.)

The Fix: Some sites, such as the ones mentioned above, will stop advertising their



USERS WHO ARE not interested in Digg's iPhone app (shown here) can't easily escape the Digg mobile site's constant promos for it.

mobile apps for good if you take a moment to click the close button where the message appears. Otherwise, you could show your disapproval by going to a competing service or Website, but if you switch to Google Places over Yelp simply out of spite, you have a pretty big chip on your shoulder.

Being Unable to Pick Up Where You Left Off

During the day, my computer's browser becomes an organized mess of tabs and open windows. But once I go mobile, all of those stories I wanted to read or Websites I needed to reference are gone, unless I e-mail a list of them to myself.

The Fix: This one is easy. Just check out the Xmarks service. which lets you send all open tabs on a PC to your mobile devices, iPhone users can get the native app (find. pcworld.com/70845) for a mere \$1-an Android version is supposedly in the worksbut you can also log in to the service's general phone site at mobile.xmarks.com.

The Flash Problem

Missing Flash support won't always be a problem for all phones, but with the exception of Android phones running the new Froyo mobile OS (2.2), most phones can reliably annoy their owners by displaying Websites filled with empty Flash boxes. A subannoyance: Why doesn't YouTube's mobile site let you watch full television episodes as you can on a desktop browser? I fret that it's

because some Hollywood executive doesn't like the idea of me watching full episodes of Star Trek on You-Tube from the road.

The Fix: "Get an Android phone" is admittedly not the best answer-well, it is if you think of phones as political factions. Meanwhile, iPhone owners can try a workaround and turn to LogMeIn Ignition (\$30; find. pcworld.com/70846) to feed content from their own computers, including Flash. Another workaround is to use the iPhone app called Cloud Browse (free, but with a premium version for



MESSAGES SUCH AS this one are an alltoo-common sight on mobile Web pages.

faster speeds; find.pcworld. com/70847), which opens a Flash-enabled browser on the app's own server.

Lingering Ghosts of Mobile Websites

One thing I despise more than bad Websites on mobile phones is bad mobile Websites on a PC. At times this can happen if someone links to a site's mobile version, and the destination has no redirect to take you back. It doesn't happen often, but when it does, I feel helpless.

The Fix: Using a full Web browser, conduct a search within the Website's domain (for example, enter "site: domain.com the thing you're searching for" in Google). That might just get you back to the land of the living.

PRISONERS OF WAR TO READ THIS ENTIRE AD.

Webroot® Internet Security Complete is the first security solution designed to protect the individual, not just the computer. Webroot utilizes a hybrid desktop/ Web-based model and multilayered, best-of-breed technologies to ensure your personal information is secure, no matter where or how you go online. It begins with protecting your passwords. With AES-encrypted passwords transmitted over 256-bit SSL, the Password Manager tracks hundreds of different passwords, license keys, and registration codes. Webroot also generates unique, hacker-proof passwords that securely and easily log you in from anywhere. Your credit card and bank account numbers can be encrypted and filled in for you, preventing keyloggers and phishers. Next, Webroot Internet Security Complete protects all that digital data you couldn't bear to lose. Secure Online Storage lets you back up critical documents to the cloud, so even if your computer dies, your financial records won't be lost. Your files are securely transferred using SSL encryption, and stored in an encrypted format using 128-bit AES — the same level of protection used by major financial institutions. Two geo-redundant, carrier-grade data centers store an encrypted copy of your data in case of a major disaster. We broot Internet Security Complete includes 10GB of online storage, but the true advantage is what you get beyond mere file storage. For example, let's say you need to work on a file that you left at the office. You can securely access it online, and all changes will be automatically synchronized. You can even share the file with colleagues using Secure Online Storage. Okay, now let's talk about Webroot's malware protection. PC Magazine® named Webroot AntiVirus with Spy Sweeper® their 2010 Editors' ChoiceTM — for the tenth time. Not to mention the dozens of accolades and certifications from West Coast Labs, ICSA, TopTenREVIEWS, Virus Bulletin, and other experts. Webroot Spy Sweeper and antivirus technologies are integrated into Webroot Internet Security Complete to deliver the best malware protection on the market. More than a dozen shields prevent malicious files from harming your computer, and the engine can clean even a badly infected system. The direct disk scanning component detects Windows® rootkits, even when Windows itself has no idea they're installed. Which is probably why Webroot earned the highest score yet from PCMag.com for removing commercial keyloggers. 2 During scans, the engine checks all processes running in memory first and terminates any malicious files immediately. The Startup Items Shield alerts you if any program — malicious or not — adds a reference to itself, and lets you choose whether you want to prevent it from loading at boot time. The Execution Shield checks any file against Webroot's database of known malware as soon as you double-click it. If the file is malicious, the engine automatically guarantines it before it can do any damage. IE Hijack Shield prevents Trojans from changing your homepage. The Communications Shield checks all DNS lookups against a list of websites known to host malware or domain names used for command-and-control of botnets, and black holes any site even before a browser can load the page, or before a running piece of malware can retrieve its payloads. If a malicious program tries to bypass this protection by changing the Hosts file, the Hosts File Shield will stop it dead in its tracks. The Email Attachments Shield scans your POP3 mail as it downloads. An advanced spam-scanning engine automatically analyzes your incoming email and filters out spam and email scams. The File System Shield scans files as they are written to the hard drive; preventing Trojan horses. The registry scan finds and disables malware based on the characteristic changes a particular file makes to the Windows registry. Additionally, Webroot's Threat Research team tracks and updates detections for hundreds of commercial keylogging programs. Malware that loads itself using an Alternate Data Stream will be thwarted by the ADS Shield. In this latest version, the anti-malware engine has been rewritten from the ground up. It works faster, using fewer resources, so you can work simultaneously. The engine's heuristic detection algorithms identify unknown malware based on known characteristics of malicious files. Webroot maintains a record of every file it has checked and only searches new files on subsequent scans. ActiveX® Shield and BHO Shield prevent malware from hooking the browser using two commonly exploited plug-in architectures. Online, Webroot tracks hundreds of thousands of websites and warns you about visiting any known to steal passwords, host malware, or engage in drive-by downloads. Search engine results show a security rating next to each search result. A two-way firewall monitors traffic traveling into and out of your computer ports, denying access to hackers or intruders. Webroot Internet Security Complete also includes an award-winning system cleaner that removes Internet traces such as your online history, address bar history, cache, cookies, and more. It can also permanently delete sensitive files and folders, making them completely unrecoverable. If you think all this sounds complex, you're only half right. While the work Webroot does behind the scenes is extraordinarily complex, the experience from your seat is simple. All this technology is seamlessly integrated in one product, wrapped up with a streamlined, user-friendly interface, and includes a multitude of convenient features like idle-time scanning, one-click malware removal, color-coded security alerts, automatic

threat updates, Gamer Mode, and even a Magic Briefcase. Finally, personal security can be effective yet truly hassle-free.

YOU DON'T CARE HOW IT WORKS, AS LONG AS IT DOES.

Available at BEST

For the security solution that works, visit webroot.com/pcworld





Samsung's Galaxy Tab Aims to Battle the iPad

THE ANDROID-versus-Apple battle has officially made its way to the world of tablets.

Samsung's Galaxy Tab is a 7-inch slate built to compete with the current tablet king, Apple's thus-far-unchallenged iPad. We've heard a lot of chatter about the coming army of Android tablets, but we haven't seen any real contenders posing a threat to the iPad-until now.

The Galaxy Tab goes on sale later this year, through AT&T, Sprint, T-Mobile, and Verizon Wireless. As of this writing, however, price and availability are still unknown; carriers have said only that details are coming soon. T-Mobile promised its Galaxy Tab by the "holidays," and Verizon said it would announce availability before the end of September.

Despite the lingering questions (mainly about price), judging from an initial handson review of a preproduction Galaxy Tab, this tablet has the chops to compete.

Meet the Galaxy Tab

For a rundown of the new tablet's specs and how they compare to those of the iPad, see the chart on page 18.

The first thing that jumps out is the Tab's manageable size. It's compact enough to fit into tight spaces (such as a roomy pocket), yet large enough to make viewing pleasant. We found the 0.84pound unit comfy to hold in

Stylish, feature-filled, and comfortable to hold. the Android-based Galaxy Tab slate promises to be the first true rival to Apple's tablet.

one hand, unlike the iPad, which at 1.5 pounds is too heavy to grasp with a single hand for any length of time.

Clearly influenced by Samsung's Galaxy S phones (see a review of the Epic 4G on page 57), the Tab looks more stylish and less clunky than

SAMSUNG

not get a chance to test it in bright sunlight. Samsung claims that its display has a better viewing angle and contrast ratio than the iPad's higher-resolution screen.

You'll find a rear-facing 3.2-megapixel camera and a front-facing 1.3-megapixel

MALAXY TEB SAMSURS CE0168(0) 3.77

THE FRONT OF the Galaxy Tab is all screen, with four capacitive touch buttons at the bottom. As for thickness, it's a stender 13 millimeters (while the iPad is 13.4).

some of the early, off-brand Android tablets we've seen.

The size and weight allow you to hold the Galaxy Tab and type with your thumbs, using two hands or even one. Users with smaller hands will have to stretch to type onehanded; for larger hands, it's no problem. The keyboard seemed decent, but we did not pound on it enough to pass final judgment.

Although the Super VGA, 1024-by-600-pixel TFT display appeared bright and viewable at an angle, we did camera, plus a camcorder for video chat. In our limited tests, the back-facing camera seemed passable, but we need to get the final version of the Galaxy Tab out into the wild to put it through its paces. We didn't try the front-facing camera.

The Tab has a proprietary charger port; like the iPad, it needs more juice than is available via USB. If you plug the tablet into a PC's USB port, you'll get only a trickle charge. The 4000-mAh battery can provide 7 hours of

video, according to Samsung. In addition to a 1GHz Hummingbird processor, the Tab has two SIM slots, a 3G radio for data connections, Wi-Fi and DLNA support, 16GB of storage, and a MicroSD slot for expanding

Optimized Software

storage to up to 32GB.

Running Android 2.2, the Tab supports Adobe Flash 10.1

> and Microsoft's Play-Ready DRM, and has a tablet-optimized version of TouchWiz 3.0, the Samsung interface found on the Galaxy S phones.

> Like the phones, the Tab supports the Swype input method for faster typing; Samsung's Social Hub for aggregating e-mail, text, and social network messages; and a new service called Media Hub for download and rental of TV shows and movies.

You can share a Media Hub account

among up to five Galaxy devices, although at this time you can't start watching something on one device and then return to the same place and resume viewing on another. That capability is in place for e-reader software such as Amazon's Kindle apps; if Samsung can establish something comparable for Media Hub, that could give it a competitive advantage over Apple's iTunes.

Samsung has spent time optimizing Android for a tablet screen, redesigning >> APC revolutionizes the UPS... again.



Cutting-edge UPS technology from the inventors of Legendary Reliability.

What do you get when you combine 25 years of Legendary Reliability™ with the latest in UPS technology? Introducing the new APC Smart-UPS™ range of interactive, intuitive, and energy-saving UPSs, designed to protect critical server and network equipment from power threats and downtime.

New APC Smart-UPS: Smarter. Easier. Greener.

Thanks to millions of dollars in research, APC can proudly claim that only the new Smart-UPS features the unique battery life expectancy predictor, telling you the exact month and year for battery replacement. Precision temperature-compensated charging extends battery life; unique power meter function monitors energy usage; and a patent-pending "green" mode boosts online efficiencies up to 99 percent, saving on utility costs. Plus, the interactive LCD provides detailed status, configuration, and diagnostic information previously available only via software.

When dollars count and performance is critical, insist on the more intelligent, more intuitive APC Smart-UPS. Now more than ever, the name on the outside quarantees reliability on the inside: APC Smart-UPS.



Intuitive alphanumeric display: Get detailed UPS and power quality information at a glance – including status, about, and diagnostic log menus in your choice of up to five languages.



Configurable interface:
Set up and control key UPS
parameters and functions using
the intuitive navigation keys. On
rack/tower convertible models,
the display rotates 90 degrees
for easy viewing.



Energy savings: A patent-pending "green" mode achieves online efficiencies approaching 99 percent, reducing heat loss and utility costs.



Download a FREE copy of APC's White Paper #10, "Preventing Data Corruption in the Event of an Extended Power Outage."

Visit www.apc.com/promo Key Code w440w • Call 888-289-APCC x4944 • Fax 401-788-2797



Forward

the e-mail, memo, file management, calendar, contacts, messaging, music, and video apps. E-mail, for example, has an iPad-esque dual-pane view in landscape mode that shows the open message and your inboxes.

The Android Desktop has received tweaks, too: A sliding tray of icons (browser, apps, e-mail, and the like) sits at the bottom, while widgets occupy the middle. An enhanced status bar resides near the top; above it is the Androidstandard notifications bar. The ability to pinch to view your multiple home screens-a feature not offered on the phone series-is available here.

Three e-reader apps (PressDisplay for news, Kobo for e-books, and Zinio for magazines) are preinstalled. Of course, you can download and use any Android e-reader app; the only question is whether that app has been designed in a way that works with tablets.

Samsung says the 80,000-plus apps in the Android Market will run on the tablet, although just a small number are optimized for the screen. Apps that aren't optimized, the company says, appear centered at 800-by-400 resolution, which may help to explain why we thought that unscaled apps looked better on the Tab than unscaled apps on the iPad do.

As for the Tab's productivity potential, preinstalled is Microsoft's Document View-

Galaxy Tab vs. iPad: How the Specs Stack Up





	Apple iPad	Samsung Galaxy Tab
Screen size	9.7-inch LED IPS	7-inch TFT LCD
Screen resolution	1024 by 768	1024 by 600
Operating system	iOS 3.2 (iOS 4.1 coming in November)	Android 2.2 (upgradable to Android 3.0; no specific date announced)
Processor	1GHz Apple A4	1GHz Cortex A8
Internal storage	16GB, 32GB, or 64GB	16GB or 32GB
Expandable storage	None	Up to 32GB
RAM	256MB	512MB
Multitasking	No (iOS 4-style background processing available in November)	Yes
Multitouch	Yes	Yes
Camera	None	3.2-megapixel rear-facing camera, 1.3-megapixel front-facing camera
Phone	No	Yes (speakerphone or Bluetooth)
Bluetooth	2.1 + EDR	3.0
GPS	In 3G model only	Yes
Battery life	Up to 10 hours of video playback ¹	Up to 7 hours of video playback ¹
1/0	30-pin only	30-pin only
Adobe Flash support	No	Yes
E-book client	iBooks	Readers Hub
Apps	Apple App Store	Android Market; access to non-Market apps
Weight	1.5 pounds (Wi-Fi); 1.6 pounds (3G)	0.84 pound
Dimensions	9.56 by 7.47 by 0.50 inches	7.48 by 4.74 by 0.47 inches
Carrier	AT&T	AT&T, Sprint, T-Mobile, Verizon Wireless
Price	\$499 to \$699 (Wi-Fi); \$629 to \$829 (3G)	To be announced

FOOTNOTE: 1 According to manufacturers' estimates.

er and Editor, which lets you work on Word, Excel, Power-Point, and PDF documents.

Android Tablets vs. the iPad

Some of the largest differences between the Galaxy Tab and the iPad come down to the software: Android and iOS are worlds apart in style

and function. While Apple's mobile operating system has its strengths, an Androidbased tablet such as the Tab could have an advantage in numerous areas.

 App support: Apple's App Store may provide a larger selection than the Android Market, but Android's open ecosystem lets you install

anything-no Jobsian approval required. That means there's no censorship of things like political satire, celebrity cartoons, or even porn.

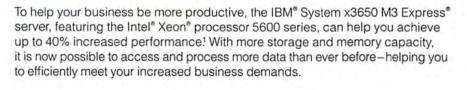
- · Tethering: Android's stance on apps opens up the potential to use a tablet for fee-free tethering. You could get your laptop online via your tablet's 3G connection without having to pay extra.
- . Flash: Love it or hate it, Flash is still a big part of the Web, and omitting support for it restricts what users can do. Especially for a tablet, being able to access any material you need is going to be a big selling point.
- · Full access: Android devices can act as hard drives. You can drag and drop files from your PC, and browse your device as if it were a computer.
- . Full multitasking: On Android you can run multiple programs at the same time. Apple's newest iOS allows only limited and carefully defined types of multitasking.
- · Battery replacement: Unlike Apple's mobile hardware, Android devices tend to have removable batteries. We're hoping that this trend carries over into the tablet realm.

The Galaxy Tab seems very promising; we look forward to seeing the shipping product that each carrier offers, as well as the pricing. Cost, in particular, will help determine whether the Galaxy Tab family sinks or swims.

> -Melissa J. Perenson and JR Raphael

Being competitive starts with being productive. Here's your edge.







IBM System x3650 M3 Express \$3,229

or \$83/month for 36 months2

PN: 7945-E2U

2U dual-socket server featuring up to 2 Intel® Xeon® processor 5600 series Energy-efficient design, 92% efficient PS

3 HS fan modules, altimeter

IBM System x3550 M3 Express

\$1,969

or \$51/month for 36 months2

PN: 7944-E1U

1U dual-socket server featuring up to 2 Intel* Xeon* processor 5600 series Energy-efficient design, 92% efficient PS

6 HS fan modules, altimeter

IBM System Storage® DS3500 Express

\$8,799

or \$226/month for 36 months2

PN: 1746-A2D or 1746-C2A

External disk storage with 3 Gbps Serial Attached SCSI (SAS) interface technology Scalable up to 3.6 TB of storage capacity with 300 GB hot-swappable SAS HDDs or up to 9 TB of storage capacity with 750 GB hot-swappable SATA HDDs

See for yourself.

See how much you could be saving—in just minutes—with the IBM Systems Consolidation Evaluation Tool.

ibm.com/systems/productivity 1 866-872-3902

(mention 6N8AH30A)

Based on Intel Engineering Study, January 2010 - performance increase comparing latest Intel Xeon processor 5600 series to previous generation - Intel Xeon processor 5500 series. See page 8, footnote 3 for more information, tarp//www.intel corn/Assets/PDF/preditiet/323501 pdf. "Global Financing officings are provided intologible IMC florid LLC in the United States and other IBM substituties and divisions worldwide to qualified commercial and government customers. Monthly payments provided are for planning purposes only and may vary based on your credit and other IBM florids. Lease offer provided is based on an EMV lease of 86 monthly payments. Other restrictions may apply, Rates and offerings are subject to change extension or withdrawal without notice. IBM floridware products are manufactured from new parts or new and servicesable used parts. Regardless, our warranty terms apply. For a copy of applicable product warranties, visit http://www.ibm.com/services/support/machine_warranties. IBM makes not representation or warranty regulation party products or services. IBM, the IBM logo, System Sungae and System vare registered stratements, or takematic original information or information or the United States and/or other countries. For a complete is of IBM tradematics, or registered tradematics of their completes storid leaf. Intel Inte





From user to listener

MM-1 Transform your computer into a superb stereo sound system. The MM-1 is a true hi-fi speaker, shrunk to fit on your desktop. And it sounds amazing. But then you'd expect nothing less from the makers of the award-winning Zeppelin iPod® speaker, not to mention some of the most advanced studio speakers in the world. Listen and you'll see.

Available at Apple stores and apple.com www.bowers-wilkins.com/mm-1

The New iPod Touch: Not Quite an 'iPhone Without the Phone'

SORRY, GEEKS, BUT Apple's new iPod Touch is not quite ready to be your contract-free, data-only iPhone.

At Apple's September press event, CEO Steve Jobs hinted that the iPod Touch could get the job done, saying, "a lot of people call it an iPhone without the phone." He added, half-jokingly, "It's also an iPhone without a contract."

Indeed, the iPod Touch is a leading candidate to become a contract-free smartphone, thanks to VoIP apps such as Skype and Line 2 and the call man-

Pod © 141 AM

To interest Character Position Character

To interest Character

To interest

THE IPOD TOUCH has the potential to supplant the iPhone, but it isn't there yet.

agement of Google Voice's Web app, but a few critical pieces are missing.

The iPod Touch's new features make it more phone-like than before: Besides front- and rear-facing cameras, the device has speakers and a microphone. Whereas previous iPod Touch models required an external headset for VoIP apps, now Skype conversations can happen over speakerphone.

Speakers are nice—but without an earpiece, your calls are everybody's business. Your only workaround for private calls is to sync a Bluetooth headset.

GigaOM's Kevin Tofel has pointed out a couple of other drawbacks. He notes that the iPod Touch's rear-facing camera is inferior to that of the iPhone, shooting at a mere 960 by 720 resolution, or roughly 0.7 megapixels. That's worse than any iPhone, ever. More important, Tofel adds, the iPod Touch has no 3G radio (so you can't use a data plan with it) and no GPS (relying on Wi-Fi triangulation instead). I think you could get around the data issues with a portable hotspot, but that would be just another device to lug around.

If you don't mind carrying multiple gadgets, more power to you. The rest of us will have to wait for something else, and pray that by the time it comes along, unlimited mobile data plans aren't completely dead.

-Jared Newman

Facebook Adds Remote Logout

FACEBOOK USERS ARE gaining a way to knock spammers out of legit accounts.

A new security feature lets users see which devices are logged in to their Facebook accounts and then remove the ones that should not have access.

The feature addresses a growing problem on Facebook: Spammers design fake phishing sites to trick Facebook users into entering their usernames and passwords, and then they use those credentials to send spam messages to as many Facebook friends as possible.

Remote logout is being rolled out "gradually," Facebook said in an e-mail message sent in early September. Users who have been granted the feature can go to Account Settings and then look for it in the Account Security section.

-Robert McMillan









Scan Business Cards
To Outlook®, Lotus Notes®,
Address Book, Act!®, etc.



Scan Paper Documents
Letters, faxes, receipts, invoices, etc.
Eliminate your paper clutter!



Scan Photos
Convert piles of photos into shared digital memories.

Forward



EDWARD N. ALBRO

BETA WATCH

Bitbop: TV on Your Phone

If you spend more time on a bus or train than you do in your living room, the idea of watching last night's episode of The Office on your phone may appeal to you. Most carriers offer an extra-price option, usually in conjunction with MobiTV, that streams shows to your handset. But if you don't like going through your carrier, Bitbop is a nice alternative for owners of many Android and BlackBerry phones. For \$10 a month (the same amount most carriers charge), you can see episodes of Bones, The Daily Show, or Family Guyand you can not only stream the shows but also download them to your device. Downloads give you better picture quality, and you don't have to worry about the show freezing if your commute takes you out of a decent coverage area. Unlike MobiTV services, however, Bitbop does not provide live television, bitbop.com

Trailmeme: Guided Web Tours

Trailmeme is a free service that lets you put together a string of Web pages to tell a story or lead people where they need to go. Visitors view your online trail in the order you made it (although you can give them options to follow different branches of the trail). You can also add written commentary along the way. Viewers see your notes and follow the navigation through a frame that Trailmeme places at the top of the page. The setup is mostly

an elegant way to guide people around the Web. A problem arises on sites (such as NYTimes.com) that don't allow frames around their pages. The only solution Trailmeme suggests is summarizing such sites' information on a blog page of your own. Another option is to download the Trailmeme toolbar for Firefox, which puts the trail navigation in your browser rather than relying on a frame. trailmeme.com

Cyncz: All Your Contacts, Everywhere

What do phones, computers, e-mail services, and social networks have in common? They all have a version of your contact list. The maddening thing is that it's not the same version. On your phone, for instance, you have Jim's cell phone number but not his e-mail address, while your PC has his IM handle but not his landline number. As the name ham-handedly tries to indicate, Cyncz is designed to keep all of that in sync. It pulls your contacts from Gmail (and other e-mail services), Outlook, Salesforce, and your phone, and merges the information. (According to a note on the Cyncz site, you'll soon be able to gather information from Facebook and LinkedIn.) Cyncz is unmistakably a beta: I experienced complete failures when I tried to import some contacts, and I found lengthy delays when I clicked on certain functions. But this free service is certainly a beta worth watching. cyncz.com



WITH THE FREE Trailmeme, you can build your own Web tours. Just gather some Web pages, decide on an order, and add your comments to help visitors follow along.









UNLEASH YOUR R



PERFORMANCE BEFINED

The Patriot Memory Xporter XT Rage breaks conventional performance constraints to deliver.
Extreme Performance. Engineered with 'Quad-Channel' technology, the RAGE boasts incredible read/write speeds!

Designed for convenience, RAGE offers a capless, rubber-coated housing eliminating damaged USB connectors, lost protective caps and makes the drive as easy to use as it is fast.



27MB/s Read 25MB/s Write

Get yours today and see how you can "Unleash Your RAGE!"





www.facebook/patriotMEM















amazon.com









GEEKTECH

Lab-Testing the PC That Time Forgot

IN THE PCWORLD Labs we constantly receive new products for testing. Though we do our best to return each review unit to its owner, we inevitably end every year with an oddball assortment of leftovers in our warehouse. We carefully catalog and archive these remainders (read: pile them in a closet), only to unearth them every few years for fun and profit during an impulsive spate of spring cleaning.

We recycle most of this stuff, but occasionally we boot up a particularly amusing relic to reformat, reminisce, and remind

ourselves that tech enthusiasts can find uses for a hunk of junk long after most consumers would have dumped it.

This time, we found a desktop that we traced to January 1999, when it may have been delivered as part of a budget-PC roundup for the April 1999 issue of PCWorld.

After carefully

wiping away the dust and grime to expose a set of vintage serial numbers, we did what any optimization-obsessed tester would do: We set up this one-of-a-kind "My Favorite PC" (yes, that's the brand) for some hard-core performance testing.

Upgrading a Relic

And that is where the adventure began. First we had to install WorldBench 6, which meant that we had to replace the default Windows 98 with a fresh installation of Windows 7 Starter Edition. Reformatting was just the first step down this retro rabbit hole; to get Windows 7 operational, we had to toss out the factoryinstalled 32MB of 133 SDRAM and slot in a pair of 256MB SDRAM sticks.

We junked the old 512MB hard drive in favor of a comparatively massive new

After unearthing an ancient desktop, the PCWorld Labs promptly ran it through our current benchmark suite.

160GB hard drive capable of holding a bare-bones Windows 7 install and a copy of our benchmarking software. With the end in sight, we hooked up the 100-watt power supply and booted into Windows with a BIOS update and a prayer.

Once we got WorldBench 6 running, the machine failed seven of the ten consumer-

> app tests. Without a full-size motherboard in the PC, we couldn't even install a 3D graphics card (no PCI or AGP slots), and had to rely on integrated graphics installed during the Clinton administration as the system limped through our Photoshop and videoencoding tests.

The average bud-

get desktop of today scores around the 100-point mark in WorldBench 6. My Favorite PC scored a 5-and earning even that much was a grueling process, as the 400MHz processor spent days chugging through Firefox and Microsoft Office tests that take 6 to 8 hours on a new budget PC.

So what have we learned from our upgrade experiment? First, stay out of the PCWorld Labs warehouse at all costs; you never know what you'll find. Second, Windows 7 runs exceptionally well on an old machine, all things considered. With a little love, even a decade-old PC can be useful as a dedicated Internet box for a small business or a technophobic relative.

-Alex Wawro

For more hardware news, visit the Geek-Tech blog at go.pcworld.com/geektech.



BEFORE WE COULD benchmark this 1999 PC, we had to update a few components.









cameraderie



Meet Solo, the Thinking Camera™

Solo and your smartphone are going to be good friends, because Solo sends video alerts when it sees events that are important to you.

A wireless monitoring camera that understands what it sees? How smart. No wonder it gets along so well with your phone.

See Video Monitoring Done Right[™] at thinkingcamera.com.



Consumer Watch

Google-Verizon Pact: Consumers Beware?

BY IAN PAUL

GOOGLE AND VERIZON received a cascade of abuse recently when they proposed a compromise on the controversial, unresolved net neutrality issue. The proposal calls for

keeping an open Internet in which broadband providers can't restrict Web traffic based on its content. But the two companies held out the prospect of wireless data networks that can offer premium services with faster data speeds.

The proposal, which has no legal standing, is basically a policy paper for consideration by Congress and the Federal Communications Commission. Net neutrality is the principle that broadband providers shouldn't be allowed to restrict or discriminate against Web traffic based on its content.

Google says that the companies' joint proposal would not eliminate network neutrality over wireless cellular networks. The search giant believes that the proposal's transparency rules-whereby

companies must publicly report their wireless traffic management policies-would ensure that providers played fair. Google also insists that the wireless market is competitive enough that it doesn't warrant net neutrality regulation. Nevertheless, many concerns and questions surround the proposal. Here are five to be aware of.

How would the so-called private Internet work? Verizon, and presumably other broadband providers, want the right to maintain a so-called private Internet dedicated to offering services that don't exist yet. What such private broadband services could be is speculative at this point, but might include health-care monitoring and educational services, as well as gaming and other forms of entertainment. Such private services would be separate from the regular Internet.

In theory, this sounds like a fair idea since a carrier's private

network wouldn't infringe on the existing Internet we have today. But I wonder how it would it play out in practice.

Why is wireless not regulated? By all accounts, wireless (3G and EDGE cellular service) is the fastest-growing means for accessing the Internet. So why does the Google-Verizon proposal leave wireless access out of the network neutrality debate? The proposal explains that the wireless industry is too "competitive and changing rapidly" to be included in any net neutrality agreement.

But if safeguards aren't set now, what happens to net neutrality when wireless access becomes the dominant way to go online? (That may happen surprisingly soon. A recent study by Morgan Stanley predicts that more people will go

online via mobile devices than via PCs within five years.)

What does "lawful Internet content" mean? The Google-Verizon proposal says that broadband providers "would not be able to discriminate against or prioritize lawful Internet content."

Perhaps you're wondering, as I am, whether by "lawful Internet content" what these two companies really mean is "any content but torrents"—those disreputable data streams that are also known as peer-to-peer file sharing.

For all the criticism and bad press they get, torrent protocols are an efficient and useful way to distribute content (legal >>>



The companies' compromise proposal on net

tiered Internet-but do we really want that?

neutrality could lay the groundwork for a two-

For more on the Google-Verizon plan on net neutrality, and links to the proposal itself, see find.pcworld.com/70787; for the most recent developments, check out search results at find.pcworld.com/70788.

Consumer Watch

or otherwise). How would the Google-Verizon proposal affect P-to-P file sharing? Would access to sites such as The Pirate Bay or other torrent databases be restricted based on accusations that most of the content it points to isn't "lawful"? Also, how deeply would broadband carriers monitor P-to-P traffic to watch out for unlawful content on their networks?

What happens to the regular Internet? The Google-Verizon proposal appears to lay the groundwork for a two-tiered Internet: the public Internet that we use today and a private one for premium services. Such a two-tiered system raises questions about what happens to the regular Internet in the long term. Would broadband providers be compelled to maintain and upgrade their regular Internet services? Could carriers cap regular Internet speeds at a certain level, and then force users over to the proposed private service if they wanted better broadband speeds?

And how does an open or so-called public Internet survive when corporations have financial incentives, such as private networks, to ignore it?

What will the costs be? Finally, how much will this two-tiered framework cost the regular end user? If the proposed framework succeeds and carriers are able to offer private services, what will the costs of such services be?

Would fees be structured much as cable-TV packages are, as some reports have suggested-where you buy one plan for entertainment services such as gaming and another for services like health-care monitoring? Or would services be provided à la carte, where you pay only for the access you want?

The stated aim of the Google-Verizon plan is to maintain both an open Internet and "continued investment in broadband infrastructure."

But is the proposal's two-tiered broadband system—a plan that ignores the growing popularity of wireless access-really a good way to maintain open Internet access for all?

I'm not so sure.

SKEPTICAL SHOPPER GINNY MIES

Tired of eBay? Consider These Alternatives

EBAY IS NO doubt by far the best place to bid on new and used PCs, gadgets, and electronic components. It is

also one of the best places to auction off your older equipment-and make some money to fund your new purchases. But some critics of the online auction house argue that it has gotten too big for its own good. Luckily, alternatives are out there.

One of the biggest complaints about eBay is that its seller fees are constantly increasing. At this writing, fees were \$1 for every item listed at \$50 to \$200 and \$2 for every item over \$200 (see find. pcworld.com/70801 for the full breakdown). Although these listing

fees might seem small, they add up if you are selling multiple items.

For buyers, another problem is that the market is so large that scoring a genuine deal is difficult. So many products are listed that finding just what you're

looking for can be overwhelming. And of course, eBay has a history of counterfeit, forged, and bootleg items.

Lastly, eBay's user feedback system is weak: The site allows users to post only 80 characters of feedback for a seller. That's not nearly enough room for a disappointed customer to speak out about how they got ripped off or why the product was unsatisfactory.

The Trade-Off: Slower Traffic

Fortunately, alternative auction sites address some of the problems-but be aware of trade-offs when going the noneBay route. The big one is that traffic is a lot slower: Fewer people will see your items, and selling something could take weeks. Also, as a shopper, you won't find as many products to choose from.

Here, then, are some of the best online

eBay may be the largest, best-known auction site-but check out some others that offer better features.

auction-site alternatives to eBay.

eCrater provides free tools to help you build your own Web store. It has no listing fees, and you can easily import your eBay products into your storefront. All wares are monitored by Google's Product Search Marketplace, which provides up-to-date information about your offerings to potential buyers.

Bonanzle is a hybrid of eBay, Etsy (an online marketplace for homemade products), and social network. More of an on-

line garage sale than an auction

house, the site encourages a sense of community and individuality among

shoppers and sellers.

More about unique and collectible items than mass-produced products, Bonanzle presents a good selection of older-model cameras and camera ac-

cessories, cell phone accessories, and computer parts. Although the site does not charge sellers listing fees as of this writing, it does take final-value fees (see find.pcworld.com/70810 for a breakdown of the final-value fees).

iOffer lets you either purchase an item at the seller's asking price or make the seller an offer. Stores are also integrated with Google Analytics, so sellers can track visitors and keywords to help them optimize the stores' design. To protect buyers, iOffer provides a rating chart that gives a visual summary of seller transactions and past rating history. Finally, listing items on iOffer is completely freeregardless of asking price. But if you want to have your items promoted on iOffer's homepage or category page, you have to join the company's premium listing service, which charges fees.



Consumer Watch

ON YOUR SIDE MARLA MIYASHIRO

I BOUGHT A Panasonic HDTV last year at the Yokota Air Base Army Air Force Exchange Service (AAFES). A month after the one-year warranty expired, the TV would no longer turn on. On Panasonic.net, I found contact information for Panasonic in Tokyo, where I'm stationed. The reps that I contacted said that they wouldn't service an American-made model and that I needed to get service through the store where I purchased the item. The AAFES directed me to a repair service on base that is contracted with Panasonic. After taking my TV in, I contacted Panasonic.com to see if it would cover the repairs, but its reps just referred me back to Panasonic.net (a completely different site). Can you help?

Valarry Smith, SMSgt, USAF, Tokyo

OYS responds: A quick Internet search showed that other people were having the same problem with Smith's particular model. After we contacted Panasonic about Smith's issue, a company representative arranged to have the repairs expedited and to cover their cost. Smith says the TV is now working fine.

When shopping for a big-ticket item such as an HDTV, it pays to research if other people have reported trouble with the model you're considering. An easy way to do that is to conduct a search using the brand and model names and the word "problem" as keywords. Then if a particular issue-power, for example, or warranty-catches your eye, learn more about it by doing a search using that term; in addition, instead of using "problem" in the search string, use the phrase "problem solved" to see if results show that the issue can be dealt with easily.

Missing Number

Mary Alice Hunter of Portland, Oregon, contacted us after she downloaded some software but couldn't get a working license registration number for it. Hunter paid \$23.90 to register Adblock Pro, an add-on for Internet Explorer. Despite twice e-mailing the company (named Adblock Pro as well), she didn't receive the necessary number. Adblock Pro took a week and a half to respond to the first message and didn't reply to the second.

Because Hunter hadn't been able to get what she needed within a month after her purchase, she had no confidence that the product was being sup-



ported and wanted to get her money back. After we contacted Adblock Pro about Hunter's problem, a company representative gave her a refund.

Recall of Hazardous Fake BlackBerry Batteries

Asurion, in cooperation with the U.S. Consumer Product Safety Commission, is recalling about 470,000 counterfeit BlackBerry-branded cell phone batteries. The batteries were used in refurbished BlackBerry devices distributed by Asurion through a handset protection program prior to November 1, 2009. The counterfeit batteries can overheat, posing burn and fire hazards. Asurion has received two reports of such overheating, causing minor burns to a consumer in addition to slight property damage. Consumers should immediately stop using the batteries and contact Asurion to arrange a free battery exchange. For more information, call the toll-free number 866/384-9175 or visit the company's batteryexchange Website at www.001batex.com.



Clickjacking Scam Pops Up on Facebook

SECURITY FIRM SOPHOS recently discovered a new clickjacking scam on Facebook that spreads via the social network's "Share" feature and could be costing victims \$5 a week. Here's how the "Share" scam works.

You see a link to a Facebook page for "10 Funny T-Shirt Fails" or something similar. Once you arrive on the page, a message tells you that you have to go through Facebook's new three-step human-verification process in order to see the content.

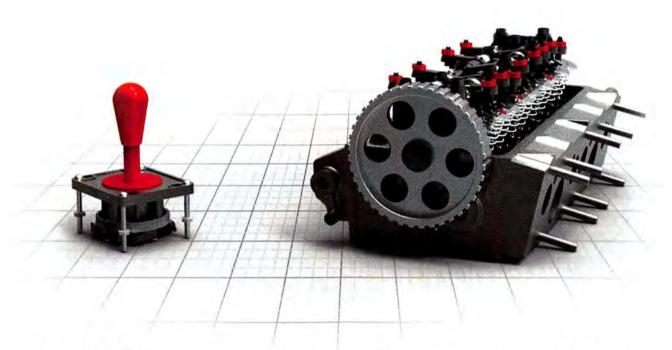
On the second step, you are asked to click the "Next" button, which doesn't actually have any functionality. But hidden underneath the "Next" button is a functional "Share" button. So while it looks like you are clicking just to move to the final step, you are actually posting that page to your profile wall.

The scam doesn't end there. The whole point is to get you to the third step, where you fill out a revenuegenerating survey for the scammers. The survey asks you to supply your personal information to enter a contest. The survey's fine print, however, says that providing your information will end up tacking an extra \$5 per week onto your cell phone bill.

Facebook has removed all the scam pages involved. But if you think you might have fallen prey to the scam, you should check to make sure any links associated with the phony pages have been removed from your profile wall.

-Ian Paul

From gaming parts to engine pistons



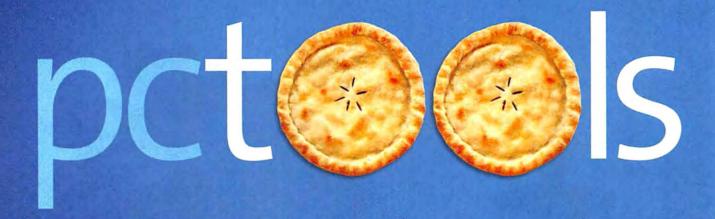
Model, test, and manufacture your ideas with 3D/2D design software from Alibre.

Starting at \$99.

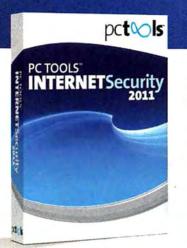
libre

mkt.alibre.com/pcworld 877.525.4273





Award-winning protection made easy.



Introducing PC Tools[™] Internet Security 2011, our most advanced protection ever. Slice through cybercrime without all the fluff. It defends your online identity with multiple layers of hardworking protection. Plus, it's faster than traditional antivirus products, so it won't slow you down. Simply install it today and you're covered.

What could be easier? Protect yourself at pctools.com



March 30, 2010 PC Tools Internet Security 2010



Business Center

How to Get Started With a Blade System

BY LOGAN G. HARBAUGH

WHEN YOU INSTALL a new server in your small to midsize business's data center, you have to make multiple connections to it, including a keyboard, a mouse, a monitor, power cables,

network connections, and perhaps a storage connection.

Rather than setting up all of those connections to each of a dozen servers, wouldn't it be great to consolidate them into one of each type? A blade server system can do that for you.

Blades are stripped-down, modular servers. Blade servers consist of a chassis (which can hold from 2 to 14 blades), the blades themselves, a management unit, and network and storage connections. Each blade is a separate server equivalent to a 1U (1 rack unit) rackmount server, and it may have from one to four CPUs offering 2 to 48 cores. Memory can go up to 256GB of RAM. Blades can support one or two hard drives, or the chassis may share a storage system with six or

more drives. The chassis requires only one keyboard, mouse, and video connection (or a separate management connection); two power connections for redundant power supplies; and one network connection. Many blade chassis also offer Fibre Channel or InfiniBand connections to each blade.

Why You Should Install Blades

Any organization that uses more than three or four servers may find blade servers a good fit. Blade servers offer a substantially simplified cabling setup versus the equivalent number of separate rack-mount servers. In addition, they often

can squeeze more equipment into a given amount of space than separate setups can: A space that's 7 rack units (12.25 inches) high, for instance, may hold from 8 to 14 blades.

One trend is to use virtualization to consolidate many operating systems into a single hardware setup. Even though

> it is possible to use blade servers and virtualization in conjunction, systems that run several to dozens of OSs on each of many blades are probably beyond the needs of most small businesses. If you're keeping separate hardware servers (either because you don't want virtualization or because you're running applications that fully utilize the hardware they're on), blade servers can reduce the cost of managing all of the systems.



Is a blade server right for your company?

business is looking at blade technology.

Here are the factors to consider if your small

HP'S BLADESYSTEM C7000 blade chassis (shown here loaded with HP ProLiant BL685c G6 server blades) offers solid management tools, an LCD control panel, and power-saving options.

Limitations and Costs

Blade servers have some limitations. First, while even 1U servers might have two or three PCI-X or PCI-E slots, blades may not have any. Usually, separate servers also support at least four drives, versus the

one or two 2.5-inch drives typical for blades. (Some blade systems, however, compensate for that shortcoming by offering high-performance connections or shared storage.)

If your business typically buys clusters of 4 to 12 servers a year, the savings in management costs and potential power consumption may make blades worthwhile.

Pricing for a chassis is about the same as that for an equivalent number of separate servers. In fact, though the blade system may be more expensive, the lower management costs over its lifetime will likely more than make up the difference.

You can find blade systems from Cisco, Dell, HP, IBM, >>>

For an in-depth comparison of recently released blade servers from a number of major vendors, see "Blade Server Review: Dell, HP, IBM Battle for the Virtual Data Center" at find.pcworld.com/70822.

Business Center

Sun, and smaller vendors. Blades from one system typically don't work in another chassis, or in older (or newer) versions of the same vendor's chassis.

Spending \$50,000 or more for a blade system isn't necessary. You can choose small, 1U, two-node systems starting at under \$2000, or chassis that hold four blades starting at under \$5000. Processors and memory come in the same varieties and capacities as they do for standard servers; some blade systems even offer both Intel and AMD processors in the same chassis, plus blades with up to four 12-core processors.

Benefits and Drawbacks

Blade servers can reduce management costs, free up administrators for other tasks, simplify data-center cabling, save power, and enable remote administration without extra equipment. They also offer better reliability than individual servers, with options such as dual redundant power supplies and highavailability components.

The biggest problems blade systems may introduce are higher power and cooling requirements. Since blade systems can fit more CPUs, memory, and other components into smaller spaces than other systems can, they might produce more heat, and may demand more power. Some blade systems can fit 672 CPUs into a standard 7-foot rack, which would require 38,400 watts of power and would produce more heat than a commercial-grade oven.

Because many blade systems are available for purchase with less than a full complement of blades, you might buy a system with a few blades and get more as required later. But with hardware standards evolving so quickly, even after a period as short as 18 months the blades you purchased with the system might no longer be available. Finding out whether the maker still supports previous versions of blades will give you a good indication of whether new blades with faster processors and memory are likely to be compatible with the half-full chassis you already have.

NET WORK TONY BRADLEY

Get Your Data Safely Across the Border

SINCE THE TERRORIST attacks on September 11, 2001, the United States

Take steps to keep your data safe from government inspections and searches.

has sacrificed some freedoms and liberties in exchange for tighter security that is aimed at preventing future attacks. In early September of this year, the ACLU joined with other groups in filing a legal challenge to one such security measure that infringes on personal liberty: the practice of searching laptops at border crossings, without probable cause. However, you still have a few ways to get your data across the border while keeping it

away from the prying eyes of Big Brother.

Check Your Laptop

If you are traveling by air, you can get your laptop past the TSA (Transportation Security Administration) checkpoint and possi-

bly past CBP (Customs and Border Protection) agents by checking it along with your luggage. You probably wouldn't use the machine much on the flight anyway: Unless you're flying first class (and how many businesses still allow for expensing first-class travel?), there's simply no room to work with a laptop.

That said, baggage handlers are not known for treating things gently. (Samsonite had a reason for demonstrating the quality of its luggage with commercials showing the suitcases being abused by a gorilla.) You'll need to pack and pad your laptop carefully. Also, keep in mind that CBP agents do randomly inspect checked baggage, as well, so it's not a guarantee that the data won't be accessed.

Simply encrypting your laptop's hard drive-or at least the sensitive files and folders on it-will prevent casual access by border agents. If you or your laptop seem particularly suspicious, the government may still try to compel you to share the encryption key and permit a deeper look; at that point, it will be up to you whether to dig in your heels and stand on principle, or whether exposing the data to border agents who are just trying to protect the country is really that big a deal.

Use a USB Drive

Another option for transporting sensitive or confidential information back into the United States without having your Fourth

> Amendment rights violated is to carry the files separately on a USB thumb drive. Your laptop will still be subject to inspection at border checkpoints; but prior to getting there, you can remove any critical data that should not be accessed or

viewed by others and put it in your pocket or on a keychain with a USB thumb drive.



Take to the Cloud

Probably the best way to keep your critical data away from border agents who might randomly confiscate and access your laptop is to store it where borders don't exist-the cloud. You can easily place your personal, sensitive, and confidential data files in the cloud by using Box.net, Dropbox, Google Docs, Microsoft's SkyDrive, or any of a wide variety of other Web-based storage options.

Using the cloud means that you can access the data from any Web connection in the world even if the laptop is lost or stolen, and at the same time it prevents government agents or any other unauthorized party from reaching the data.

When you travel internationally, remember that your possessions may be seized and searched with or without legal justification. Be sure to take appropriate steps.

WHAT'S the BUSINESS PROBLEM? -

DATA

- DISAPPEARING DATA

the QWEST SOLUTION: It's harder than ever to keep your critical information from falling into the wrong hands. Fortunately, Qwest's voice, data and networking solutions are created with today's complex security challenges in mind. So you can keep your business safe and your data fully intact. Solve more problems at qwestsolutions.com.



Business Center



TECH AUDIT ELSA WENZEL

Make Money Selling Your Business's Old Tech Equipment

FROM THE MOMENT you slip electronics out of the box, they're worth less than what you paid for them. You can't do anything about depreciation, but you can probably find a market for your company's unwanted gear. Unloading spent gadgets can put cash in your pocket that you can reinvest toward the latest technology.

Shedding old electronics used to mean paying a service to help with disposal and with legal compliance. Now, however, you can

handle the process yourself. (For moredetailed advice, see the online version of this article at find.pcworld.com/70821.)

You'll get the biggest reward by dealing with at least a handful of goods simultaneously. If your company had to drop five employees, for example, selling their desktops and monitors in one swoop can help recover some losses.

Instant Quotes

Smartphones and laptops (particularly from Apple) tend to fetch the highest prices. Cameras, storage, and inkjet printers are among the hardest sells.

Many services pay a pretty penny for relatively new smartphones. EcoSquid

lets you compare offers, and takes a share if you sell to a referred service. Dumping a handset before its contract expires can prompt an early-termination fee of up to \$350, depending on the carrier; CellSwapper and CelltradeUSA help users avoid the penalty by exchanging phones and plans. Among the services that buy phones but don't deal with contracts, Cell for Cash, CellItUsed, and Simply Sellular offer high quotes (see the chart below).

BuyMyTronics.com, Gazelle, and NextWorth all offer cash or credit for various electronics. I saw plenty of information for Apple computers on these sites, but I couldn't find quotes for a ThinkPad laptop. BuyMyTronics quoted \$41, NextWorth quoted \$66, and Gazelle quoted \$95 for a 1GHz, 60GB Apple iBook G4. I couldn't find takers for a year-old Canon inkjet or an older HP laser printer.

Get Started Apply Filters: Acc Offer \$76.64 CEXCHANGE MAIL BLACKBERRY RIM BOLD 9000 \$88.98 TigerDirect to the unit working? # Yes O'No Is the screen damaged? 5 yes \$ No \$65,14 RadioShack is there water damage? Dives # No

ECOSQUID SEARCHES MULTIPLE services that buy cell phones, allowing you to select the best offer.

Get paid to unload outdated gear instead of letting it languish in drawers and closets.

Bulk-resale options for small businesses are available at Gazelle and elsewhere. If you plan to off-load a bunch of machines, contact the services directly. As for security, each service pledges to wipe data from your equipment, but the details are fairly scant.

Vendor Trade-In Programs

Trading in a product through the company that made it can help you afford a same-name upgrade. If you're buying a new PC from Dell, the company will take any other old computer from you for free. Apple offers gift cards toward new purchases if you send an approved Mac or PC laptop or desktop to partner PowerON, which provides a prepaid shipping label and a box; recycling a PC or monitor through Apple partner We-Recycle involves paying a \$30 charge.

Hewlett-Packard pays in the form of credit toward a new purchase for tradedin equipment-from copiers to printers

to workstations-made by assorted companies. HP charges \$15 to scrub data off devices according to Department of Defense standards. Return-for-cash options include asset return for businesses.

Compliance

Businesses must ensure that their getting rid of old gear complies with the law. The federal Resource Conservation and Recovery Act, for example, makes it illegal to carelessly dispose of goods containing hazardous materials, such as lead-laced CRT monitors.

Disposing of tech also means clearing stored data. Companies that use financial information have to consider the Sarbanes-Oxley and Gramm-Leach-Bliley acts; those in healthcare must follow HIPAA regulations. You can delete data yourself (find.pcworld.com/70253).

> If you sell to a service, see that it follows Department of Defense data-destruction standards.

If you're an IT consultant serving small to midsize businesses, and you'd like to learn how you can contribute to Tech Audit, e-mail techaudit@pcworld.com. Read the Tech Audit blog (find.pcworld. com/64147) and follow us on Twitter (@TechAudit), as well.

PRODUCT	BuyMyTronics	Gazelle	NextWorth	Cell for Cash	CellitUsed	Sell Your Cell	Simply Sellular
BlackBerry Bold 9000	\$63	\$80	573	\$98	\$92	\$88	\$110
iPhone 3G (16GB)	\$83	\$101	\$104	\$144	\$116	\$110	\$123
Nokia 7610	\$3	\$4	\$4	\$5	\$9	\$0	\$6
Motorola Razr V3	\$3	\$4	\$0	Recycle free	\$2	\$0	\$7

WEB-BASED SERVICES THAT offer money for older cell phones provide a range of quotes.

YOUR

REMOTE SUPPORT SILVER BULLET.



You've heard the call for help and are ready to ride – all you need is the best tool to let your skills shine. With the simple yet powerful technology of GoToAssist® Express™, you'll connect with customers like never before.

Speed – Instantly support up to 8 clients at once.

Unlimited Use – Wrangle all the issues you want for one flat fee.

Performance – 100% reliability you can hang your hat on.

Unattended Support – Work while customers are away.

GoTo Assist®

the property organization and organizaposition proplement throughout. by CITRIX*



Real People. Real Support.

(spend time with your family this holiday - not their pc)

Technology Solutions With a Human Touch

- Virus and Spyware Removal
- Troubleshoot System Errors
- Optimize a Slow Computer
- 🎺 Establish a Home Network
- ✓ Connect With Wireless Devices
- Solve Printer Issues

Security Alert

What Digital Photos Reveal About You

BY ROBERT VAMOSI

THE MOMENT IS special: Your kid just learned how to ride a bike without training wheels. So you fire up your iPhone's camera, snap a photograph, upload the image to Twitpic, and

share the evidence of your child's triumph via Twitter.

When you post the picture, a subset of the 75 million Twitter users will know the exact location of you

The geotagging data in mobile phone images lets strangers know exactly where you are.

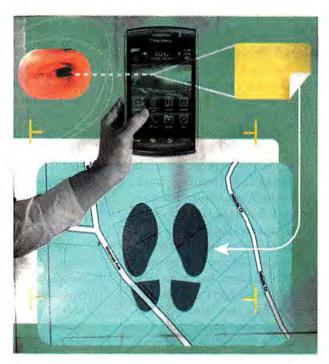
and your child. Digital photos automatically store a wealth of information-known as EXIF data-produced by the camera. Most of the data is harmless, but as Mayhemic Labs' Ben Jackson noted at a security conference in New York last July, about 3 percent of all photos posted on Twitter contain location data, and that figure is growing. Anyone on the Web who can read the data knows where the photographer was standing. And arguably this is a gross invasion of personal privacy.

EXIF Data and Geotagging

The Exchangeable Image File format specification adds metadata to common JPG and TIFF image files. Along with a thumbnail image of the photo, EXIF data stores details about aperture, shutter speed, focal length, metering mode, and ISO settings, some of which can help a printer do a better job of color-matching the final printed image. EXIF also has room for other information, such as the camera's make, model, and registration number, and in some cases, location data.

Geotagging is the process of storing latitude and longitude data inside an image's EXIF data. This information mates the image with a photographer's specific geographic location, which mapping services such as Google Earth can then chart.

For older digital cameras, adding location data to an image requires complicated peripherals: You must attach a cable to the camera for it to communicate with a GPS receiver, such as a stand-alone navigation device or a mobile phone. But many newer digital cameras and mobile phone cameras have built-in



GPS receivers. The geotagging features in these newer devices are integrated and seamless, and your EXIF files may store latitude, longitude, time, and even altitude data (which can be helpful for reconstructing a family vacation on a map).

ICanStalkU.com

To highlight geotagging-related privacy issues, Jackson and Larry Pesce, a colleague, adopted the Twitter username ICan-StalkU to respond to tweeters who posted geotagged images. Twitter shut down the account but let Jackson back in after he argued for the need to educate users. He has also started a Website called ICanStalkU.com to get his message out.

ICanStalkU uses a Perl script to scrape some 20,000 images each day off of MobyPicture, SexyPeek, Twitter, and Yfrog. The site then reposts the pictures with messages like "I am currently nearby..." and supplies the street address, latitude and longitude data, city, and state (if these details are known). Each ICanStalkU entry also shows the location mapped on Google, the original tweet, and the original photo.

Another site, PleaseRobMe.com (now shut down), used data from Foursquare and Twitter to emphasize the abundance of personal data being posted online. The research- >>

Is it time to adopt a 'Do Not Track' list for the Web? For more, see find.pcworld.com/70830. And for tips on protecting your privacy when using the Foursquare service, see find.pcworld.com/70831.

Security Alert

ers behind the project say that they're reviewing feedback they've received before continuing with the project.

In his security conference presentation (see find.pcworld.com/70798), Jackson described how he found personal details about a man in a photo. Using accompanying geotagging data, Jackson located the man's house on Google Earth. Then he found a name associated with the house where the photo was taken, leading him to a Facebook account that yielded a birth date, marriage status, and friends. A second username listed on the Facebook page led to a second Twitter account, and so forth.

Some people say they don't mind sharing their real-time location data with total strangers. But others dislike the idea that strangers can know where they are at any given moment. Fortunately, smartphones and cameras let you turn off the photo geotagging feature.

Phone-Specific Remedies

On an iPhone, you can block geotagging by disabling all geolocation apps, such as Foursquare. To do so, go to Settings. General, and toggle the Location Services settings to Off. In iOS 4, you can disable location services for specific apps (off for the Camera app but on for Yelp, for instance). If you don't use iOS 4, instead of turning off Location Services for the entire phone, you can reset the Location Warnings. Go to Settings, tap Reset, and select Reset Location Warnings. Start the camera, and answer No to the 'Ask on first use...' question. You can then allow or disallow individual applications the next time you open them.

On Android phones, turning off GPS will break all location-based apps on the phone. Instead, start the Camera app, and under 'Location and Security' in the menu on the left side, disable GPS. To check your work, open the Camera app and pull out the left-side menu. 'Store Location' should be disabled.

For the RIM BlackBerry, disabling the feature within the camera is easy. Press the <Menu> key, select Disable GPS, and choose Yes to confirm the change.

BUGS & FIXES JAMES MULROY

Adobe Responds to Black Hat Revelations

ADOBE GOT HIT hard by multiple vulnerabilities that speakers revealed

and discussed at the Black Hat USA 2010 security conference, which took place in Las Vegas in July, and the company has responded with emergency updates. Microsoft, meanwhile, released its usual monthly fix, this time with 14 patches.

Out-of-Cycle Adobe Releases

On August 19, Adobe released a batch of updates that were out of cycle with the company's quarterly update scheduleaccording to which the next batch should have come out on October 12. The updates, which address flaws that were publicized at this summer's Black Hat USA 2010 security conference, include fixes for

Adobe Flash Player announced on August 10. The problems affect Adobe Reader 9.3.3 and earlier for Windows, Mac, and

Unix; Acrobat 9.3.3 and earlier for Windows and Mac: Flash Player 10.1.53.54 and earlier for Windows, Mac, Linux, and Solaris: and AIR 2.0.2.12610 and earlier for Windows, Mac, and Linux.

The company rates the vulnerabilities in Adobe Reader and Acrobat as critical because they could cause the application to crash and might even allow an attacker to take control of your system.

The updates addressing flaws in Adobe Flash Player and AIR fix multiple vulnerabilities in the programs' memory handling, which could let an attacker gain remote execution capabilities, and a hole that could lead to clickjacking-tricking users to reveal information or even taking control of their system when they click innocent-looking Web pages.

As usual, you should update your PC to the latest versions of Adobe Reader, Acrobat, Flash Player, and AIR using automatic update checks. To read up on

Plus: A healthy serving of Microsoft Patch Tuesday fixes for Windows.

> the vulnerabilities-and to update to the latest app versions-visit find poworld. com/70792 and find.pcworld.com/70793.

More Microsoft Patches

Microsoft's Patch Tuesday collection for August included 14 security updates, 6 of them rated as important, and the remaining 8 rated as critical. The month's Tuesday fix affected all supported versions of Windows XP, Vista, 7, Server 2003, Server 2008, and Server 2008 R2.

Of the 14 new security updates.

7 address defects in Microsoft Windows itself. An attacker could exploit these holes by creating a specially crafted link or Website containing malicious code that would run if you opened it, or-if the intruder had

physical access to your PCcould run a malicious program to gain additional access privileges.

The remaining updates deal with vulnerabilities in Microsoft XML Core Services (a tool for programmers), Windows Media Player, Internet Explorer, Windows Server, and Microsoft Office, plus one weakness in the .Net Framework (which numerous applications are based on). A specially crafted link, Website, Excel file, or media file could exploit any of these security holes if you opened it; such a link could run malicious code on your system and give the attacker remote access to and control over your PC.

Using your operating system's default firewall settings can help protect your machine against some of these threats, but as always, you should install the patches as soon as possible using Windows Update. For details about each of them-and to download them manually if you prefer-visit find.pcworld.com/70791,



Dell model shown may not be the exact model awarded in the sweepstakes. The actual prize will be of equal or greater value. No purchase necessary to enter or win. Void where prohibited. Open to legal residents of the 50 United States (including District of Columbia), 18 years of age or older. For entry details and full Official Rules, visit www.eset.com/tron. Promotion ends 2/28/11. Sponsored 2010 by ESET, LLC, 610 W Ash Street, Suite 1900, San Diego, CA 92101.

Internet Security



Security Alert

PRIVACY WATCH

GPUs Power Games, Crack Passwords

IN MID-AUGUST, the BBC reported (find.pcworld.com/ 70771) on research at the Georgia Tech Research In-

stitute demonstrating that graphics processing units are better at cracking passwords than had been previously thought. (See the study at find.pcworld.com/70772.)

GPUs are designed to process huge volumes of data in parallel, specifically to render 3D graphics for games; but the technology also has other, scarier uses.

Most GPU makers have opened their graphics hardware platforms to allow nonrendering applications to take advan-

tage of the graphics card's power. But a potential misuse of the technology is brute-force password cracking, which entails testing every possible combination of characters in a password, rather than checking a list of possible words in

what's known as a "dictionary attack."

A modern GPU is so powerful that a seven-character password is "hopelessly inadequate" against one or more GPUs, GTRI lead researcher Richard Boyd told the BBC. Lengthening passwords, however, makes them exponentially more difficult to crack by brute force, and Boyd suggests using passwords that are at least 12 characters long (mixing letters, numbers, and symbols) to safeguard data.

Longer passwords can be more difficult to remember, as well, but a reliable password manager can help.

manager's database for added security.

If you need a password based on spe-

New research shows that even gardenvariety graphics cards pose a surprisingly serious threat to password security.

> cific criteria-a minimum length, say, or a mix of numbers and letters-password managers can generate otherwise random passwords that satisfy those criteria. And because password managers act as an archive, you may not need to memorize the passwords they generate. But back up your password database often!

Many password managers, like 1Password (find.pcworld.com/70773), can automatically fill Web forms, too. Generally I

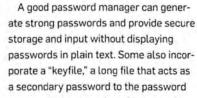
> recommend against that, but 1Password lets you create multiple distinct "personas" that use different password types. One persona may contain billing information for trusted sites (for example, Amazon.com), while another may store

personal information (such as your Facebook password). The ability to separate passwords to billed services from other, potentially untrusted sites is excellent.

My favorite free, open-source option is KeePass (find.pcworld.com/70774), available in Windows, Mac OS, Android (as KeePassDroid), and iOS (as MyKeePass) versions. Since KeePass is cross-platform, you can use the same password database on all your devices-it's very convenient.

Here, as in other areas of security, the balance between convenience and protection can be delicate. Having your Web browser remember your passwords may be easy, but it's not secure. On the other hand, digging through a password database for a simple password to a noncritical Web service may be an unnecessary time sink. So use your head and make sure that your identity stays your own.

-Chris Head





Unmask Your Child's Online Identity

See Everything They Do Online



It's easy... Just press PLAY to watch a digital surveillance tape of all PC and Internet activity.

PLAY









SPECTOR PRO® PC & Internet Monitoring Software

Does Your Child Have a Secret Online Life?

The typical teenager has more than 100 chat buddies and 'friends' on MySpace and Facebook. Do you know who your children talk to online? What pictures they post and view? Are they pretending to be someone they're not?

Trust, Monitor, Protect, and Educate with Spector Pro

With Spector Pro, you'll rest easy knowing that your child is protected online with the world's most trusted monitoring software. It records everything on their computer, laptop, netbook or Mac – including chats, instant messages, emails, websites they visit, all activity on Facebook and MySpace, and much more. You can block unwanted chats and activity, and even "rewind and play" screen snapshots of everything they said and viewed on friends' profile pages – giving you total visibility into their online identity and choices they're making.

Recently awarded the 2010 Mom's Choice Award, Spector Pro gives you everything you need to ensure their safety, while helping them make smarter, safer decisions online.

View an online demo today www.SafeWithSpectorPro.com

Call us anytime **1.877.344.1491**

Reviews Rankings

Share USB Storage Everywhere

Low-cost devices that work with ordinary USB drives simplify the tasks of accessing and sharing files across your network or over the Internet.

IF YOU THOUGHT that USB drives were only for attaching to desktop or laptop PCs, think again. Various devices let you connect USB drives to your network, so you can retrieve files stored on them from across your network or even via the Internet.

We looked at five storagesharing devices to see how they compare at turning solo hard drives into connected network hard drives.

Iomega iConnect Wireless Data Station

Priced at \$89, the Iomega iConnect Wireless Data Station is basically a network-attached storage box without drive bays. Inside the device sits a DLNA-certified Universal Plug-and-Play

media server to stream music and video across the network and handle BitTorrent transfers; it even lets you attach printers and cameras to any of its four USB ports.

Wireless connectivity is disabled by default. To enable it you must initially connect via the gigabit ethernet port. You may connect to the unit and configure it via IP address and a browser, or by installing client software that will find the box for you. Either way, you reach the same simple-to-navigate HTML configuration pages.



IOMEGA'S iConnect can transfer files from an attached camera.



For the most part, configuring the iConnect was easy; and once configured, it functioned perfectly. I attached various USB drives, and it found them at once. The client software will map drives for you, or you can map them as network drives yourself if you forgo the software.

The UPnP server, which I tested with Windows 7 and Media Player 11, worked flawlessly. Even 1080p video streamed across my gigabit

USB STORAGE-SHARING devices from (top to bottom) Cirago, Seagate, Ctera Networks, Iomega, and Cloud Engines let you share stored files instantly.

network glitch-free. The unit automatically transferred files from my digital camera when I attached it.

I could connect directly over the Internet using HTTPS but not FTP. Iomega offers convenient access via its own relay server and TZO dynamic DNS; and you can





48 AMAZON KINDLE (third generation)



57 SAMSUNG EPIC 4G



63 HP ENVY 14



66 CANON POWERSHOT SD4000

define users, shared folder permissions, and other settings, just as on a NAS box.

Seagate FreeAgent GoFlex Net

This \$80 device uses Cloud Engines Pogoplug technology to offer supereasy access to your files from any Internet connection, and the ability to share them with others.

The GoFlex Net has two 2.5-inch SATA hard drive bays but just one USB 2.0 port (you can work around that limitation with a powered USB hub). Seagate sells GoFlex drives that fit snugly into the dock, but the connectors inside are standard SATA, so you should be able to use any 2.5-inch SATA drive that has separate data and power connectors. You may have to remove the drive from its case first, however.

To set the unit up, you simply plug it into the wall and into the router, go online to Pogoplug.com, create a new account or sign in to

MORE ONLINE

For extended reviews of the five USB storage-sharing devices discussed in this article, go to find.pcworld.com/70853.

PC WORLD TOP USB STORAGE-SHARING DEVICES MODEL Rating Features and specifications Iomega iConnect Integrated wireless Wireless Data Station Local and Internet sharing VERY GOOD . Three USB 2.0 ports find.pcworld.com/70782 Gigabitethernet ► This feature-rich device enables you to share USB drives on your network locally and across the Internet. Seagate FreeAgent Internet sharing ***** GoFlex Net** Two SATA ports (designed for GoFlex 2 580 drives), one USB 2.0 port **VERY GOOD** find.pcworld.com/70784 · Gigabit ethernet ▶ Having Pogoplug technology on board lets the FreeAgent GoFlex Net provide easy access to USB and SATA drives. Internet sharing **Cloud Engines Pogoplug** *** · Four USB 2.0 ports 3 **VERY GOOD** Gigabit ethernet find.pcworld.com/70781 The pink-and-white Pogoplug device offers dead-simple setup and convenient file sharing over the Net. Local sharing and administration Ctera Networks CloudPlug **** Internet sharing \$199 • One USB 2.0 port, one eSATA port GOOD find.pcworld.com/70783 Gigabit ethernet ► CloudPlug uses the parent technology for Pogoplug, making it not as easy to work with, but more powerful: Cirago NUS1000 Network Local sharing *** **USB Storage Link** Media streaming

an existing one, and select Activate New Device.

\$70

find.pcworld.com/70785

Pogoplug's online portal lets you copy, delete, download, and upload files. It even offers an online viewer for perusing images, Office files, and other content without firing up a local app-handy in Internet cafés that permit browsing only. Seagate adds software for file syncing, too. And the GoFlex Net works

with social networking services and portable devices. Pogoplug doesn't support local network administration or access, but it allows you to share files online easily.

GOOD

Cloud Engines Pogoplug

► This device allows you to share files and stream media locally, but it is hampered by several buggy features.

Cloud Engines' updated, \$99 Pogoplug device lets you access and share files across the Internet, using your own local drives and Internet connection via the company's Web portal. Log on to your account, and any storage attached to the Pogoplug's USB ports will be accessible from a Web browser.

· Four USB 2.0 ports

10/100 ethernet

The new Pogoplug unit sits vertically on your desktop. It has four USB 2.0 ports and an ethernet port, so you can connect it to your router and from there to the Internet. >>

Reviews&Rankings

You can attach or detach drives at any time; only storage drives that are currently attached to the network will be available online.

By signing up for a Pogoplug account, anyone can view shared files beyond the two-week limit that otherwise prevails when you invite someone to share. Just as it does with Seagate's GoFlex Net, the Pogoplug online portal supports copying, deleting, downloading, and uploading files. It has an online viewer so you can



SEAGATE'S GoFlex Net is built for portable GoFlex hard drives.

look at images, text documents, spreadsheets, and the like without having to open a local application.

My only complaint about the Pogoplug device is that it's bright pink-not a color I'm looking to coordinate my office décor around.

Ctera Networks CloudPlug

The CloudPlug (\$199) offers an online backup adjunct plus local administration and local network access to your files-capabilities not found in most competing shared storage devices.

The CloudPlug has ports

for attaching USB 2.0 and eSATA devices, and a gigabit ethernet port to connect it to your router. You can also pop out the CloudPlug's AC prongs and replace them with a power cord.

To set up the CloudPlug, you complete the cabling, and the unit shows up automatically under Network Places in Windows, or under Safari's Bookmarks on the Mac. You can then access the HTML user interface, where you'll find options for such actions as sharing files and creating volumes and folders. When you log on initially, the CloudPlug steps you through the basic configuration process.

Ctera has done a great job with the HTML interface: For the most part, you just plug drives into the unit and leave things as they already are. If you like, you may log on locally to the CloudPlug and view the files that are on the USB or eSATA devices attached to the unit.

Once you've configured the CloudPlug and attached storage devices, you can access files via the Internet by going to the Ctera Website and logging on to the account that you created as part of the configuration



CLOUD ENGINES' Pogoplug simplifies Internet file sharing.



CTERA NETWORKS' CloudPlug looks like a bulky AC adapter.

process. You then select Remote Access . My files, at which point you can log on to your CloudPlug device with the same local username and password (which is separate from the online account) that you established during configuration.

Ctera provides online storage for backing up devices attached to the CloudPlug or to other shared resources on your network. You can try the backup service-5GB for 30 days-at no charge, but thereafter Ctera imposes a rather steep monthly fee of \$10 for 10GB, \$20 for 25GB, \$30 for 50GB, \$50 for 100GB, or \$100 for 200GB.

Cirago NUS1000 Network USB Storage Link

You can attach multiple USB storage devices to this \$70 unit to share files and stream media across your network.

The NUS1000 is slightly larger than a deck of cards, yet it houses four USB 2.0 ports for accommodating drives. It also has a 10/100 ethernet port for connecting to your router, plus an AC port; the unit's eject button lets you safely remove USB devices. You won't find integrated wireless.

As with most NAS boxes, you configure and administer the NUS1000 via a Web browser. But its interface, features, and options are

subpar-and occasionally unintuitive. The unit's biggest drawback, though, is its lack of write support for NTFS: You can read NTFSformatted drives, but before you can write to them you must reformat them to FAT32 or ext2.

Though the NUS1000 has some NAS features, it lacks RAID and cannot share files across the Internet. I had expected it to function as an FTP server at least, but no such luck. Cirago promises to add this capability in the next firmware version. The unit can already share files, stream media, download Bit-Torrents, and serve up printers and an iTunes library.

In my hands-on testing, everything went well, aside from my first attempt to enable BitTorrent downloads. Initially, having only NTFS drives attached to the

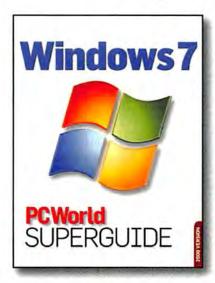


CIRAGO'S NUS1000 could use a more intuitive help system.

unit prevented the BitTorrent feature from working; and even after inserting and selecting a FAT32 drive, I couldn't enable downloads. The fix turned out to be a simple reboot, but the experience underscores the hassle of working with a model that lacks NTFS write support. Cirago informed me that this issue reflects a limitation of the chipset and won't be addressed until the next version of the product.

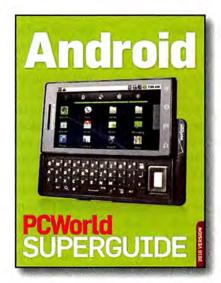
-Jon L. Jacobi

PCWorld Superguides



This superguide offers straightforward, hands-on instruction for all of Windows 7's most useful features.

- Speed up your system with our performance-enhancing secrets.
- Edit your own videos with Movie Maker.
- Connect your Windows 7 PC to a wireless network.
- Share music, movies, and more with every PC in your house.
- Protect your data with BitLocker Drive Encryption.



Get PCWorld's superguide to Android and find out all about the best phones and the coolest apps, and pick up insider tips for organizing your data!

- Learn keypad shortcuts
- Explore customization tricks
- Find out how to manage music, video, and photo files
- Get tips on installing apps



PCWORLD SUPERGUIDES ARE AVAILABLE IN TWO CONVENIENT FORMATS.

- DOWNLOAD THE PDF INSTANTLY AND GET IMMEDIATE ACCESS, FOR ONLY \$12.95
- ▶ ORDER THE PDF ON CD-ROM AND ALWAYS HAVE A BACKUP, FOR ONLY \$12.95

www.pcworld.com/superguide

Reviews&Rankings

Amazon's Third-Gen Kindle: The Best E-Reader Yet

AMAZON HAS FINALLY created a dedicated e-reader that not only slays its current rivals but also seems ready to win over the masses. With the third-generation Kindle, Amazon addresses many of the transgressions of earlier iterations.

Better Readability

The new device comes in two versions: The Kindle Wi-Fi costs \$139, while the Kindle (as Amazon calls it) has both Wi-Fi and 3G and costs \$189. This is also the first smaller Kindle available in two colors: eye-pleasing graphite (the same shade as on the new Kindle DX that debuted earlier this summer) and standard white.

In my experience, a darker border enhances readability, giving the perception of better screen contrast. But the display itself has improved, too: The Kindle now has a 6-inch E-Ink Pearl screen one of whose benefits is 50 percent better contrast. The difference is striking: Blacks are more solid, and text looks smoother. Screen refresh rates are faster, too.

Comfortable to Use

The streamlined design has allowed the Kindle to shrink by 21 percent, says Amazon. The new model measures 7.5

*** SUPERIOR

Kindle (third-generation) Amazon

Attractive e-reader has a lighter weight and an overhauled design. List: \$189 (Wi-Fi/3G), \$139 (Wi-Fi) find.pcworld.com/70767

by 4.8 by 0.34 inches. To achieve that, Amazon trimmed the superfluous space around the edges so that the device is dominated by its 6-inch screen. I still found enough room around the edges for my fingers to rest comfortably while holding the device. I also liked the subtly rubberized, curved back cover. In fact, I could hold the Kindle to read for a couple of hours and not feel as if I were encumbered. I can't say the same thing for the Apple iPad: At 1.5 pounds (25 ounces), the iPad is nearly three times the weight of the new 8.7-ounce Kindle.

Although this Kindle is not the lightest e-reader around, it feels dramatically lighter than Barnes & Noble's Nook (which is 11.6 ounces for the Wi-Fi version and 12.1 ounces for the Wi-Fiand-3G model). And the new Kindle is 15 percent lighter than its predecessor (which weighed 10.2 ounces).

Amazon also reworked the keys and buttons, to great effect. Now flanking the screen are simple, slimmeddown forward and back buttons. In having these buttons on both sides, the Kindle accommodates left- and right-handed users alike. Overall I found the new layout finger-friendly and convenient. Navigation now involves a D-pad-like setup, with a Menu button above and a Back button beneath. This organization is easy to adapt to, and certainly light



THE LATEST Kindle has a new E-lnk Pearl display with improved contrast.

years better than older Kindles' rather stiff joystick.

The keyboard's layout is tighter, and its buttons are more rounded. I found it easier to type on than the prior Kindle's keyboard.

Fast Page Loading

Scrolling through menus has practically no lag, and page turns are zippy (20 percent faster, according to Amazon). Although page turns remain accompanied by an annoying flicker-LCDs still have the edge here-the boosted speed helps minimize the flicker to acceptable levels.

The one place I noticed a lag was in the Kindle bookstore; cover thumbnails routinely lagged behind the page load of the rest of the content. I couldn't tell, however, whether the lag was due to

the 3G connection's integrity, the bookstore's responsiveness, or the display's redraw speed.

New Features

You can finally change typeface (to regular, condensed, or sans serif). Although I would like to see some other font options, as well as to see the names presented in sample text, I'm glad that Amazon added a changefonts capability, since the Nook and almost all LCDbased e-readers have had it for some time.

This Kindle introduces a WebKit-based Web browser; it's still classified as experimental, but it provides better browsing than before. The PDF

viewer is improved this goround, too, but ultimately Amazon needs to figure out how to reflow PDFs so that users can read them directly on the unit. (The closest workaround today requires you to e-mail a PDF to your Kindle device.)

The internal memory has grown to 4GB, which Amazon says translates into 3500 books (up from 1500). Amazon claims that the Kindle has up to one month of battery life, as well. Lastly, 3G wireless continues to be delivered at no charge via AT&T.

For anyone who wants the advantages of a dedicated e-reader device-long battery life, a paper-like screen that you can read in bright light-the third-generation Kindle can't be beat.

-Melissa J. Perenson







Acer® TravelMate® 8372

- Genuine Windows® 7 Professional
- Intel[®] Core[™] i5-460M Processor
- · 4GB DDR3 SDRAM, 320GB1 hard drive
- 13.3" display

TM8372-7127 (LX.TZF03.021)

\$879



Acer® Aspire® 5742

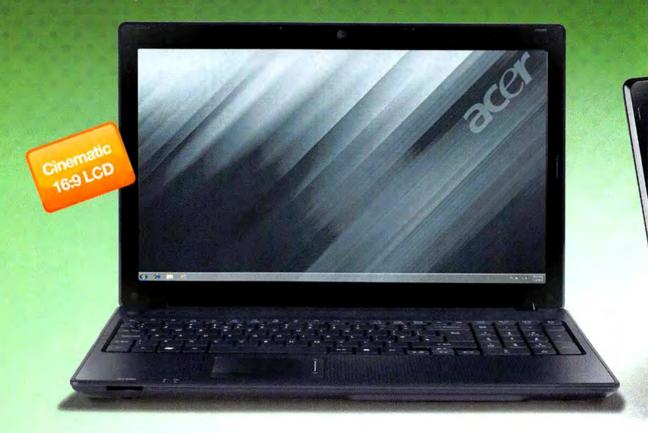
- Genuine Windows® 7 Home Premium
- Acer CineCrystal 15.6" display, 1366 x 768 resolution
- Integrated Super-Multi drive
- 2-in-1 card reader
- 802.11b/g/n WLAN, gigabit LAN
- Integrated webcam
- One-year limited warranty²

Acer Aspire 5742

- Genuine Windows® 7 Home Premium
- Intel® Pentium® Processor P6100
- 4GB DDR3 SDRAM
- 320GB¹ hard drive

AS5742Z-4685 (LX.R4P02.020)

\$559



Acer Aspire 5742

- Genuine Windows® 7 Home Premium
- Intel® Pentium® Processor P6100
- 3GB DDR3 SDRAM
- · 320GB1 hard drive

AS5742Z-4601 (LX.R4P02.001)

\$529

Acer Aspire 5742

- Genuine Windows® 7 Home Premium
- Intel® Pentium® Processor P6100
- 2GB DDR3 SDRAM
- · 250GB1 hard drive

AS5742Z-4200 (LX.R4P02.002)

\$459



Your PC, simplified.



Acer® TravelMate® 5542

- Genuine Windows® 7 Professional
- 15.6" display, 1366 x 768 resolution
- · 2-in-1 card reader
- 802.11b/g/n WLAN, gigabit LAN
- Integrated webcam
- One-year limited warranty²

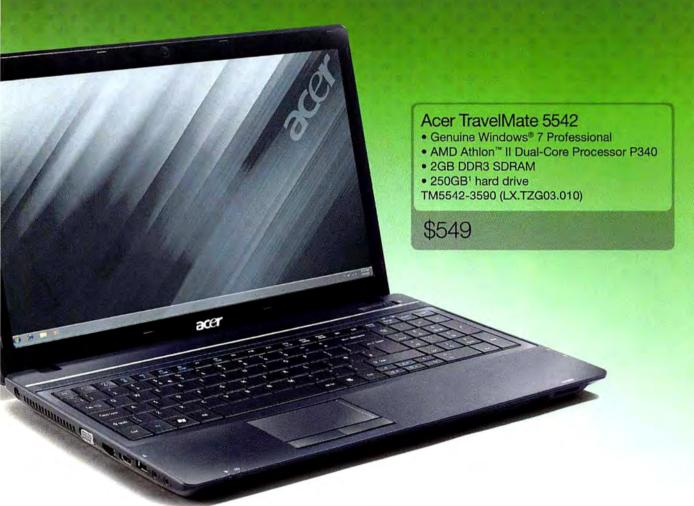
Acer TravelMate 5542

- Genuine Windows® 7 Professional
- AMD Turion™ II Dual-Core Mobile Processor P540
- 4GB DDR3 SDRAM
- 320GB1 hard drive
- Bluetooth®

TM5542-5256 (LX.TZG03.006)

\$649

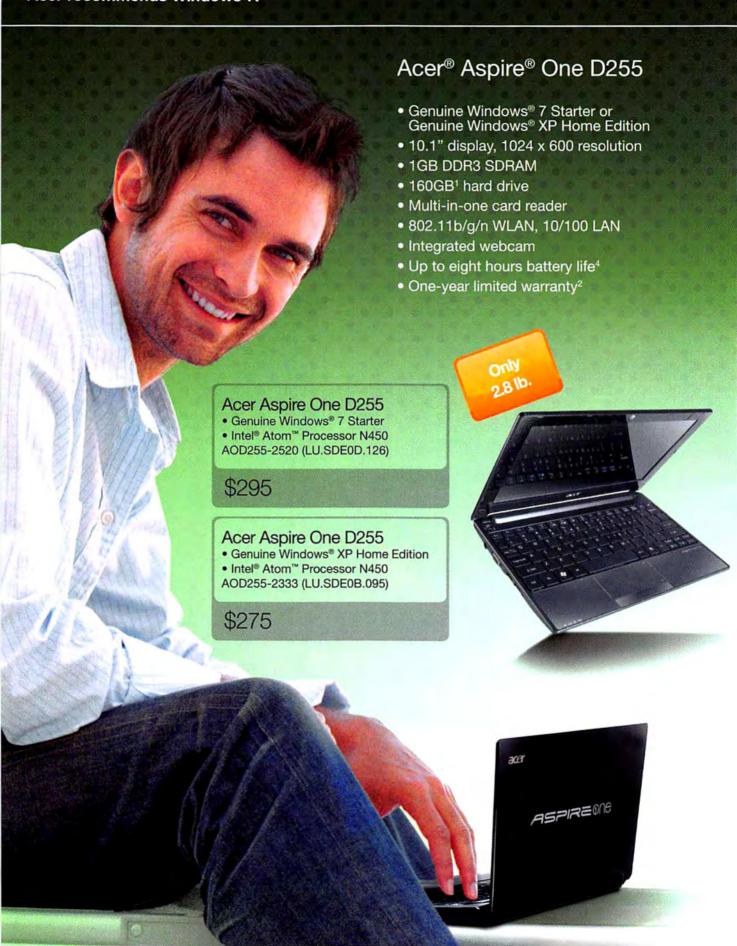




Acer GD235HZ bid

- 23.6" wide TFT LCD
- 3D ready3
- 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
- Three-year limited warranty² (ET.UG5HP.001)







Acer® Aspire® 5553

- Genuine Windows® 7 Home Premium
- Acer CineCrystal 15.0" display, 1366 x 768 resolution
- 4GB DDR3 SDRAM
- 320GB¹ hard drive
- Integrated Super-Multi drive

- 5-in-1 card reader
- 802.11b/g/n WLAN, gigabit LAN
- Integrated webcam
- One-year limited warranty²

Portable Theater

Acer Aspire 5553

- Genuine Windows® 7 Home Premium
- AMD Turion™ II Dual-Core Mobile Processor P540 AS5553G-5881 (LX.PUA02.071)

\$649



Acer D240H bmidp

- 24" wide 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
- · 1GB¹ storage
- CompactFlash®, Secure Digital card reader
- Tilt adjustment
- Three-year limited warranty² (ET.FD0HP.001)



Acer B243HL bmdrz

- 24" wide 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
- Three-year limited warranty² (ET.FB3LP.002)



\$325

Acer® Aspire® M3400

- Genuine Windows® 7 Home Premium
- 6GB DDR3 SDRAM
- 640GB¹ SATA hard drive
- Super-Multi drive
- · Multi-in-one card reader
- Gigabit LAN
- USB keyboard and optical mouse
- One-year limited warranty²

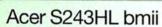
Acer Aspire M3400

- Genuine Windows® 7 Home Premium
- AMD Phenom™ II X4 Processor 820
 AM3400-U2052 (PT.SE002.014)

\$649







- 24" wide 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
- Three-year limited warranty² (ET.FS3LP.001)



Acer P5271

- DLP® 3D-ready professional projector3
- 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
- One-year limited warranty² (EY.J8701.008)







Acer® Veriton® X275

- Genuine Windows® 7 Professional
- Super-Multi drive
- Gigabit LAN
- PS/2®-style keyboard and optical mouse
- 4.0" W x 15.6" D x 10.5" H
- One-year limited warranty² with limited on-site service⁵

Acer Veriton X275

- Genuine Windows® 7 Professional
- Intel® Core™2 Duo Processor E7600
- 4GB DDR3 SDRAM
- 500GB¹ SATA hard drive
 VX275-UD7600W (PS.VAM03.016)

\$579

Acer Veriton X275

- Genuine Windows® 7 Professional
- Intel® Pentium® Processor E6700
- 3GB DDR3 SDRAM
- 320GB¹ SATA hard drive
 VX275-UD6700W (PS.VAM03.015)

\$499

Acer Veriton X275

- Genuine Windows® 7 Professional
- Intel® Pentium® Processor E5700
- 2GB DDR3 SDRAM
- 320GB¹ SATA hard drive
 VX275-UD5700W (PS.VAM03.014)

\$449



Acer T230H bmidh

- 23" wide TFT LCD
- Touch-screen capable⁶
- 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
- Three-year limited warranty² (ET.VT0HP.001)



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





TravelMate TRAVELMATE TIMELINE WORK SMARTER, TRAVEL LIGHTER

Acer® TravelMate® 8172

- Genuine Windows® 7 Professional
- 11.6" display, 1366 x 768 resolution
- 2GB DDR3 SDRAM, upgradeable to 4GB
- 250GB¹ hard drive
- 5-in-1 card reader
- 802.11b/g/n WLAN, Bluetooth[®], gigabit LAN
- Integrated webcam
- Fingerprint reader
- Up to eight hours battery life⁴
- Optional port replicator available
- One-year limited warranty²





Acer TravelMate 8172

- Genuine Windows 7 Professional
- Intel[®] Core[™] i3-380UM Processor TM8172T-7818 (LX.TZW03.009)

\$649



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.2 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.

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

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.)

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.)

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

- 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

- Vivien referring to storage capacity, the standard finited 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.

 3 D content, 3D glasses and an appropriately equipped PC are also required to display 3D images.

 4 Deparding on model configuration. Actual battery life varies by usage, settings, and operating conditions.

 5 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.
- Touch-screen capability requires appropriate software installed on the PC connected to the display. This software does not come with the display.



© 2010 Acer America Corporation. All rights reserved. Pricing is effective frem September 1, 2010 through November 30, 2010. Information is subject to change without notice. Prices shown are estimated street prices and do not include tax or shipping. Retailer or reseller prices may vary. Product images are representations of some of the models available and may vary from the model you purchase. Acer, the Acer logo, Aspire, TravelMate and Veriton are registered trademarks of Acer. Microsoft, Windows and the Windows logo are either registered trademarks or trademarks of Acer the Vindows and the United States and/or other countries. Other names and brands may be claimed as the property of others.

Samsung's Epic 4G: A Fast Multimedia Phone

THE SAMSUNG EPIC 4G (\$250 with a two-year Sprint contract) stands apart from its Galaxy S siblings for a few reasons. Unlike the Captivate (AT&T) and Vibrant (T-Mobile), it has a physical keyboard and a front-facing camera. It's also the second handset, after the HTC EVO 4G, to run on Sprint's 4G network. (For more details about the other Galaxy S phones, see page 56 in the October issue or go to find. pcworld.com/70406.)

The hardware keyboard's keys are nicely spaced and have a good clickiness. If you don't feel like using it, you have several decent touchscreen typing options.

Some reviewers have noted that colors on the 4-inch Super AMOLED display look oversaturated, but I don't mind the effect. The screen also does well outdoors, although the phone's glossy hardware sometimes reflects a killer glare.

Since the Epic has a frontfacing camera for video calls, Sprint preinstalls Qik for your video-chatting pleasure. I was able to test Qik



THE EPIC 4G has an easy-to-use keyboard and a beautiful screen.

only over 3G, and its quality was too choppy to carry on a conversation. I suspect the quality is better over 4G.

Performance

For the most part the Epic was incredibly fast, but I did encounter some stalls in one particular action. I shared a Gallery photo with a friend via Gmail. As the phone was sending the message, I tried to browse more images, but the Epic began to stutter and freeze. I then closed the Gallery app and attempted to open another-the phone froze for about 20 seconds. The problem returned when I tried to send a second image. My contact received both photos, but it was disturbing to see the phone freeze like that regardless.

Similar to the Captivate and Vibrant, the Epic lagged when I navigated around menus, contact lists, and Web pages. Samsung's TouchWiz 3.0 overlay sometimes interfered with the phone's speed, too. Samsung says the entire Galaxy S family is upgradable to Android 2.2 (Froyo); let's hope that will help.

Unfortunately, we were

unable to test the phone's 4G performance, as Sprint's WiMax network isn't live in the San Francisco Bay Area yet. We'll update our review at PCWorld.com once we have a chance to try the Epic in a 4G-supported area.

Web browsing on Sprint's 3G network was sufficiently speedy. Call quality was also good on 3G, though I heard a bit of static in a few calls.

Unlike the HTC EVO 4G, the Epic does not have You-Tube HQ, which enhances certain videos' quality tremendously. Without it, You-Tube videos are unwatchable on the Epic. With such an incredible screen, this omission is a big oversight.

Nevertheless, out of the Galaxy S phones I've tested, the Epic 4G is the best, and it's certainly one of the top Android phones. It also edges out the EVO 4G overall.

-Ginny Mics

Xperia X10: Impressive Hardware, Slow Software

AVAILABLE FOR \$150 (with a twoyear AT&T contract) Sony Ericsson's Xperia X10 has an elegant curved body. Measuring 4.7 by 2.5 by 0.5 inches, it offers a 4-inch. 480-by-854-pixel WVGA display.

The screen is gorgeous, but it's single-touch, and it wasn't as responsive as I would have liked.



Sony Ericsson's UX inter-



Xperia X10 | Sony Ericsson

Slick design can't make up for an older OS and a lack of multitouch. List: \$150 (with two-year contract) find.pcworld.com/70770



THE XPERIA X10 uses a proprietary overlay atop Android 1.6.

face runs over the outdated Android 1.6 OS on the X10, but the phone will be upgradable to 2.1 later this year.

As I navigated apps and menus,

the X10 was sluggish. Once, the keyboard froze while I was logging in to my Google account.

Call quality on AT&T's 3G network was generally good. Voices sounded loud, clear, and natural. But all of my contacts complained about the background noise they heard when I stood on a busy city street corner.

-Ginny Mies

*** SUPERIOR

Epic 4G | Samsung

With a front-facing carnera and 4G, this is the best Galaxy S phone. List: \$250 (with two-year contract) find.pcworld.com/70768

Canon Pixma MG5220 Has Speed, Good Quality

color inkjet multifunction printer (\$150) offers strong speed, quiet opera-

tion, and good output.

Like most home-oriented

MFPs, the MG5220 lacks an

automatic document feeder.

★★★★ GOOD
Pixma MG5220 | Canon

A good MFP for a family or a home office with basic scanning needs. List: \$150

find.pcworld.com/70444

It does, however, have automatic duplexing and two 150-sheet input trays.

On plain paper, printing text and simple monochrome graphics, it posted a fast 7.8 pages per minute on a PC and 8 ppm on a Mac. Snapshot photos averaged a swift 2.3 ppm on the PC. A higherres, full-page photo on our Mac took almost 2 minutes. Color scanning was speedy; black-and-white copies were in the middle of the pack.

At default settings its text quality was nice, but output



THE REASONABLY PRICED Pixma MG5220 can print, copy, and scan.

turned nearly laser-like when we chose High quality. Photos that were overly bright on plain paper were nothing short of fantastic on Canon's own photo paper. Scans of color photos tended to look dark, but monochrome scans and copies were sharp.

The separate inks include a

341-page, \$16 black cartridge and \$14 cyan, magenta, and yellow ones rated for 500 to 520 pages. The photo black, \$14, lasts for 660 images (or contributes a small amount to a non-photo page). A fourcolor page costs 13 cents.

> —Jon L. Jacobi and Melissa Riofrio

Top 5 Inkjet Printers

The business-focused Epson B-510DN is an affordable option that churns pages out quickly.



	Rating	Performance	Features and specifications				
Epson B-510DN \$599 NEW find.pcworld.com/70029	★★★ ★ SERY GOOD	Text quality: Very Good Photo quality: Good Tested speeds (ppm): 14.7 text/3.4 graphics	USB, ethernet connectivity 500- and 150-sheet inputs, automatic duplexing One-year warranty				
Businesses seeking a color la	ser should look at th	is inkjet alternative: It's fast, cheap to use, an	d better at printing photos.				
HP Officejet Pro 8000 Wireless Printer \$180 ind.pcworld.com/64133	**** VERY GOOD	Text quality: Superior Photo quality: Very Good Tested speeds (ppm): 10.3 text/4.2 graphics	USB, ethernet, wireless connectivity 250-sheet input, automatic duplexing One-year warranty				
 Packed with features and built for speed, this small-business printer is hard to beat. Ink costs are amazingly low. 							
HP Officejet 6000 Wireless Printer \$120 find.pcworld.com/63656	**** VERY GOOD	Text quality: Very Good Photo quality: Good Tested speeds (ppm): 7.4 text/3.4 graphics	USB, ethernet, wireless connectivity 250-sheet input, automatic duplexing One-year warranty				
 Good speed and print quality 	, plus automatic dup	lexing, distinguish this small-office model. Its	s high-yield inks are a great deal.				
HP Officejet 7000 Wide Format Printer \$230 find.pcworld.com/63411	***** VERY GOOD	Text quality: Superior Photo quality: Good Tested speeds (ppm): 7.6 text/3.4 graphics Tested speeds (ppm): 7.6 text/3.4 graphics	USB, ethernet connectivity ISO-sheet input, manual duplexing One-year warranty				
► Printing posters and other large pieces is easy with the fast Officejet 7000. This model's high-yield inks are inexpensive, too.							
Canon Pixma iP4820 \$100 NEW find.pcworld.com/70478	*** VERY GOOD	Text quality: Good Photo quality: Very Good Tested speeds (ppm): 8.1 text/2.4 graphics	USB connectivity Two 150-sheet inputs, automatic duptexing One-year warranty				
	## S599 NEW find.pcworld.com/70029 ** Businesses seeking a color late	Epson B-510DN S599 NEW find.pcworld.com/70029 • Businesses seeking a color laser should look at the HP Officejet Pro 8000 Wireless Printer S180 Find.pcworld.com/64133 • Packed with features and built for speed, this small limits and built for speed, this small limits powerld.com/63656 • Good speed and print quality, plus automatic dup HP Officejet 7000 Wide Format Printer S230 Find.pcworld.com/63411 • Printing posters and other large pieces is easy with limits posters and limits	Epson B-510DN \$599 NEW find.pcworld.com/70029 **Businesses seeking a color laser should look at this inkjet alternative: It's fast, cheap to use, an HP Officejet Pro 8000 Wireless Printer \$180 Find.pcworld.com/64133 **Packed with features and built for speed, this small-business printer is hard to beat. Ink costs and built for speed, this small-business printer is hard to beat. Ink costs and built for speed, this small-business printer is hard to beat. Ink costs and built for speed, this small-business printer is hard to beat. Ink costs and built for speed, this small-business printer is hard to beat. Ink costs and built for speed, this small-business printer is hard to beat. Ink costs and built for speed, this small-business printer is hard to beat. Ink costs and built for speed, this small-business printer is hard to beat. Ink costs and built for speed, this small-business printer is hard to beat. Ink costs and built for speed, this small-business printer is hard to beat. Ink costs and built for speed, this small-business printer is hard to beat. Ink costs and built for speed, this small-business printer is hard to beat. Ink costs and built for speed, this small-business printer is hard to beat. Ink costs and built for speed, this small-business printer is hard to beat. Ink costs and built for speed, this small-business printer is hard to beat. Ink costs and built for speeds (ppm): 7.4 text/3.4 graphics and built for speeds (ppm): 7.4 text/3.4 graphics and built for speeds (ppm): 7.6 text/3.4 graphics and print quality: Good built for speeds (ppm): 7.6 text/3.4 graphics and print quality: Good built for speeds (ppm): 7.6 text/3.4 graphics and print quality: Very Good built for speeds (ppm): 7.6 text/3.4 graphics and print quality: Very Good built for speeds (ppm): 7.6 text/3.4 graphics and print quality: Very Good built for speeds (ppm): 7.6 text/3.4 graphics for printer speeds (ppm): 7.6 text/3.4 graphics for printer speeds (ppm): 7.6 text/3.4 graphics for printer speeds (ppm): 7.6 text/3.4 graphics for pr				

CHART NOTE: Ratings are as of 8/30/10

MORE ONLINE

Visit find.pcworld.com/69891 to see in-depth reviews, full test results, and detailed specs for all printers on this chart.





450Mbps Wireless N Gigabit Router TEW-691GR

Extreme Speed

Experience unmatched wireless performance with 450Mbps wireless n

Going the Distance

A record 9 radio spatial streams produce a 200% increase in wireless coverage as compared to 300Mbps routers

One Touch Networking

Wi-Fi Protected Setup (WPS) integrates other WPS supported wireless adapters at the touch of a button



©2010 TRENDnet All rights reserved

















Reviews&Rankings

Top 10 Mainstream Desktop PCs

Equipped with a pumped-up processor, the Maingear F131 zooms to the number one spot.

MODEL	·		Rating	Performance	Features and specifications
ı		Maingear F131 \$2000 NEW find.pcworld.com/70755 • Offering strong overclocking and a re	SUPERIOR adily accessible chass	WorldBench 6 score: 152 WorldBench 6 rating: Superior Overall design: Superior Graphics: Perfect is, Maingear's F131 climbs to the top	4.5GHz Core i5-655K 4GB RAM; 1TB storage nVidia GTX 460 (two) DVD-RW drive of the mainstream-PC chart.
2		Micro Express MicroFlex 75B \$700 find.pcworld.com/70756 • This system is filled to the brim with p	**** SUPERIOR	WorldBench 6 score: 132 WorldBench 6 rating: Very Good Overall design: Very Good Graphics: Superior It its low bard-disk capacity threate	* 2.86Hz Core i5-750 * 468 RAM; I506B storage * ATI Sapphire 4890 * DVD-RW drive
3		CyberPower Gamer Ultra 9000 \$1299 NEW find.pcworld.com/70757	**** VERY GOOD	WorldBench 6 score: 128 WorldBench 6 rating: Very Good Overall design: Very Good Graphics: Superior	2.86Hz Phenom II X6 1055T 4GB RAM; 1TB storage ATI Radeon HD5870 BD drive
_		► CyberPower's Gamer Ultra 9000 pack	s a compelling combin	nation of performance and value into	A MALE PARTY OF THE PARTY OF TH
4	0	Dell Studio XPS 8100 \$1429 find.pcworld.com/70758	**** VERY GOOD	WorldBench 6 score: 129 WorldBench 6 rating: Very Good Overall design: Good Graphics: Fair	2.6GHz Core i5-750 8GB RAM; ITB storage nVidia GeForce GTX260 BD drive
_		► The Studio XPS 8100 is a solid all-arou	and performer, with go		Total Action and the late to
5		Dell Studio XPS 7100 \$1500 NEW find.pcworld.com/70759	**** VERY GOOD	WorldBench 6 score: 120 WorldBench 6 rating: Good Overall design: Good Graphics: Very Good	2.8GHz Phenom II X6 1055T 6GB RAM; 1.5TB storage ATI Radeon HD5870 BD drive
		 Versatile, attractive, and capable, the 	Studio XPS 7100 lacks	s upgradability but is a major conten	der for the media-savvy set.
3		Gateway DX4840-15 BUY \$850 NEW find.pcworld.com/70760	**** VERY GOOD	WorldBench 6 score: 128 WorldBench 6 rating: Very Good Overall design: Very Good Graphics: Fair	3.2GHz Core i5-650 8GB RAM; 1TB storage nVidia GeForce GT 320 DVD-RW drive
		 If you aren't the tinkering type, and yo 	ou aren't interested in	enthusiast-level gaming, the DX4840	0-15 is a fine choice at a fine price.
	-:0	AVADirect Nano Cube \$1535 find.pcworld.com/70761	***** G000	WorldBench 6 score: 134 WorldBench 6 rating: Very Good Overall design: Fair Graphics: Perfect	2.67GHz Core i5-750 4GB RAM; 120GB ATI Radeon HD5850 DVD-RW drive
	-	 What AVADirect's ultracompact Nano 	Cube lacks in finesse	(and upgrade options), it makes up fo	or in raw power.
3		HP Pavilion Elite HPE-235f \$1019 NEW find.pcworld.com/70762	***** GOOD	WorldBench 6 score: 114 WorldBench 6 rating: Good Overall design: Good Graphics: Fair	2.6GHz Phenom II X6 1035T 8GB RAM; 1TB storage ATI Radeon HD5570 BD drive
		 You won't find anything too exciting h 	ere, but the HPE-235f	delivers good performance and stror	ng media functions, at a great pric
9		HP Pavilion Slimline s5370t \$1089 NEW find.pcworld.com/70763	*****	WorldBench 6 score: 124 WorldBench 6 rating: Very Good Overall design: Fair Graphics: Poor	3.2GHz Core i5-650 4GB RAM; 1.2TB storage nVidia GeForce GT 220 DVD-RW drive
		► Smaller systems generally sacrifice f	eatures for a svelte ch	assis, and HP's Slimline s5370t is no	exception.
10		HP Z200 Workstation SFF \$2000 find.pcworld.com/70764	****	WorldBench 6 score: 139 WorldBench 6 rating: Very Good Overall design: Fair Graphics: Poor	3.3GHz Core i5-660 8GB RAM; 500GB storage nVidia Quadro FX 380 DVD-RW drive

MORE ONLINE

Visit find.pcworld.com/69452 to see in-depth reviews, full test results, and detailed specs for all desktops on this chart.



NeatDesk

DESKTOP SCANNER + DIGITAL FILING SYSTEM

This high-speed, duplex scanner lets you scan multiple paper types all at once, or even insert up to 50 pages for lightning-fast batch scanning.



NeatReceipts

MOBILE SCANNER + DIGITAL FILING SYSTEM

At less than one pound, the USB-powered scanner fits easily in your laptop bag and is perfect for the road, home, or office.

FOR MAC OR PC

Will your office be naughty or neat for the holidays?

Paper Monsters love the holidays. Year-end expense reports, gift receipts—even cookie recipes—can quickly grow to beastly proportions. But Neat helps you stay merry and clutter-free at work, at home, or on the go. Whether it's the portable NeatReceipts* or the lightning-fast NeatDesk,* our patented software extracts key details from your paper and organizes it all in a digital filing cabinet. Good for productivity. Great for gift giving. Bad for Paper Monsters.

- Scan and organize receipts, business cards and documents in a digital filing cabinet
- Create expense reports, IRS-accepted tax reports, digital contacts and searchable PDF files
- Export data to Excel, Outlook, Quicken, TurboTax, and more



TO ORDER VISIT

neatco.com/PWFREE

OR CALL 866-395-3540



Reviews&Rankings

Pricey Clevo W860CU Offers 3D Gaming

THE CLEVO W860CU lap-

top from AVADirect has some attractive base specs: The Core i7 820QM

quad-core CPU's clock speed of 1.72GHz pushes up to 3.06GHz when run in singlecore Turbo-boost mode. The graphics chip is nVidia's last-generation GeForce 285

*** # # GOOD

Clevo W860CU | AVADirect

Laptop carries a steep price, and its screen has limited viewing angles. List: \$2219

find.pcworld.com/70794

GTX, which facilitates the use of nVidia's 3D Vision stereoscopic 3D technology.

The display, a 15.6-inch glossy screen, offers a somewhat anemic 1366 by 768 pixels. The lower resolution helps 3D Vision performance: The frame rate must effectively double in stereoscopic mode. Also present are 4GB of memory; a 500GB, 7200rpm hard drive; and a Bluray Disc recordable drive.

The display's big downside is its relatively poor viewing angles. The 3D Vision shutter glasses cut brightness in half, so that even minor shifts THE CLEVO W860CU offers robust gaming for a laptop, including a still-uncommon 3D capability.

in viewing angle cause severe dimming.

The laptop's volume levels are quite low; using headphones creates a much better audio experience, however.

The keyboard has a separate numeric keypad, but the keys are intermingled somewhat, which can create confusion as you try to touchtype; otherwise, it's typical.

Gaming performance in

standard (nonstereoscop-

ic) mode is robust; gaming using the 3D Vision glasses was a mixed bag, but can be very immersive.

All the gaming goodness comes at a price. As configured, the Clevo W860CU costs more than \$2200 and weighs over 9.25 pounds with the power brick.

-Loyd Case





PLATINUM 2010 **Business Suite**

Save 50-80% or more on checks!

- Manage Finances
- · Create custom personal & business checks and save 80% or more
- · Accept payments online, by fax or over the phone
- · Import and Export data files
- Compatible with QuickBooks[®], Peachtree, Money & more
- · Use with any inkjet or laser printer
- Replace Credit Card use with zero-fee payments by VersaCheck®
- NEW! ProVision™ Payment Manager*
 - No more postage cost & hassle!
 - Send & receive checks instantly by e-mail
 - *Service fee applies

Visit VersaCheck.com/pc1 or call 877-872-1191





Love-life Dreams

amazon.com







PCWorld

tell us your favorite products

Your vote counts! Use our Facebook app to rate the best hardware, software, Web services, and phone apps you've used in 2010.



vote here:

pcworld.com/top5

HP's Envy 14 Has Power, Style

I'M OFTEN ASKED, "Which notebook would you buy?" This is it. That doesn't mean it's the one for you,

because everyone has different needs, but few laptops have such high quality.

Our test unit-priced at \$1289-came with a dualcore Core i5-450M processor with hyperthreading at 2.4GHz, but supporting

** * SUPERIOR

Envy 14 | Hewlett-Packard

This is a powerful, attractive, reasonably priced all-purpose laptop. List: \$1289

find.pcworld.com/70789

Intel's Turbo Boost technology. It also had a 500GB hard drive and HP's Radiance display, a \$200 option providing a higher-resolution screen (1600 by 900) and better brightness, contrast, and color. All Envy 14 models have a slot-loading 8X DVD-RW drive and ATI's Mobility Radeon HD 5650 graphics card (a base unit would cost \$999). To save battery life, you can switch graphics between this card and the integrated high-def video chip.

At 5.3 pounds, the Envy 14 is neither lightweight nor unduly heavy. The 14.5-inch screen is large enough-and great-for video and games.

THE HP ENVY 14 is designed around a rigid, sturdy all-aluminum body. The model has three USB 2.0

ports (one a combo USB/ eSATA), HDMI and Mini DisplayPort outputs, gigabit ethernet, and an SD Card reader (but no USB 3.0).

Performance is fantastic for a midsize all-purpose system-its WorldBench 6 score was 106, and it can run

all the hot modern games. Battery life was 4.5 hours in our tests.

The backlit keys are wellsized and well-spaced for quick and accurate typing.

If you're looking for a laptop that has reasonable size and weight, plenty of muscle, a high-quality display, and great style and build quality, the Envy 14 fits the bill.

-Jason Cross



Reviews&Rankings

Top 10 Desktop Replacement Laptops



Three models here have touchscreens: the top four units, however, carry widescreens.

MODEL		Rating	Performance	Features and specifications					
1	Lenovo ThinkPad W701ds \$3299 find.pcworld.com/70061	**** SUPERIOR	WorldBench & score: 123 Superior Overall design: 90 Superior Tested battery life: 2:10	2.0GHz Core i7 920XM 17.0-inch widescreen plus secondary screen 11.0 pounds 840GB hard drive					
-	► For a content creator or engine	For a content creator or engineer, this portable Goliath could replace a desktop workstation, allowing nonstop productivity anywhere.							
2	HP Envy 17 \$1825 NEW find.pcwartd.com/70865	**** SUPERIOR	WorldBench 6 score: 108 Very Good Overall design: 92 Superior Tested battery life: 2:19	1.73GHz Core i7 720QM 17.3-inch widescreen 7.9 pounds 640GB hard drive					
100	► HP's Envy 17 is a robust, media-	► HP's Envy 17 is a robust, media-centric desktop replacement that's svelte enough to lug around if you need a large screen on the go.							
3	AVADirect Clevo X8100 Core i7 Gaming Notebook \$4100 NEW find.pcworld.com/70509	**** SUPERIOR	WorldBench 8 score: 120 Superior Overall design: 84 Very Good Tested battery life: 1:26	1.73GHz Core i7 820QM 18.4-inch widescreen 12.4 pounds 896GB hard drive					
-	► If you need an all-in-one gamin	g rig for a LAN party, t	he bulky Clevo X1800 does the job, but	a compact desktop may be cheaper.					
4	Acer Aspire 8940G-6865 \$1399 find.pcworld.com/70062	**** VERY GOOD	WorldBench 8 score: 105 Very Good Overall design: 81 Very 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 A	cer an intriguing choice for gamers, de	espite its bulk and short battery life.					
5	MSI GT660 \$1699 NEW find.pcworld.com/70510	**** VERY GOOD	WorldBench 6 score: 108 Very Good Overall design: 94 Superior Tested battery life: 2:33	1.73GHz Core i7 740QM 16.0-inch touchscreen 7.7 pounds 1000GB hard drive					
	► The MSI GT660, with a top-noto	► The MSI GT660, with a top-notch CPU and discrete GPU, makes an all-around great gaming laptop and desktop replacement.							
6	Alienware M17x \$3849 find.pcworld.com/70063	VERY GOOD	WorldBench & score: 100 Very Good Overall design: 88 Very Good Tested battery life: 3:04	2.53GHz Core 2 Extreme QX9300 17.0-inch widescreen 11.7 pounds 320GB hard drive					
	A well-performing, tricked-out	gaming machine like	the M17x inevitably costs a lot. But few	Landson Co.					
7	Asus G73Jh-A2 \$1599 find.pcworld.com/70064	VERY GOOD	WorldBench 6 score: 111 Very Good Overall design: 82 Very 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	► You don't have to be a gamer to enjoy the great speed and the good-looking screen (and the nonflamboyant case) of the G73Jh.							
8	Dell Studio 17 (model 1747) \$1100 NEW find.pcworld.com/70511	★★★☆ VERY GOOD	WorldBench 6 score: 103 Very Good Overall design: 92 Superior Tested battery life: 3:23	1.6GHz Core i7 720QM 17.1-inch touchscreen 8.7 pounds 500GB hard drive					
-	➤ Despite a confusing arrangeme	➤ Despite a confusing arrangement of ports, Dell's Studio 17 has a solid design and comes in a wide variety of configurations.							
9	iBuyPower Armada Touch MT20X \$1300 NEW find.pcworld.com/70512	*** VERY GOOD	WorldBench 6 score: 104 Very Good Overall design: 83 Very Good Tested battery life: 2:15	1.6GHz Core i7 720QM 15.5-inch touchscreen 6.3 pounds 500GB hard drive					
	► IBuyPower put a slick Windows	7 multitouch screen o	on this fairly average laptop. Its Magic	utility improves touch-based gaming.					
10	Micro Express KHL9070 \$1299 NEW find.pcwortd.com/70513	**** G00D	WorldBench 6 score: 119 Superior Overall design: 73 Fair Tested battery life: 2:35	2.67GHz Core i7 620M 15.5-inch widescreen 6.0 pounds 500GB hard drive					

MORE ONLINE

Visit find.pcworld.com/70832 for in-depth reviews, full test results, and detailed specs for each laptop on our chart.

- The specs and benchmark numbers promise a great bargain, but Micro Express cut a few corners to reach the affordable price.

NEW VERSION. MORE IMMERSION.



INTRODUCING TOTALe." Our Proven Solution, Enriched.

Discover Rosetta Stone's award-winning solution, now with an entirely new online experience that fully immerses you in language as never before.

- Learn naturally using our unique software, complete with proprietary speech-recognition technology.
- Converse confidently through live practice sessions tutored by native speakers.
- Communicate and connect with others as you play games in our exclusive online community.

SAVE 10% when you order today.

 Level 1
 Reg. \$249
 NOW \$224

 Level 1, 2, & 3
 Reg. \$579
 NOW \$521

 Level 1, 2, 3, 4, & 5
 Reg. \$749
 NOW \$674

 SIX MONTH, NO-RISK, MONEY-BACK GUARANTEE*

Buy Rosetta Stone today: (800) 306-3105 RosettaStone.com/pws110

Use promo code pws110 when ordering



Reviews&Rankings

This Compact Camera Offers Big Performance

WITH ITS VERY good image quality, its wideaperture lens, and its useful apertureand shutter-priority

modes, the \$350 Canon PowerShot SD4000 IS is a standout point-and-shoot. Its performance is on a par



PowerShot SD4000 | Canon

One of the most impressive compact cameras we've tested. List: \$350

find.pcworld.com/70795

with that of the excellent Canon PowerShot S90, a camera geared toward demanding photographers.

Both cameras offer 10megapixel sensors, 3.8Xoptical-zoom lenses (28mm to 105mm), a bright f2.0 aperture at the wide-angle end, and very effective optical image stabilization.

Both also capture crisp, relatively noise-free images at high ISO levels. And both have a 4X digital zoom that can reach up to a simulated 15X at the telephoto end.



THE SD4000 IS comes in black and silver as well as this vibrant red.

In subjective jury evaluations for image quality performed by PCWorld Labs, the SD4000 IS turned in one of the best overall scores we've seen for a point-and-shoot this year. It also achieved high marks for video quality, despite some shortcomings.

As an everyday, pocketable camera with some manual controls and stellar image quality, the PowerShot SD4000 IS gets our wholehearted recommendation. But consider spending \$50 more for the PowerShot S90.

-Tim Moynihan

Top 5 Interchangeable-Lens Cameras

Though they are not true DSLRs, these compact models shoot top-notch photos and video.



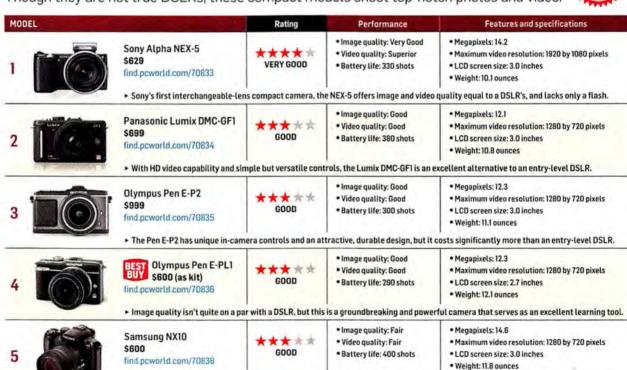


CHART NOTES: Ratings are as of 8/30/10. All of the cameras ranked on this chart are equipped with CMOS sensors.

MORE ONLINE

Visit find.poworld.com/70839 to see in-depth reviews, full test results, and detailed specs for these cameras.

► We like the ease-of-use and firm construction of the NX10, but its video and image quality pale next to that of competing models.

Are You in Sync?



GoodSync is Easy, Fast, Automatic and Completely Reliable...

Let's face it...you have a lot of important data on your computer such as emails, contacts, precious family photos, extensive music collections, sensitive financial documents, etc. Losing those files would be a nightmare. Everybody knows they should backup their files, but few ever do, until now...

GoodSync will:

- Automatically backup your data
- ✓ Easily synchronize between multiple locations
- ✓ Effortlessly transfer files between devices
- Seamlessly work with FTP, SFTP, and WebDAV
- ✓ Help you achieve complete peace of mind!

Backing up or keeping multiple computers and devices in sync has never been easier.

Available on both Windows and Mac,
GoodSync's leading technology also powers
Government, Fortune 500 and many small business' backup and disaster recovery solutions. What are you waiting for?

PCWorld Readers
Download GoodSync Today
Free Trial

GoodSync.com/PCW



A competency-based education means more bandwidth for life.



WGU's competency-based education lets you progress through your online program as you prove your knowledge of it. You have the flexibility to keep living your life, while staying on target to meet your career goals. It's no wonder 94 percent of our graduates would recommend us.



Reviews

A Comfy Bluetooth Headset, for Once

FINDING A BLUETOOTH headset that fits snugly in the ear and feels comfortable to wear can be tricky. The \$80 Plantronics M100 satisfies on both counts. It has some other strengths, too, but a few weaknesses leave it in the middle of the pack.

Available in five different color accents, the M100 has a lightweight, svelte design. It weighs 9 grams (0.32 ounce) and comes with three different-size ear gels and an over-the-ear loop that's easy to place, despite being fairly rigid. The headset is relatively unobtrusive.

One point that impressed me: When I slid the power switch, the headset reported the number of hours of talk time left, and it appeared to do so accurately. Plantronics rates the M100 at up to 6 hours of talk time and up to 10 days of standby time; plus, as the specs promised, I found that it charged efficiently, in just 1.5 hours.

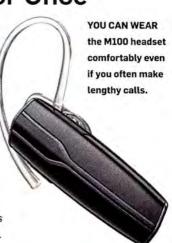
The audio quality was good, but not knock-mysocks-off great. The headset has dual microphones and DSP (digital signal processor) noise cancellation. While callees were generally satisfied by the headset's

** * THE VERY GOOD

M100 | Plantronics

Bluetooth headset for phones is comfy and has some nice touches. Street: \$80

find.pcworld.com/70796



clear audio, even the built-in wind-noise reduction and echo cancellation sometimes couldn't squash the background noise in places like a crowded restaurant. I could occasionally perceive a hissing noise during calls.

The headset charges via a micro-USB port and has volume and disengage buttons as well as a power switch.

The M100 pairs quickly and easily with Bluetoothenabled phones. When used with an iPhone, it displays an iPhone battery gauge on-screen-a feature I loved.

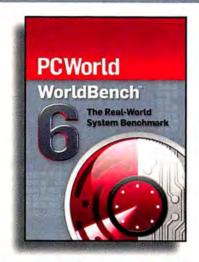
The voice prompts were convenient, and the buttons were easy to feel by touch. (The headset will press into your ear when you hang up, but that's a minor gripe.)

Some other Bluetooth headsets may have better audio quality, but its conveniences, long battery life, and comfortable fit-along with its reasonable pricecombine to make the M100 headset a very solid choice, especially for iPhone users.

-Melissa J. Perenson

Test Your PCs The PC World Labs Way





WorldBench 6

runs on all editions of Windows 7.

Windows Vista, and Windows XP, including all 64-bit and 32-bit versions.

You can purchase one of three different licenses for WorldBench 6, according to your needs:

- A Single User license (\$249) allows you to install and use the software on a single computer at a time.
- A Small Business license (\$999) allows you to install and use the software for your internal business purposes on up to 5 computers at a time.
- A Corporate license (\$2499) allows you to install and use the software for your internal business purposes on up to 25 computers at a time.

Your company's bottom line depends on the performance of its PCs.

To assess and compare system performance across your organization, use the benchmarking software developed by the experts at PC World Labs.

Real-World Performance

WorldBench is the core set of applications that PC World uses to test desktop and laptop PCs. The results play an important role in PC World's computer reviews—the reviews you trust. Because our benchmark uses actual programs performing common functions, it is an excellent barometer of PC performance outside the lab and on your desk.

Automatic Testing

From Web browsing to file encoding to general tasks, the automated test scripts that run in WorldBench 6 are designed to deliver a tough evaluation of today's top computers. Although multicore processors and larger amounts of RAM are appearing even in budget PCs, it's important to have benchmarks that can accurately assess—and challenge—systems with a wide variety of configurations. WorldBench 6 delivers.

Since it's automated, the suite can report errors and restart failed tests without user input. It then records the results, including the final WorldBench 6 score as well as the individual results of each application's workload, in both text and graphs.

Refined over the past decade, WorldBench is currently used in over 30 countries by Fortune 500 corporations, government agencies, and international media outlets.

Visit www.worldbench.com today and secure your DVD of WorldBench 6.



www.worldbench.com

Reviews&Rankings

Serif's Photo-Editing Software Gets More Powerful

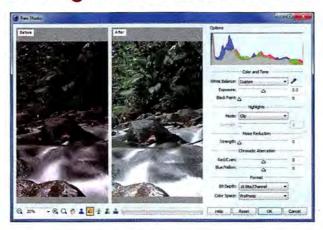
SERIF PHOTOPLUS is designed for photo enthusiasts who seek more creative control than novice programs permit, but who aren't ready to graduate to the depth, complexity, and expense of Adobe Photoshop. The latest iteration, PhotoPlus X4 (\$90) offers significant improvements through the addition of nondestructive editing, greater support for

*** SUPERIOR

PhotoPlus X4 | Serif

Offers improved photo-editing power for a reasonable price. List: \$90

find.pcworld.com/70797



16-bit images, and interface changes that help smooth the editing workflow.

One of the strengths of PhotoPlus is the quality of its help and guidance. From the opening splash screen,

you can access useful online video tutorials. In addition, when you hover your mouse over the list of recent files, a thumbnail preview now pops up. As in past versions, the How To help panel in

PHOTOPLUS X4 offers improved support for 16-bit images.

the main screen provides intelligent advice and step-bystep instructions, with links to commands rather than just descriptions of them.

The redesigned Organizer can now use geotag metadata from a camera or phone to place photos on an integrated Google Map. But it can be sluggish, especially when tagging or geotagging groups of pictures.

Still, PhotoPlus X4 rates as a clear step up in power, accessibility, and features.

> -Sally Wiener Grotta and Daniel Grotta



Inkgard™ software optimizes image quality for maximum print yield.

- Up to 75% Savings on Ink and Toner!
- Works with any Printer
- Quick One-Step Setup
- Bonus: Powerful PDF Generator

Also available at Inkgard.com... Inkgard™ Ultra Yield Print Cartridges for HP, Canon, Dell, Epson, Lexmark & more.



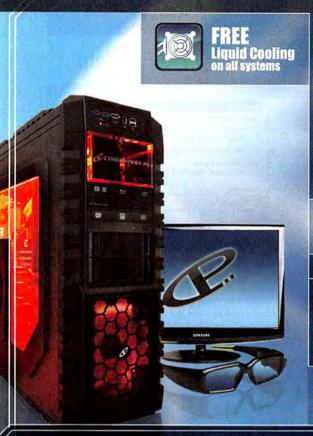
Get Inkgard™ software FREE with purchase of any ink or toner cartridge!



Visit www.inkgard.com/pc1 for details or call 858-217-3130

Prolog

Windows. Life without Walls., CyberPower recommends Windows 7





CORE inside

Faster.
Smarter.

Intel® Core™ i7 Processor

Asetek Liquid Cooling System

Nvidia® 3D Vision Glass and LCD + \$499

(8MB L3 Cache, 1066Mhz)
Extreme i7-980X 3.33Ghz \$2125
i7-970 3.20Ghz \$1965
i7-960 3.20Ghz \$1649
i7-950 3.06Ghz \$1349

\$1965 \$1649 \$1349 \$1349

AZZA Hurrican 2000 Full Tower Case 800 Watt Power

All Desktop systems come with 3 year Limited Warranty + lifetime toll free techsupport

www.cyberpowerpc.com

Cyber POWER Inc. YOUR UNLIMITED GAMING SOLUTIONS

Unleash THE POWER







i7-970 3.200hz i7-960 3.200hz i7-960 3.090hz

Reviews&Rankings

Inexpensive Remote PC Control

MANY PROGRAMS will help you remotely control a PC, but Elsinore's \$250 Screen-Connect aims squarely at the business and professional support system side of the market. And it's a worthy player indeed.

Setup is easy for professionals. The software supports Windows, Macs, Linux, and even Androidbased cell phones.

Compared with competitors such as TeamViewer. ScreenConnect offers attractive pricing: \$250 for life for



SCREENCONNECT IS FOR professionals in remote-PC support.

a single-seat/single-PC connection, and \$2500 for a single seat with as many concurrent sessions as your computer can handle.

ScreenConnect works smoothly. It's a solid choice if you're looking to set up a remote support desk that is a bit more elegant than the free alternatives available.

-Jon L. Jacobi



ScreenConnect | Elsinore

Remote-support software does the job and is priced competitively. List: \$250 for life (one seat, one PC) find.pcworld.com/70848

DOWNLOAD THIS

Three Small, Free Utilities Add Up to Big Help

A LITTLE SOMETHING extra can make a big difference in time saved and frustration averted. One of these handy utilities opens and saves files faster. An e-mail helper alerts you to new Gmail messages. And another divulges the contents of your folders, helping you decide where to clear a little room.

Buzz Folders Free

Finding and saving documents and files to and from various folders on your com-

puter may not seem to be an especially timeconsuming task. But Buzz Folders Free, a nifty utility that streamlines the file-saving and fileopening process, can save you a few seconds each time you use it-seconds that quickly add up. Once installed, Buzz Folders Free introduces a small box below the open/save dialog box that you see when opening or saving any type of file. The box has tabs, each of which offers access to a different frequently used folder. Buzz Folders Free won't revolutionize the way you use your computer. But it will save some time here and there, find.pcworld.com/70823

-Liane Cassavoy

Folder Size

Folder Size scans your hard disk and shows the

space consumption of various folders it contains. Using an interface like Explorer's, it displays the space breakdown of the current folder as either a pie chart or a bar chart in one pane, and offers a detailed listing by file or directory name in another.

Folder Size has many uses. It allows you to instantly notice if something is suspiciously large, which might indicate a directory filled with junk or other files



SPIFFY CHECKS YOUR Gmail account and alerts you from the system tray when messages arrive; alert boxes are extensively customizable.

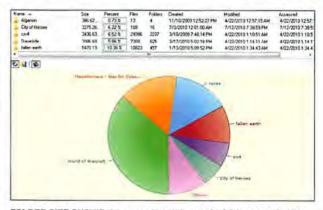
that should be deleted, or perhaps let you realize just how many files you've downloaded but never looked at, find.gcworld.com/70824

-Ian Harac

Spiffy

Gmail is a great Webmail service, with features rivaling those of stand-alone clients. But since it runs in a browser, if you're not on the site, you won't be notified of new mail. Spiffy fills this gap. It runs in the system tray, periodically checking up to five Gmail accounts and displaying alert boxes for new messages. It's lightweight and free, and it allows detailed customization-a welcome improvement over Google Labs' rather limited Gmail Notifier, find.pcworld.com/70825

-Gabe Gralla



FOLDER SIZE SHOWS the space breakdown of a folder as a pie chart or a bar chart in one pane, with a detailed breakdown in another.

THE TRUTH IS OUT THERE!

WHAT YOUR CHILD OR EMPLOYEE DOES ONLINE MIGHT SHOCK YOU.



1-888-475-5345

www.sniperspy.com www.sniperspymac.com



SNIPERSPY

REMOTE MONITORING FOR PC + MAC

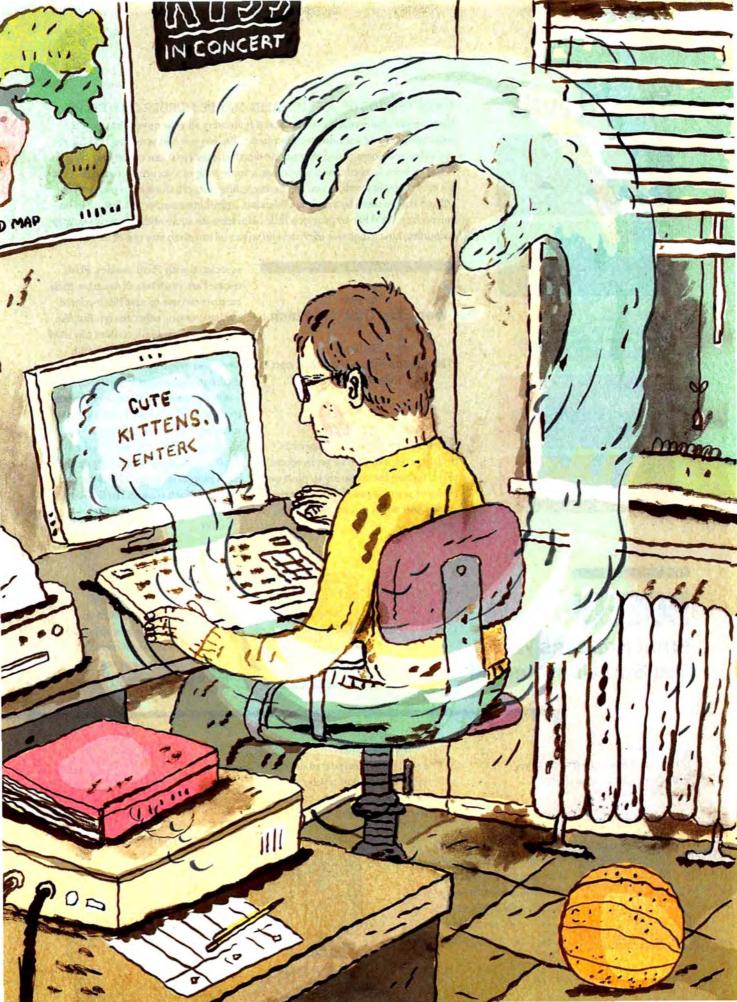
MOST

The scariest sites on the Net?

They're not the ones you might suspect.

Here's what to watch for and how to stay safe. »

BY NICK MEDIATI
ILLUSTRATIONS BY MARK TODD



Threat Levels

BLUE

Perfectly Safe

This is the land of unicorns and fairies and candy raindrops, where nothing bad could ever happen. All joking aside, you'll never run across such a site anywhere on the Internet.

Slightly Dangerous

Although you'll get into trouble if you look for it, your risk of being infected by malware or unknowingly having your privacy compromised is fairly low.

YELLOW

Moderately Dangerous

Tread carefully in these areas. Simply clicking on the wrong thing could put your computer in jeopardy.

ORANGE

Very Dangerous

Threats to your online safety and privacy abound. It's best to avoid these places entirely, but if you must go there, just entirely, but if you must go there, just assume that everyone's out to get you.

Unsafe

THOSE PHOTOS OF JESSICA ALBA MAY BE MURDER ON YOUR PC.

That Google search result that looks as if it answers all your questions may do nothing but create a serious tech headache. The fun you had watching that hilarious video you downloaded may not be worth the misery it can cause your system.

You've been warned that the Internet is something of a security minefield—that it's easy to get in trouble. You can do everything you can think of to protect yourself and still be taken by a malware infection, a phishing scam, or an invasion of online privacy. We'd like to provide a little help. Here are some of the hazards you may encounter, how dangerous they are, and what you can do to stay out of harm's way.

The Place

Websites That Use Flash

The Threat Malicious Flash files that can infect your PC

YELLOW

Adobe's Flash graphics software has become a big malware target in recent years, forcing the company to push out frequent security patches. But another danger you might not know about is

associated with Flash cookies. Flash cookies are small bits of data that their creators can use to save Flash-related settings, among other things. But like regular cookies, Flash cookies can track the sites you visit, too. Worse still, when you delete your browser's cookies, Flash cookies get left behind.

→ If You Have to Go There: To help protect against Flash-based attacks, make sure you keep your Flash browser plugins up-to-date, by visiting find.pcworld. com/70829. And you can configure the Flash plug-in to ask you before it downloads any Flash cookies. To find out how, see find.pcworld.com/69816.

HOSED!

What Happens When You Surf Unprotected



12:48 p.m.

More random downloads, and my desktop is getting junked up. I now have icons for free games and 1000 free songs littered all over, plus more browser toolbars than I care to have.

11:45 a.m. -

I start the experiment with a pristine, clean PC running Windows Vista.

OWNLOAD



download what appears to be

tle, but nothing

12:00 p.m.

I start poking around on the Web, and start out easy. I run a Google search for free smilies, and sure enough, I find some. Who am I to refuse?

12:41 p.m. --

I download some random freebie antivirus software I've never heard of. Let's see what this does...

11:55 a.m.

I need to check my e-mail. I a résumé file. Strange, I'm not hiring. I open it anyway.

> My screen flickers a litstarts. Hmm...



12:29 p.m.

A couple smiley packs later, I am up to three browser toolbars. Junkware, but no malware...yet.

The Place Twitter

The Threat

Shortened links that lead you to potentially harmful places

ORANGE

Scammers love Twitter since it relies so much on URL shorteners, services that take long Internet addresses and replace them with something briefer.

It's very simple to hide malware or scams behind shortened URLs. A shortened link that supposedly points to the latest Internet trend-du-jour may be a Trojan horse in disguise.

→ If You Have to Go There: Simply don't click links. Of course, that takes some of the fun out of Twitter. The other option is to use a Twitter client app. TweetDeck (find.pcworld.com/62924) and Tweetie for Mac (find.pcworld.com/70861) have preview

features that let you see the full URL before you go to the site in question.

Some link-shortening services, such as Bit.ly, attempt to filter out malicious links (find.pcworld.com/70866), but it seems to be a manual process, not an automatic one. TinyURL has a preview service you can turn on at tinyurl.com/preview.php.

The Place

Your E-Mail Inbox

The Threat

E-mail scams/ attachments that get you to install malware or give up personal info

YELLOW

Although phishing and infected e-mail attachments are nothing new, the lures that cybercrooks use are constantly evolving, and in some cases they're becoming more difficult to distinguish from legitimate messages. My junk mailbox has a phishing e-mail that looks like a legitimate order confirmation from Amazon. The only hint that something's amiss is the sender's e-mail address.

→ If You Have to Go There: Don't trust anything in your inbox. Instead of clicking on links in a retailer's e-mail, go directly to the retailer's site.

The Place Torrent Sites

The Threat

Malware hiding in video, music, or software downloads

RED

Torrent sites (such as BitTorrent) are often used for sharing pirated music, videos, or software, and are a trove of malware. No one yets the download

12:55 p.m.

IE is hating me right now. Still no signs of malware, but something's sure eating up system resources.

1:03 p.m.

My PC locks up for a few moments.

1:25 p.m.

After a restart,
Windows throws up a
warning about a program at C:\Users\
PCW\AppData\Roaming\host32.exe. I have
no idea what it is.



4:13 p.m. -----

something just forced my PC to shut down and restart. I think i, I've successfully based

fully hosed this PC.



1:40 p.m.

I think I killed IE. I can't launch it. Malware? But I uninstall a couple of toolbars, and it seems to work again.

3:00 p.m. -

It's unclear whether I've gotten infected by anything on the Web, but so far I haven't done anything too terribly risky. However, I've got to check my e-mail again; I'm expecting an important file from a friend.

3:05 p.m.

Whoops. I think
I clicked on the
wrong file. I've
got fake antivirus!



· 3:25 p.m.

I now have three or four fake antivirus programs running. Malware has also planted three shortcut links to porn sites on my desktop. And whenever I open something in IE, a fake antivirus app kicks in with a fake warning.

files—they may be malware in disguise.

Ben Edelman, privacy researcher and assistant professor at Harvard Business School, thinks torrent sites are the most dangerous places to visit, since they don't have a business model or reputation to defend (by comparison, many porn sites rely on being deemed trustworthy). "The [torrent] customers, they really don't want to pay," he says.

→ If You Have to Go There: Use a secondary PC to protect your main system. Use antivirus software, and keep it updated. Scan downloaded files and wait a couple of days before opening them. Brandnew malware can be tricky to catch.

The Place 'Legitimate' Porn Sites

The Threat Malware in photos or videos of scantily clad women

YELLOW

Porn sites have a reputation of being less secure than mainstream sites, but that assumption doesn't tell the whole story. "There is no doubt that visiting Websites of ill-repute is deadly dangerous. If you make a habit of it, it's a given that you'll be attacked at some point," says Roger Thompson, chief research officer with security firm AVG. "Unfortunately, staying away from those sites won't keep you safe by itself, because innocent sites get hacked all the time, and are used as lures to draw victims to the attack servers."

And as mentioned earlier, many porn sites operate as actual, legitimate businesses that want to attract and retain customers. That said, it may be hard to tell the "legit" porn sites from malwarehosting sites that use porn as a lure.

→ If You Have to Go There: Be suspicious of video downloads, or sites that require you to install video codecs to view videos (see the next threat, below). Using tools like AVG's LinkScanner (linkscanner.avg.com) and McAfee's

SiteAdvisor (www.siteadvisor.com) can help you weed out the malicious sites.

And, again, consider visiting such sites on a secondary machine. You don't want your browser history on the family PC.

The Place

Video Download Sites, Peer-to-Peer Networks

The Threat

Trojan horses disquised as video codecs, infecting your PC with malware

DRANGE

If you watch or download video online, you've likely been told to download a video codec-a small piece of software that provides support for a type of video file-at least once. Usually, these bits of software are perfectly legitimate (for example, the popular DivX codec), but some less-than-reputable download services or video sites may direct you to download a piece of malware disguised as a codec. Security software company Trend Micro provides a good example of what these attacks look like at find.pcworld.com/70799.

→ If You Have to Go There: Your safest option is to stick with well-known video sites such as YouTube and Vimeo. And for catching up on the latest episodes of your favorite TV shows, Hulu, TV.com, ABC.com, and iTunes are safer than peer-to-peer networks.

The Place Your Smartphone

The Threat

Geolocation-your smartphone and perhaps other parties know where you are

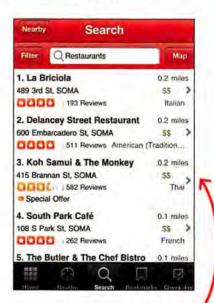
GREEN

The smartphone market is still in its infancy, really, and so are the threats. One possible concern is the use-or abuse-of geolocation.

Although plenty of legitimate uses for location data exist, the potential for inappropriate uses also exists. In one case, a game listed on the Android Market was in reality a client for a spy app (see find.pcworld.com/70802).

Apple recently updated its privacy policy to reflect changes in how it handles location data in iOS 4. It now states that "to provide location-based services on Apple products, Apple and our partners and licensees may collect, use and share precise location data" (www.apple.com/privacy). See find. pcworld.com/70803 to read more on Apple's new privacy terms and what they mean for you.

→ If You Have to Go There: Be particular about the location-based sites, apps, and services you use. Services such as Yelp are good examples of useful locationaware apps. On the other hand, weigh the privacy implications of services like Foursquare or the new Facebook Places feature, and consider how much you feel comfortable divulging.



SOME SMARTPHONE APPS, like Yelp for iPhone, use your physical location to provide you with information on nearby businesses or points of interest.

TIPS FROM THE PROS

Top 5 Ways to Stay Safe Online

STAY UP-TO-DATE, STAY paranoid, stay protected. That's the message from the security experts we spoke with while developing this story. Here are a few of their top tips and suggestions for protecting your computer against malware and hackers.

[1] Keep up on patches.

Be sure to run Windows Update, as well as the software update features in the other programs that you use every day.

Be password smart.

As tempting as it is to use the same password in multiple places, don't. And use longer passwords, too-they're harder to crack. If you have lots of accounts to manage, use a password manager. (See "GPUs Power Games, Crack Passwords," Privacy Watch, on page 28 for more.)

Use security software.

It can help block malware or software that is acting suspiciously, and security software companies are hard at work devising new ways to stop infections before they reach your PC. Check our antivirus and security software page (find.pcworld.com/70867) regularly for the latest on security products.

[4] If it sounds too good to be true... well, you know

the rest.

No, someone in a faraway land isn't really offering you millions of dollars. No, attractive women from Russia probably aren't seeking you out specifically. No, those aren't magic cure-all pills.

Assume that everyone's out to

get you.

PC security is one area where it pays to be paranoid. Just remember that no security software is fail-safe, and that you're still the one sitting at the keyboard. Assume that no site is safe. And don't automatically trust a link or file download, even if a friend sends it to you.

The Place Search Engines

The Threat

'Poisoned' search engine results that go to malwarecarrying Websites

DRANGE

Search engine poisoning is the practice of building tainted sites or pages that are designed to rank high in a search on a given topic. For example, according to a recent study by the security firm McAfee, 19 percent of search results for "Cameron Diaz and screensavers" had some sort of malicious payload. Breaking news topics and Facebook are also common search targets for attackers. For more, see find.pcworld.com/70804.

-> If You Have to Go There: Pick and choose which sites to go to. Don't just blindly click search results; check each URL first to make sure that it really

leads to the site you want. Although any site can be hacked, visiting the Washington Post's story on a hot news topic, for example, is probably a wiser choice than following a link to a site you've never heard of before.

The Place

Hacked Websites. Plus Your Inbox

The Threat

Malicious PDFs that try to fool you into installing malware

DRANGE

So-called poisoned PDFs are PDF files that have been crafted in such a manner that they trigger bugs in Adobe Reader and Adobe Acrobat; posted on a hijacked Website, they may let an attacker commandeer your PC and access your files and personal info.

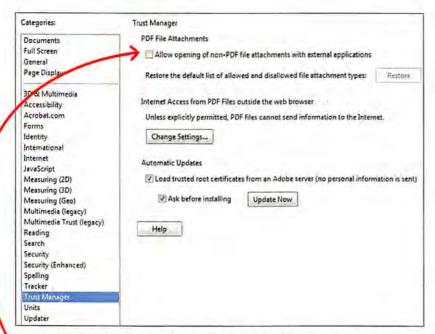
A newer variant takes an otherwise

innocent-looking PDF document and inserts malware into it. Adobe Reader may pop up an alert asking if you want to run the malware, but hackers can edit those messages to trick you into opening the file (find.pcworld.com/70806).

How serious is this problem? In 2009, attacks using malicious PDFs made up 49 percent of Web-based attacks, according to security firm Symantec.

→ If You Have to Go There: First, always make sure that you're running the latest version of Adobe Reader.

You can also use a different PDF reader, such as Foxit Reader (find.pcworld. com/70099). This can protect you from attacks on holes in Adobe Reader itself, but it won't make you immune to all PDF attacks, such as the newer ones that embed malware inside the PDFs. Make sure, also, that you update to Adobe Reader 9.3.3 or later (Reader 8 users should update to version 8.3.3 or later); these updates change the way Adobe Reader handles non-PDF attachments and reduce the risk from such attacks (see find.pcworld.com/70828).



FEELING PARTICULARLY PARANOID? Uncheck 'Allow opening of non-PDF file attachments with external applications' to head off certain types of PDF exploits.

You can turn off Adobe Reader's ability to open non-PDF attachments by going to Preferences, clicking Trust Manager, and unchecking Allow opening of non-PDF file attachments with external applications. See find.pcworld.com/70098 for more.

The next major release of Acrobat and Reader will provide a new "protected mode" against these attacks. See find. pcworld.com/70827 for additional details.

The Place Video Download Sites

The Threat

Malicious video files using flaws in player software to hijack PCs

WD.LISY

Attackers have been known to exploit flaws in video players such as Quick-Time Player and use them to attack PCs. The threats are often "malformed" video files that, like malicious PDFs, trigger bugs in the player software that let the attackers in to spy on you, plant other malware, and more.

→ If You Have to Go There: Keep your

player software up-to-date. Apple and Microsoft periodically release patches for QuickTime and Windows Media Player, respectively. Avoid downloading videos at random. Stick to wellknown video sites such as YouTube, or to download services like iTunes.

The Place Hacked Legitimate Sites

The Threat

Drive-by downloads that install malware when you visit a site

A drive-by download occurs when a file downloads and/or installs to your PC without you realizing it. Such downloads can happen just about anywhere. Some sites are built to lure people into a drive-by download; but in a common attack method, criminals will hack a Web page, often on an otherwise legitimate site, and insert code that will download malware to your computer.

→ If You Have to Go There: The first thing to do is to keep your security software up-to-date, and to run regular malware scans. Many security suites can flag suspicious downloads.

> The Place Your Inbox, Hacked Legitimate Sites

> > The Threat

Fake antivirus software that extorts money-and your credit card information



Fake antivirus programs look and act like the real thing, complete with alert messages. It isn't until you realize that these alerts are often riddled with typos that you know you're in trouble.

Most fake antivirus software is best described as extortionware: The trial version will nag you until you purchase the fake antivirus software-which usually does nothing to protect your PC. Once you send the criminals your credit card information, they can reuse it for other purposes, such as buying a high-priced item under your name.

You can get infected with a fake antivirus app in any number of ways. For example, in drive-by downloads (see the previous item), a malicious payload downloads and installs without the user realizing it or having any time to react.

→ If You Have to Go There: If you get an alert saying you're infected with malware, but it didn't come from the antivirus software you knowingly installed, stop what you're doing. Try booting into Safe Mode and running a scan using your legitimate antivirus software.

However, such a scan may not clean up all of the malware-either the scanner doesn't have a signature for one fragment, or that piece doesn't act like traditional malware. This may render behavioral detection (which spots malware based on how it acts on your system) useless. If all else fails, you may need to call in a professional.









SONAMU PC Provides

· Automatic Electricity Block Function

Patented built-in standby power control system automatically shuts off power to all connected peripheral devices, enabling the same effect as unplugging all peripherals.

· Energy and Cost Savings

Tests show that should all desktop PCs in the US be switched to the SONAMU G100, an estimated 22 billion kWh of energy can be saved annually, with up to 30 billion pounds of CO2 emission reduction. This significant decrease in energy expenditure and CO2 emissions will serve to effectively reduce long-term energy expenses as well.

· Environmentally Friendly Technology

By using the SONAMU PC, you too can take part in helping to provide cleaner and healthier lives not only for present day, but for future generations to come so our children can inherit a safe and healthy planet to thrive in.

· Quality Products with Purpose

At Moneual we are passionate about using expertise from what we do best-produce high quality entertainment units and PC Systems – and channeling it into a cause we care deeply about: the environment. The brand SONAMU is Korean for the Pine Tree, one of the most CO2 emission absorbing trees on the planet.

The Place

Just About Any Ad-Supported Website

The Threat

Fraudulent ads on sites that lead you to scams or malware

VELLOW

Hey-ads aren't all bad! They help sites pay the bills. But cybercriminals have taken out ads on popular sites to lure in victims. Last year, the New York Times site ran an ad from scammers (find.pcworld.com/70807), and earlier this year some less-than-scrupulous companies were gaming Google's Sponsored Links ad program and placing ads that looked like links to major companies' Websites (find.pcworld.com/70808).

"The bad guys have become very clever at exploiting online advertising networks, tricking them into distributing ads that effectively load malicious content-especially nasty, scaremongering pop-ups for rogue antispyware," says Eric Howes of Sunbelt Software.

→ If You Have to Go There: Most large sites, such as PCWorld.com, have ad

sales departments that work frequently with a core group of large advertisers, so it's probably safe to click a Microsoft ad on the New York Times site. But as the Google Sponsored Links incident shows, nothing is entirely fail-safe.

The Place Facebook

The Threat Questionable Facebook apps

YELLOW

Facebook apps have long been an issue for security experts. You don't always know who's developing the apps, what they're doing with the data they may be collecting, or the developers' data security practices. Even though you have to approve apps before they can appear on your profile and access your personal information, from there the security of your data is in the developer's hands.

→ If You Have to Go There: Be selective about the apps you add to your profile -don't take every quiz, for example. Check your privacy settings for Facebook apps, as well: Click the Account

drop-down menu in the upper-right corner of Facebook's site, select Privacy Settings, and then click Edit your settings under 'Applications and Websites'. There, you can control which apps have access to your data, and more; you can also turn off Facebook apps altogether.

The Place Social Networks

..... The Threat

Oversharing—exposing too much personal information on your social network profiles



Oversharing isn't just a matter of getting a little too personal—it can leave your private information viewable to the general public. But it's avoidable.

"There is a subtle danger that few people understand with the social networking sites, and that is the idea of information leakage," says AVG's Roger Thompson. "People, particularly teens, put all sorts of information online, without realizing that many more people than just their friends can see that data."

Oversharing could very well lead to more serious privacy issues further down the road, Thompson adds. "As today's young teens reach an age to apply for a credit card, I fully expect an onslaught of fraudulent card applications on their behalf, because they unwittingly divulged so much information. Harvesting is going on now, and we have no idea who is doing the harvesting."

→ If You Have to Go There: This particular threat is relatively easy to avoid, in that a little common sense can go a long way: Just be mindful of what you post. Do you really need to publish your home address and phone number to your Facebook profile?

Finally, be certain to check your privacy settings to make sure that you're not divulging your deepest, darkest secrets to all 500 million Facebook users.



TAKE A FEW minutes to check your Facebook application settings to make sure that your app privacy settings are as you want them.



A proud history of savings and reliability, backed by the strength of Warren Buffett's Berkshire Hathaway Inc. (Note: the above portrait is not Mr. Buffett.)

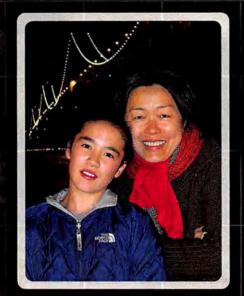
Nearly 15 years ago, GEICO became a proud part of Warren Buffett's famed holding company. Back then, the Gecko was one of the hardworking people — sorry, reptiles — in our GEICO offices. Now he's helped GEICO become not only the third-largest car insurance company in the country, but also the fastest growing. Which is no surprise. For over 70 years, GEICO has worked hard to save people hundreds on car insurance. So why not give the Gecko a call to see how much you could save? You'll find he's easier to reach than Mr. Buffett.



A SUBSIDIARY OF BERKSHIRE HATHAWAY INC.



take your































Do you trip over nighttime shots, fast action, and tough indoor scenes? With the right scene modes and a few advanced tricks, you can unlock your camera's hidden powers. »





BY TIM MOYNIHAN

PHOTOGRAPHS BY ROBERT CARDIN, TONY LEUNG, AND TIM MOYNIHAN



Your camera's Auto mode can be a blessing and a curse. The mode does a great job of choosing appropriate in-camera settings when you're shooting in broad daylight or in well-lit rooms, so it's a quick and easy way to snap decent photos with minimal work. However, it can also become a crutch that keeps you from getting the best shot possible.

Every camera—even a bargain-bin point-and-shoot—has image-enhancing options hidden in its menus. The lowest-end cameras have scene modes that adjust settings based on the environment and usually produce a prettier shot than Auto mode will. And by using a digital SLR or a camera with manual controls, you can take your photos to another level entirely.

How much can a scene mode or a manually exposed shot enhance your photos? PCWorld Labs manager Tony Leung, PCWorld photographer Robert Cardin, and I worked together to find out. We picked six common shooting scenarios, some of which require tricky manual adjustments to capture the ideal shot, and we took a picture several times in each scenario: one using the Auto setting, one using the appropriate scene mode, and one on which we manually adjusted the settings. In most cases shooting with a scene mode offered a vast improvement over using Auto mode. In a few instances, tweaking manual settings resulted in a better-looking (or dramati-



ALTHOUGH SCENE MODES vary from camera to camera, you usually choose them by setting the mode dial to 'Scene' (or a similar label) and picking a mode from the on-screen menu. Some cameras put the most frequently used scene modes directly on the mode dial.

cally different-looking) shot than the scene mode delivered. Judging from those results, we definitely recommend using a scene mode instead of Auto mode in most cases.

For the test, we used our top-rated point-and-shoot camera, the Canon PowerShot S90. It offers very good images for a point-and-shoot, a selection of scene modes, manual exposure and focus controls, and, of course, an Auto mode. The S90 also has a wide-aperture f/2.0 lens and good high-ISO performance for a pocketable fixed-lens model; those factors let us shoot at higher shutter speeds, achieve shallow depthof-field effects, and take better shots in dark environments.

Our test shots are meant to serve as a good representation

the basics

A Glossary of Commonly Used Controls

SHUTTER SPEED: Using a slow shutter speed lets you capture more light over the course of a shot, and it turns moving objects into a blur. In most cases you should use a tripod (or at least a flat, solid surface) when you're shooting at slow shutter speeds. As long as both your camera and your subject remain very still, a slow shutter speed is the ultimate weapon for capturing a crisp, bright, well-detailed shot in poorly lit environments.

If you use a slow shutter with a moving subject, the blur effect can work to your creative advantage, conveying speed or adding an otherworldly effect to flowing water. Conversely, use the fastest shutter speed possible to freeze a fast-moving object in place.

TURESETTINGS: Aperture is the yin to the shutter speed's yang-use them in perfect balance. A wider aperture lets in a lot of light, allowing you to use faster shutter speeds. Lenses with wide apertures also permit shallow depth-of-field effects that keep the foreground in focus and the background a bit blurry.

Finding the sweet spot can be tricky: Some combinations of

aperture and shutter speed lead to pitch-black photos, and others look completely overexposed. To help you find the right balance, many cameras have aperture priority and shutter priority modes in which you select your preferred setting for aperture or shutter and the camera automatically optimizes the other setting.

UIVALENCY SETTINGS: Higher ISO numbers let you shoot in dark situations and at faster shutter speeds without using a flash. Although they help you brighten an image without futzing with aperture or shutter settings, they also tend to degrade image quality. With most point-and-shoots, high ISO settings translate into more visible noise in photos. In fact, the quality of high-ISO results is one of the biggest differences between DSLRs and pointand-shoots-DSLRs have large, powerful sensors that eliminate most of the graininess you'll get with a lower-end camera.

Boosting the ISO settings in your camera also takes a toll on photos' color accuracy, as the exposure often takes on a red or orange tint as the sensor's light sensitivity increases.

of what a novice can do with simple in-camera adjustments. You're bound to get different results if you use a different camera-in general, you'll see better image quality and have more manual options with a DSLR and less-impressive photos and fewer options with most point-and-shoot cameras.

portrait mode

Usually the first option in your camera's scene mode menu, Portrait mode is built for one of the most common photos you'll take: the head-and-

shoulders shot. In most Portrait modes, the camera recognizes the presence of faces in your scene, focuses on them, and adjusts the color in the image to enhance skin tones. In many recent cameras, Auto mode even defaults to Portrait mode settings if it detects a face (or faces) in the shot.

In Portrait mode the camera also tries to narrow the depth of field behind the subject: It keeps the person's face in focus and slightly blurs the background, drawing the viewer's attention to the face and away from distant objects.

Unless you're shooting in broad daylight or a bright indoor setting, Portrait mode usually fires the flash. It does this to bring out detail in the subject's face, but it often reduces the intensity of the flash to avoid overexposing the foreground.

In our three test portraits, the flash was too intense in Auto mode, making our subjects' faces a bit too bright for our liking. Portrait mode was much better at properly exposing the image and enhancing our subjects' skin tone.

In our manually composed shot, we turned off the flash and tried to harness natural light by using a wide aperture with a slow shutter speed. The result is a portrait that's a little more subtle and natural-looking. Nevertheless, Portrait mode generally does a great job on this kind of photo.

macro mode

In Macro mode, the camera uses its minimum focus distance to keep small objects or details that are close to the lens in sharp focus. Our test pictures provide some clear-cut examples of why you should delve deeper into your camera's settings when taking up-close shots. We used a tripod for all of our macro photos.

In Auto mode, the camera keyed in on the clasp and band behind the watch face instead of focusing on the watch face in the extreme foreground. As a result, much of the image's foreground detail was out of focus. Auto mode also boosted the ISO equivalency to 640, used an aperture setting of f/4.9, and set the shutter speed to 1/250 of a second. The mode boosted the ISO in order to use a faster shutter speed, which would have come in handy if we hadn't been using a tripod or had been trying to shoot a moving subject. The faster shutter and higher ISO also meant, however, that we would see less detail in our shot if we tried to crop and resize it.



THE POWERFUL FLASH and high ISO that the camera selected in Auto mode failed to create much depth in the image.



IN PORTRAIT MODE our subjects were nicely separated from the background, but the flash was still a bit too powerful.



BY USING AMBIENT light and a slower shutter speed in our manual shot, we obtained a more natural-looking picture.



AUTOFOCUS LOCKED IN on the watch clasp in the background instead of the watch face, producing predictably blurry results.



MACRO MODE VASTLY improved the foreground focus and sharpness of the shot, making the details clearly visible.



BESIDES WORKING with a slower shutter and a smaller aperture, we used manual focus to improve the exposure and details further.

The camera's Macro mode improved the shot dramatically. Our S90 adjusted its focus properly and kept the same aperture setting, but it reduced the ISO setting to 320 and slowed the shutter speed to 1/125 of a second. The results looked far better than what we saw in the shot taken in Auto mode.

We then attempted to outdo the Macro mode results using manual settings. In our full-manual shot, we used the focus controls to lock in more sharply on the watch's brushed-metal faceplate. We were able to close the aperture to f/8.0 and shoot with a much lower ISO sensitivity setting of 80; that allowed us to slow our shutter speed to 1/13 of a second.

The combination of a low ISO setting, a narrow aperture, and a slow shutter speed let us capture a more detailed, evenly exposed shot with less visible noise in case we wanted to resize the image. It's important to note, though, that the manual settings we used here are appropriate only for stilllife macro shots. Since we used a relatively slow shutter speed, any objects in motion would have appeared blurry. If we had been shooting a moving subject, the Macro mode's settings would have done a better job than our manual choices.

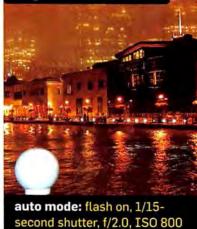
night scene mode

A camera's Night Scene mode is built to take landscape or cityscape shots when there isn't a lot of natural light. It usually demands the use of a tri-

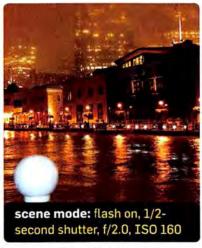
pod: Depending on the camera, the Night Scene mode may use a slower shutter speed, meaning that you'll get a blurry image if you try to steady the camera with just your hands.

We weren't pleased with our Auto-mode results. The camera boosted the ISO to 800, shifted the aperture to a wideopen f/2.0, and used a fairly fast shutter speed of 1/15 of a

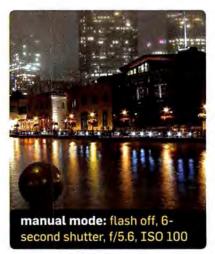
night scene test



THE COMBINATION OF the flash, high ISO, and fast shutter wreaked havoc on background details and colors.



WE DIDN'T SEE much of an improvement here, but the image's contrast was sharper due to the mode's lower ISO setting.



SELECTING A VERY slow shutter and powering off the camera's flash yielded the best results for our night scene.

second. Color accuracy and fine-grain details suffered at those settings. The camera also fired the flash, which illuminated the post in the foreground and caused light to reflect off the mist in the sky back toward the camera.

The results from Night Scene mode were surprisingly disappointing. Although the camera properly adjusted the shutter speed downward to half a second and used a lower ISO of 160, the flash still fired while the aperture stayed at f/2.0. The resulting image closely resembled the one taken in Auto mode.

Our night-landscape manual settings produced some of the most dramatic differences we saw across all of our test shots. We turned the flash off to avoid illuminating the post in the foreground and having the mist reflect light. Next, we tried to improve the detail by dialing down the ISO to 100 and using a very slow shutter speed of 6 seconds. The slow shutter also made the surface of the water look smooth, while the lower ISO made colors seem more accurate. The slow shutter let us close the aperture to f/5.6, deepening the depth of field while still capturing plenty of light for a well-exposed image.

night portrait mode

Although it sounds similar to Night Scene mode, Night Portrait mode is a different animal altogether. It's designed for capturing evenly exposed shots of a person standing in front of a nighttime background. Executed well, a night portrait will let viewers see detail in both the person and the dark background. It's a useful scene mode for vacationers, since it's ideal for taking nighttime photos of family and friends in front of landmarks.

Cameras handle this mode in various ways. Most commonly, the flash fires to enhance detail in the foreground, while the camera slows its shutter speed to capture a detailed, naturally lit backdrop. Other cameras turn off the flash and take several shots in rapid succession at different exposure levels, and then combine the images to create one evenly exposed shot; the camera uses overexposed images to highlight details in dark parts of the scene and more evenly exposed images to highlight details in lit areas. In both flavors of Night Portrait mode, a tripod or flat surface is handy, and sometimes a necessity.

In our test night portraits, Auto mode had a hard time capturing details in the background. Because the flash was too powerful and the shutter speed was a bit too fast (1/30 of a second), it illuminated the subjects well but eliminated many of the background details. For example, the "Pier 28" sign on the building is unreadable in our Auto-mode shot.

The PowerShot S90's Night Portrait mode fires the flash, opens the aperture to f/2.2, and slows the shutter to 1/8 of a second. In our photos it was much better than Auto mode at highlighting foreground and background details, and the "Pier 28" sign is clearly legible. The camera also used a higher ISO of 500 to brighten up the building and the bridge in the background, which were well out of range of the flash.



IN AUTO MODE the flash was too powerful, the shutter was too fast, and the aperture was too wide to grab much background detail.



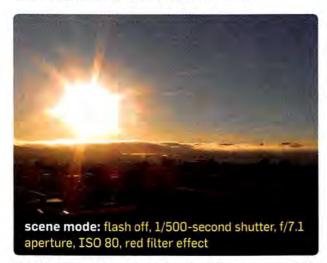
UNDER NIGHT PORTRAIT mode, the slower shutter picked up better background detail, and the lower ISO improved color accuracy.



A SMALLER APERTURE created star-like patterns around the lights, and a slower shutter improved background detail.



AUTO MODE, WHICH made no special adjustments, showed the most accurate representation of colors in our sunset scene.



SUNSET SCENE MODE applied a dramatic red tint to our sunset that wasn't really there but looks great in the resulting photo.



IN AN ATTEMPT to outdo Sunset mode, we played with the camera's digital color filters while keeping the aperture tight.

On our manual shot, we used the flash to illuminate the subjects, but we reduced the ISO to 320 and slowed the shutter speed to 0.6 second to capture background details while preventing image noise. We also closed the aperture to f/5.6 to make background details more visible, but you can't see much of a difference in depth of field between our manual shot and our scene-mode shot; the effects of aperture adjustments are more pronounced in DSLRs and other large-sensor cameras.

In our manual shot, we especially liked how the aperture setting surrounded the streetlights in the background with a star-like pattern. You can achieve the same effect by using smaller aperture settings when shooting any bright lights.

Employing a bit of skill and creativity with your flash can help make Night Portrait mode more effective: If your camera supports it, you can dial down the flash intensity to avoid overexposing your subjects, or even put a piece of tissue paper or cloth in front of it to weaken its overpowering effects.

sunset mode



If you're lucky enough to get a clear shot of a breathtaking sunset, the last thing you want is a boring photo. The Sunset scene mode is a Landscape scene

mode (it sets the focus to infinity and uses a smaller aperture to create a wide-angle view that's completely in focus), with one key difference: It boosts the warm red tones, making the vivid colors of a sunset practically jump out of the photo. That kind of color enhancement is sort of cheating, but the results can be even more stunning than the sunset itself.

Auto mode properly identified our test scene as a landscape, and because it didn't tweak the colors, it snapped the most true-to-life representation of the sunset. If you want accurate colors and more detail in your sunset shots, use Auto mode.

The test shot we took with Sunset mode made the sky's colors appear deeper, with a somewhat artificial-looking red tint. If it's drama you're seeking in your end-of-the-day photos, you should definitely use Sunset mode for the occasion.

In manual mode, we tried to outdo Sunset mode's dramatic flair by using color filters; we also closed the aperture to f/8.0 to create a deep depth of field, and used medium to fast shutter speeds. We boosted the blues, reds, greens, and contrast, and got an even-more-surreal result. Depending on our choices, the image looked dramatically different: Sometimes everything had a warm yellow tint, other times we enhanced the light blue in the sky, and still other times everything was pinkish-red.

Colleagues who viewed all of the photos tended to prefer the shots we took in Sunset mode. The colors seemed fake in both our Sunset and manual shots, but they looked more realistically fake in Sunset mode (if that makes any sense). We give the victory to Sunset mode here—but depending on the sunset you're shooting, we suggest taking extra photos using any color-accent modes your camera may have. That way, you can see how the scene looks with different filters.



Welcome to a better sounding world, where your music comes alive as never before. The QC®15 headphones are our best, with Bose® technologies that deliver sound more naturally than conventional headphones. And a significant improvement in the noise reduction helps you focus on each nuance of your music, as distractions fade into the background. Seth Porges reports in Popular Mechanics that "Compared to the competition...the QC15s are vastly superior." It's a difference you need to hear to believe. We're so sure you'll be delighted, we'll even pay to ship them to your door.

To learn more: 1-800-760-2749, ext. Q8053 Bose.com/headphones

©2010 Bose Corporation. Patent rights issued and/or pending. The distinctive design of the headphone oval ring is a trademark of Bose Corporation. Quote reprinted with permission.



fast-action modes

The mode for fast-action shooting varies in name and function. For capturing fleeting moments, your best option is a fast continuous-shooting or burst mode, which breaks the action into split-second, frame-byframe sequences—the more shots you can take in a second, the better chance you'll have of ending up with a keeper.

Unfortunately, such rapid-fire shooting isn't available in many point-and-shoots. Most low-end cameras have a scene mode that boosts the ISO to harness a lot of light and uses the fastest shutter speed to catch a speedy subject. This tactic produces noisier images-and gives you only one chance at the perfect picture. The mode is usually called "Sports" or "Action" mode, and sometimes "Anti-Blur," "High Sensitivity," or "Kids and Pets" mode. Some cameras also have motiontracking autofocus, which locks on to a moving subject; such a function generally works best if your subject is wearing a bright color that's distinguishable from the surroundings.

In our action test shot, we finally found a shooting environment in which Auto mode performed about as well as a scene mode or manual settings did. Auto mode picked a fast shutter speed of 1/500 of a second and set an f/6.3 aperture to keep the background sharp. Although our subject's T-shirt and shoes had a bit of blur, Auto mode froze her in place.

For some reason, the "Kids and Pets" mode on our camera picked a slower shutter speed of 1/320 of a second; and in comparison with our Auto shot, the resulting image has a little more blur. It isn't as sharp when viewed at a larger size, suggesting that the autofocus had a hard time locking in.

As for our manual selections, we concentrated on using the fastest possible shutter speed. We shot at 1/1250 of a second, freezing our subject in place. Because of the fast shutter speed, our manual shot looks a touch darker-even underexposedbut it has no visible blur, and we would be able to crop or enlarge the image without seeing any ISO-related noise.

When shooting action, however, freeze-framing a moving subject isn't always the best look; in our test shots here, you can't tell how fast our subject was moving. With that in mind, you can use some alternative methods for capturing creative action shots. If your camera has adjustable shutter speeds, you can use them to make subjects in motion look like they're moving fast. By slowing the shutter speed and then panning the camera to follow a subject's movement, you can create evocative "blur trails" behind the subject.

Placing your camera on a tripod, pointing it at a moving scene, and using a very slow shutter speed is great for shooting nighttime traffic scenes or cityscapes: The background appears sharp and in focus, while moving cars are reduced to bright beams created by their head- and taillights. Using a slow shutter and a tripod is also a popular technique for capturing flowing water, as it smooths out the surface of the water in your photos while conveying a sense of motion. •



AUTO MODE SURPRISINGLY did a better job than the dedicated scene mode at freezing our fast-moving subject in place.



THE DEDICATED SCENE mode for fast-action shooting picked a slower shutter speed than Auto mode did, which we found odd.



BY USING THE fastest possible shutter speed in our manual shot, we were able to freeze time—but the image looks underexposed.



For product information, online tools and more go to www.crucial.com/pcworld



©2009 Lexar Media, Inc. All rights reserved, Information is subject to change without notice. Crucial and the Crucial logo are trademarks and The Memory Experts is a service mark of Micron Technology, Inc. All other trademarks are the property of their respective owners. Lexar Media, Inc. is a subsidiary of Micron Technology, Inc. Lexar Media, Inc. is not responsible for omissions or errors in typography or photography. Ad expires 30 days after publication.



Toshiba's Qosmio® series laptop gives you multimedia, entertainment and performance options you never thought possible. Whether you're watching hi-def movies, screaming through an action-packed game or creating your own multimedia—prepare to be dazzled. Because this high-performance laptop has all the right stuff.

C'mon you know you want it. See more at: www.newegg.com/ToshibaX505

Qosmio® X505 Series Laptop Starting at: \$1279.99. Save an Additional \$50 with Promo Code TQX505

X505-Q892 Intel® Core™ i5 Search Newegg: 34-214-050

\$127999

X505-Q888 Intel® Core™ i7 Search Newegg: 34-114-905

49999

X505-Q894 Intel® Core™ i7 Search Newegg: 34-214-051

\$**159999**

X505-O896 Intel® Core™ i7 Search Newegg: 34-214-052

\$**169999**

X505-O898 Intel® Core™ i7 Search Newegg: 34-214-053

See website for full specifications and latest price.

NVIDIA® Graphics with DDR5 high-performance discrete memory

Built for performance and speed, the NVIDIA® GeForce* GPU on this laptop provides premium power for the hottest FPS-intensive games.



Incredible 7.1 Surround Sound

Your favorite movies, music and videos will sound amazing on these booming harman/kardon* speakers, plus Dolby Home Theater® for full 7.1 surround sound.



Genuine Windows® 7 Home Premium

Get the best entertainment experience with Microsoft's latest operating system. Windows® 7 Home Premium makes it easy to create a home network and share all of your favorite photos, videos, and music.



ONCE YOU KNOW, YOU NEWEGG.®

PRICE - SERVICE - SELECTION Followus on: 🚷 📭













One-piece PCs have flooded the market this year, and they're surprisingly good. We help you choose the right system for you.







living room



kitchen



dorm room



child's room

by NATE RALPH · Illustrations HANNA MELIN · photographs ROBERT CARDIN

for the

A Workaholic's Tool of Choice

Having a powerful, dependable computer in your home office will keep you productive when you're away from the cubicle farm. As seasoned travelers know, Lenovo's ThinkPad laptops offer business-centric software and functionality designed to keep the machines running smoothly. If you're looking for the familiar ThinkPad touch in a large, powerful package, Lenovo's ThinkCentre M90z all-in-one has you covered.

Much like the laptops in Lenovo's ThinkPad line, the ThinkCentre M90z is a sleek, black box. It's attractive in its simplicity, with a spacious 23-inch display sitting on metal brackets. A 3.2GHz Core i5-650 processor powers the computer, which packs 4GB of DDR3 RAM and a 500GB hard drive. The M90z netted a score of 117 on our WorldBench 6 test suite: Few all-in-ones have more muscle, other than the significantly more expensive Apple iMac.

Toolbox Extras

The ThinkCentre M90z comes bundled with Lenovo's ThinkVantage Toolbox software. Like the corresponding utilities on Lenovo's business laptops, the ThinkVantage tools help keep your machine in working order-always handy, since your home office lacks a dedicated IT staff. The Toolbox can automate data backups and monitor your software and hardware drivers to ensure that they remain up to date.

The Toolbox tools regularly scan and analyze the M90z's hardware as well, to verify that the All-in-One's innards are working as expected, cataloging any hardware or software changes. That way, if something goes wrong, you'll have a concise timeline of critical events, which should make troubleshooting your software or rolling it back to an earlier,



multitouch gestures, if you'd like to add a bit of poking and prodding to your workflow. Lenovo has also added its own finger-friendly magic, with SimpleTap. A two-fingered doubletap on the display fires up the SimpleTap overlay, which presents a grid of large tiles that serve as shortcuts to frequently used apps and hardware controls. You can add shortcuts to any file, program, or Website you like, speeding up your workflow with an intuitive gesture.

Saddled with integrated graphics, the M90z is inadequate for serious gaming.

> The display offers a native 1080p resolution, and HD video playback is smooth and stutter-free, but images are far from vibrant. Colors appear muted even at the brightest display settings-

Lenovo's ThinkCentre M90z features a roomy, 23-inch multitouch display.

which tends to leave images looking a bit dull. You'll also want to replace the lackluster built-in speakers with a set of headphones or proper speakers.

The M90z comes with a total of six USB ports to accommodate external devices. Notably absent, however, are advanced connectivity options like Fire-Wire and eSATA, a disappointment for storage buffs. A multiformat card reader makes getting photos onto the M90z a snap, and the unit also offers a DVD burner. Built-in Wi-Fi connectivity helps reduce cable clutter, and VGA and DisplayPort connectors invite you to add a second monitor to your workstation.

Lenovo's ThinkCentre M90z packs a lot of muscle into a svelte package. The home-theater experience is a bit lackluster, despite excellent video playback, due to subpar speakers and a dull picture. But for a work-focused PC user, the M90z combines strong performance and a robust software platform in a package that will simplify your workspace.

for the LIVING ROOM A Media Maven's High-Def Hub

The Internet is a treasure trove, with music, movies, and television shows available on demand, so you aren't beholden to your cable provider's schedule or programming lineup. You could wait for a Web-connected TV to hit all the right notes. But if you want a taste of what the Web has to offer, without having to replace your television set, HP's TouchSmart 600 Quad offers you a lush display, great speakers, and an intuitive, touch-optimized interface.

A 1.6GHz Core i7-720QM processor and 6GB of RAM power this 23-inch all-in-one. The i7-720QM (a CPU more commonly used in notebooks) supports Intel's hyperthreading and Turbo Boost technologies, delivering power and performance while keeping energy consumption and heat levels lower than a full-fledged desktop processor would. The TouchSmart 600 Quad earned a score of 104 on our WorldBench 6 test suite-not bad, but a bit low for an allin-one of this size. The PC comes with a 1TB hard drive, providing lots of room for your music and movie collections.

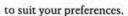
The 23-inch display has a native resolu-

tion of 1920 by 1080 pixels-perfect for viewing 1080p high-def video-and the machine includes a slot-loading Blu-ray drive and customizable ambient lighting for setting the movie-watching mood.

HP's TouchSmart software features touch-friendly desktop versions of Hulu, Netflix, and Twitter, and other popular Web destinations. These full-screen widgets are snappy and responsive, thanks to the PC's quad-core processor, and they make sifting through your music, movies, or favorite Websites simple.

Keep Your Head Ringin'

But HP's TouchSmart 600 Quad has another trick up its sleeve: Beats Audio, the high-def audio processing technology that powers Dr. Dre's signature headphone line. The system's stereo speakers deliver impressive audio fidelity, filling a room with sound without sacrificing quality. As you'd expect from equipment endorsed by a hip-hop legend, the bass is strong, but it doesn't overwhelm the experience. Audio is crisp and lively, and the Beats audio processing lets you fine-tune the sound The HP TouchSmart 600 Quad delivers excellent multimedia output.



Of course media aficionados won't rely on HP's bundled speakers. Audio output ports let you connect a proper stereo system, so Beats' audio processing technology can really shine.

The all-in-one's five USB ports leave room for external devices, in case your media collection exceeds the available hard-drive space (1TB); and a multiformat card reader makes loading pictures onto the PC easy. From there, you can use TouchSmart widgets to browse image files and create sharable collages. The system's Bluetooth connectivity, wireless keyboard and mouse, and included remote control optimize your on-the-couch experience. The Touch-Smart 600 Quad also provides a range of display input ports, so you can plug in your video game console of choice and use the TouchSmart as a display.

Plenty of connectivity options, stellar audio and video quality, the flexibility to serve up whatever media you're in the mood for, along with room for a spot of gaming: HP's TouchSmart 600 Quad is a solid buy for the multimedia enthusiast who wants it all.



for the KITCHEN
A Master Chef's Digital Cookbook

Touchscreens are showing up in many all-in-one desktops these days, but your kitchen is one place where planting and dragging your fingers all over a screen probably isn't the best idea. The chef de cuisine needs a compact, Internetconnected hub that's strictly a handsoff experience-and HP's All-in-One 200-5020 fits the bill.

This 21.5-inch all-in-one PC is armed with a 2.7GHz Pentium Dual Core processor, 4GB of DDR3 RAM, and a 500GB hard drive. The processor falls toward the lower end of the performance scale, but it's no slouch, earning a strong score of 104 on our World-Bench 6 test suite. The All-in-One 200-5020 forgoes multitouch, too, leaving you to rely on a keyboard and mouse.

With a native resolution of 1920 by 1080 pixels, the All-in-One 200-5020 is just right for high-definition (1080p) video, so you can easily catch up on an episode of Iron Chef while waiting for your bread dough to rise. The LEDbacklit screen does an excellent job of color reproduction, preserving minute details without fuzziness or distortion.

The View From the Range

A wide range of viewing angles keeps the screen's content visible at all but the most extreme angles. You'll appre-

ciate the display's clarity as you steal occasional glances at your culinary Webcast of choice while working at a stove located several feet away.

Size is the key factor here: 21.5 inches of screen real estate is a fairly generous amount, yet the slender chassis prevents the all-in-one from gobbling up too much counter space. Wi-Fi connectivity is crucial when

you want a system with as few wires running out of it as possible, and the 802.11n connection keeps the unit tied to the Web without introducing any new cables into the mix. The bundled keyboard and mouse are wireless, too, complementing the clutter-free package. A multiformat card reader makes

loading pictures onto the machine and sharing them with friends a snap. For an even more interactive approach, you

> can record your gastronomical exploits via the included Webcam, so your You-Tube fan base can marvel as you prep peerless grilled cheese sandwiches. And with the included DVD burner, you can document your expertise, and mail the resulting DVDs to friends

who missed out on your live Webcasts.

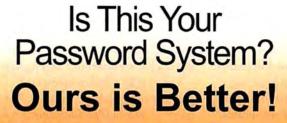
Kitchen space is precious, of course. But in case you have some extra room for expanding your hardware options, the all-in-one's seven USB ports give you ample opportunities for connecting various external devices. The audio quality of the built-in speaker bar is passable on its own, but you also get audio outputs for a proper 7.1-channel surround-sound system.

Though it lacks some of the niceties that you'd find in a larger, touchscreenequipped model, HP's All-in-One 200-5020 will be right at home wherever desk or counter space is scarce.

HP's All-in-One 200-5020 uses a no-touch screen along with wireless input devices.



"25 Products We Can't Live Without" March 2008





Amazingly fast and easy to use, RoboForm automatically:

- ✓ Remembers your usernames and passwords.
- ✓ Logs you into all your favorite websites.
- ✓ Reduces your many passwords to just one.
- ✓ Increases security and helps protect your identity.
- ✓ Fills long forms and so much more!

We've been saving you time and making your life easier since 1999. More than 26 million downloads, and over 100 five star ratings later we are by far the World's #1 Rated Password Manager.

RoboForm has earned prestigious recognition including PC Magazine Editors' Choice, CNET's Best Software of the Year, and PC World's "25 Products We Can't Live Without."

PC World Readers
Download RoboForm
for FREE!



www.RoboForm.com/PCW

RoboForm Enterprise is also available for your business - Learn more at RoboForm.com/Enterprise

for the DORM ROOM A Cash-Strapped Student's Bargain

Faced with the daunting prospect of paying for books, food, lodging, and tuition, a cash-strapped college student is bound to scrimp wherever possible. But you should resist the temptation to save money by purchasing a bottom-ofthe-line laptop. Notebook PCs do have portability on their side, but finding one that delivers competent performance and adequate storage without breaking the bank is a dicey proposition. An all-in-one PC is too large to tote to class, but the money you'll save on it over a similarly equipped laptop will buy a lot of peanut butter.

The Acer AZ5700-U2112 serves up a plenty of speed and media features for a cool \$1000-and if a mobile PC is a must, you'll have saved enough cash over a comparable laptop to pick up a decently equipped netbook, too.

The 23-inch AZ5700 runs on a 3.2GHz Core i5-650 processor and carries 4GB of RAM. It earned a mark of 119 on

WorldBench 6, easily outpacing similarly priced laptops and finishing near the top of the all-in-one PC food chain.

Beyond its very solid performance, the AZ5700 provides 1TB of storage space; that's plenty of room for archiving every last assignment and-who are we kidding?-holding music, movies, and whatever else students need to pass the time between deadlines.

The Screen's the Thing

The all-in-one's main draw is its 23-inch screen. Its multitouch screen supports Windows 7's gestures, as well as Acer's Touch Portal software-a collection of widgets that offer quick access to popular Web destinations and to music and videos stored on the PC. Large, bright buttons located on the touch-optimized browser simplify fingertip browsing. The Asus has a program for automating software and hardware driver updates, which should help keep your machine

For just \$1000, the Acer AZ5700 delivers solid performance.

......

in prime shape while minimizing the need for manual intervention in the process.

The AZ5700's HDoriented display has a native resolution of 1920 by 1080 pixels. Video playback is smooth and crisp, despite the system's integrated graphics. Image quality is impressive, too, with excellent color reproduction, so the pictures you load onto the machine via the multiformat card reader will look great. The system also offers a DVD burner-for the price, a Blu-ray player just isn't feasible.

A built-in TV tuner completes the media-friendly package. Thanks to Windows 7's built-in DVR functionality, you can record all of your favorite shows, and the bundled remote control invites you to re-create the living-room experience in your cramped dorm room. The included keyboard and mouse are wireless, so you can switch back to the paper you're supposed to be writing, should friends swing by to check in.

The built-in Webcam offers a convenient way to keep in touch with your folks back home, and included software lets you spice up your video chats with silly animations and the like. A video surveillance mode gives you the technology to catch your roommate redhanded and demand compensation for pilfered beverages and snacks.

There's a lot to like in this all-in-one, but the AZ5700's strongest asset is its price tag. The PC is a great machine for work and play, and its price won't reduce you to subsisting on ramen for the next semester. You get good value in a fairly attractive frame, and the system is versatile enough to power you quickly through your work assignments, while shining as an after-hours media hub. >>







But backing them up automatically is just \$55 a year.

Imagine how devastated you'd feel if you were to lose irreplaceable files from your computer. For just pennies a day, Carbonite™ Online Backup will make sure that never happens.

Carbonite automatically encrypts and saves your files to secure offsite data centers. It's quick and easy to set up on both PCs and Macs. Should anything ever happen to your computer you can easily restore your files. And you can securely access them anywhere—even from an iPhone or BlackBerry® smartphone.

Visit carbonite.com and use offer code CB164 to start your 15-day FREE Trial and get an additional 2 months FREE with purchase.

- · Unlimited online backup
- Backs up files automatically
- Encrypts your files for privacy
- Easy setup for PCs and Macs
- · Works quietly in the background
- Access your files from any computer, iPhone or BlackBerry®

Try it FREE now at carbonite.com

or call 1-800-327-0839

Use offer code CB164 to start your FREE Trial and get **2 MONTHS FREE** upon purchase.





Act now to protect your valuable computer files.

x Records nancial Records mail etters

Business Plans Calendars Contacts Photographs Music Homework Documents Bookmarks Graphics Payments Videos Recipes

for the

A Multipurpose Machine for the Gaming Tween

For the youngest computer users in your household, you'll want to set up an all-in-one that meets their not-toodemanding needs for work and play. But a dollop of panache doesn't hurt. For the tween in your life, we turn to Lenovo. Though the company generally means business, the IdeaCentre B500 all-in-one is anything but plain.

If you have any familiarity with the Transformers-or if you have an affinity for motorcycles-the B500's angular chassis should bring a twinkle to your eye. Clad in a shell of black, chrome, and orange, with sharp lines and accents, the B500 has a strikingly handsome, almost aggressive appearance.

Equipped with a 2.66GHz Core 2 Quad processor and 4GB of DDR3 memory, the B500 earned a World-Bench 6 score of 108, marking it as a strong performer. And the all-in-one's 1TB of hard-drive storage space leaves plenty of room for your child's music, movies, and homework.

Worker's Playtime

Once the chores are done, the system's nVidia GeForce GTS 250M graphics card lets your kid celebrate with some games. The B500 earned impressive scores on our gaming benchmarks: 73 frames per second in our Unreal Tournament 3 test, and 80 fps in Call of Duty 4, at a resolution of 1680 by 1050

The screen is bright and attractive, with a native 1920-by-1080-pixel resolution. The included Bluray player lets Junior view

pixels, with the settings

cranked up high.



his favorite flicks without tying up your dedicated media center. For youngsters who prefer to obtain their media from traditional sources, the built-in TV tuner will help keep them in touch with their favorite television shows. There's a remote control too, for replicating the couch-potato experience in the comfort of their own kid-cave.

The rear end of the B500 is as striking as the front, with a bright, almost neonorange grille that accents the chrome backplate. Six open USB ports are

available for adding external

devices such as portable hard drives or gaming peripherals. The system's built-in Wi-Fi connectivity means that you don't have to figure out how to snake an ethernet cable into your child's room without tripping everyone who enters. The bundled keyboard and

mouse are wireless, too, and they connect to the B500 over the machine's integrated Bluetooth transceiver.

Missing from this all-in-one's feature set is a touchscreen. That means your tween won't be able to take advantage of Windows 7's gesture support; but on the other hand, it also means you won't have to research how to safely remove gummy-bear fingerprints and Cheetos residue from the display panel. The system affords some measure of built-in protection against your child's roving curiosity, too: the B500 includes Lenovo's Vantage Technology suite, a consumer-oriented version of the company's ThinkVantage software utilities, which handle hardware drivers and software updates automatically, and provide system recovery tools for fixing mishaps more easily, should your progeny have an unfortunate propensity for indiscriminately downloading toolbars that stubbornly resist uninstalling.

Lenovo is well known for its relatively drab business machines, but the Idea-Centre B500 couples performance with an expressive flair that kids (and adults) are likely to appreciate.

No multitouch feature means fewer cleanup problems for the Lenovo IdeaCentre B500.





CATAR



Gamer Paladin D885

- · Intel® Core™ i7-950 Processor
- Genuine Windows* 7 Home Premium 64-Bit Edition
 Gigabyte GA-X58A-UD3R, USB3 + SATA3 Motherboard
- NVIDIA® GeForce™ GTX480 1536MB Video Card
- Thermaltake V9 Green Gaming Case + 800W SU™ Certified Power Supply Intel® 40GB SSD (Boot) + 2TB SATA3 HDD (Data)
- Liquid CPU Cooling System with 120mm Radiator
- High Definition Surround 3D Premium Sound









 Intel® Core® i7-980X Processor Extreme Edition \$2689 • Intel Core i7-970 Processor \$2549 · Intel Core 17-960 Processor

· Intel Core 17-950 Processor







\$2219 \$1929





Power Supply - 1TB SATA-II Hard Drive High Definition Surround 3D Premium Sound



\$1069

\$1034



LAN Warrior II-55





\$939

\$904

\$1029

· Intel Core 17-875K Processor Intel Core i7-870 Processor

· Intel Core i3-540 Processor \$829 • Intel® Core® i5-750 Processor • Intel® Core® i5-670 Processor

· Intel* Core i5-660 Processor \$929 · Intel Core i5-655K Processor \$934 · Intel Core i5-650 Processor

Toll Free: 888-462-3899



www.ibuypower.com

All-in-One PCs

to SUIT DIVERSE NEEDS

Each of these systems delivers excellent service for a specific group of tasks: home office use, kitchen service, home entertainment, college student support, or preteen activities.

MODEL		Rating	Performance	Features and specifications	Bottom Line
	Lenovo ThinkCentre M90z \$1100 find.pcworld.com/70855	**** SUPERIOR	WorldBench 6 score: 117 WorldBench 6 rating: Superior Overall design: Very Good	3.2GHz Core i5-650 4GB of RAM; 500GB hard drive Intel integrated graphics DVD±RW drive	An all-in-one for businesspeople, the ThinkCentre M90z may skimp on audio, but it offers strong performance on a secure platform
	HP TouchSmart 600 Quad \$1800 find.pcworld.com/70856	**** SUPERIOR	WorldBench 6 score: 104 WorldBench 6 rating: Superior Overall design: Very Good	1.6GHz Core i7-720QM 6GB of RAM; 1TB hard drive nVidia GeForce GT 230 Blu-ray drive	The TouchSmart 600 Quad delivers strong media-theater functionality to complement the signature style of the TouchSmart line.
I'a	HP All-in-One 200-5020 \$780 find.pcworld.com/70857	**** VERY GOOD	WorldBench 6 score: 104 WorldBench 6 rating: Superior Overall design: Good	2.7GHz Pentium Dual Core 4GB of RAM; 500GB hard drive Intel integrated graphics DVD±RW drive	It lacks a touchscreen, but this petite all-in-one offers a lush display and surprisingly strong performance for its size.
	Acer AZ5700-U2112 \$1000 find.pcworld.com/70858	**** SUPERIOR	WorldBench 6 score: 119 WorldBench 6 rating: Superior Overall design: Very Good	3.2GHz Core i5-650 4GB of RAM; 1TB hard drive Intel integrated graphics DVD±RW drive	Tackling media and applications with aplomb, Acer's AZ5700-U2112 offers features and style that are typical of far pricier machines.
	Lenovo IdeaCentre B500 \$1400 find.pcworld.com/70859	***** SUPERIOR	WorldBench 6 score: 108 WorldBench 6 rating: Superior Overall design: Very Good	2.66GHz Core 2 Quad 4GB of RAM; 1TB hard drive nVidia GeForce GTS 250M Blu-ray drive	Lenovo's IdeaCentre B500 brings together a bold, eye-catching design, outstanding performance, and an integrated TV tuner.



and what about

WE CAN'T HAVE a complete discussion of all-in-one PCs without mentioning the line of machines that has come to define the category: Apple's iMac. The latest model in that line, the 27-inch Core i7 iMac is the largest of the all-in-ones we've seen. Equipped with 4GB of RAM and a 2.8GHz quad-core processor, it's also the fastest, netting a score of 128 on WorldBench 6. And it's gorgeous, if you're a fan of brushed metal.

Alas, the iMac ships without a Blu-ray drive, a TV tuner, and HDMI or eSATA ports. And the Apple all-in-one is pricier than most of its Windows-based counterparts, too; keep that in mind as you ogle the chassis and weigh your options.

FREE EDUCATIONAL RESOURCES FOR PHOTOGRAPHERS AT EVERY SKILL LEVEL



TUTORIALS



HOW-TO ARTICLES



PRODUCT REVIEWS



WORKSHOPS @ADORAMA



BUYING **GUIDES**



WATCH. LEARN. CREATE.

VISIT US AT ADORAMATY.COM, ADORAMA.COM/ALC OR THE ITUNES STORE.

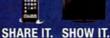












ADORAMA.COM

VISIT OUR STORE 42 W 18 ST [5+6 AV] NYC 800-223-2500

Four Projects to Automate Your Home

Teach your PC and smartphone to turn on the lights during a midnight bathroom break, lock the doors, wake you up (with coffee!), and more.

BY ZACK STERN

THE HOME OF the future unlocks the door and turns on the lights when you arrive, brews coffee to start your day, and automatically waters the garden. But you can create a smart home that does all of those things today, without paying a contractor thousands of dollars.

The Pieces You Need

An automated home has three key parts: a computer; software; and automationaware devices. The computer and software are your home's "mind," so you'll want to run automation software on an always-on system, such as a server.

HomeSeer Windows automation software has good power and supports a range of automation protocols, but its interface is often clunky. The lower-tier HS2 version costs \$220; the high-end HSPRO edition is \$600. Though the basic tools have the same interface, HSPRO bundles many



extras, including iPhone control, that are paid add-ons for the basic edition. (For more about the differences, see find.pcworld.com/70769.)

The PC software automates your home's devices and

sensors-lights, appliances, a stereo, motion sensors, a thermostat, and so on. Many devices, such as light switches and thermostats, are available in automated versions, but you can add almost anything. If a device runs on electricity, you can connect to it an automation-aware box that toggles the power.

For internal communication, your automated home needs to use a specific protocol. X10, which sends signals over a home's power lines, ruled the market for decades. But X10 can drop messages, misinterpret cable noise as instructions, and bleed into your neighbors' wiring. Though Insteon, another power-line technology, addresses those problems, they still crop up.

HomePlug and Universal Powerline Bus are more reliable than prior power-line protocols, but fewer compatible devices are available for those two standards.

The newer protocols communicate over radios instead of via your power network.

> Over a wireless connection, the devices can create a mesh network to pass messages among themselves through your house, from end to end, so range is rarely an issue.

The best wireless options are Zigbee and Z-Wave. Because Zigbee is an open standard, competing companies such as AMX, CentraLite, Control4, and Crestron have produced Zigbee devices that may not



ONCE YOU GET accustomed to the way the setup process works, you'll find that configuring your home-automation system is extremely simple.

work with other companies' products. The newer Zigbee Pro protocol mandates a spec based on Control4's example, but very few Zigbee Pro devices are available.

In contrast, a single company controls Z-Wave's protocol, and it's widely adopted. The hundreds of Z-Wave devices from different companies almost always work together seamlessly.

Whichever protocol you select, you'll need a PC adapter that speaks that language. I tried out the Aeon Labs Z-Stick Series 2 Z-Wave USB System Interface, available for about \$65.

Configure a Gentle, Automatic Night Light

Your smart home should begin with lighting control. Once you understand some lighting basics, you can configure almost anything.

Many Z-Wave lighting controllers are on the market. You can get boxes to install between a lamp and an outlet, replace current wall switches with Z-Wave controllers, or insert an adapter between the bulb and the socket. You'll pay about \$30 to \$80, depending on the module. Just be sure to choose hardware that's rated for your application, such as fluorescent versus incandescent lighting.

To configure a hallway lamp, first attach a lamp module to your outlet. You'll use a Z-Wave remote to connect the lamp module to your Z-Wave network: Position



MAKE SURE THE ports are correctly assigned in Device Manager—this controller is on COM4.

the Z-Stick Series 2 (or a similar computer adapter) next to the lamp module. Push the button on the USB adapter, and push the main button on the lamp module. The two will pair, and the USB adapter will store this information for the PC.

Turn your lamp on, and connect it to the Z-Wave module. (The lamp should stay dark at this point.)

Connect the USB adapter to your PC. Install any driver software if needed, and import the lamp details into the HS2 software. You configure the software in a Web browser. Attach the Z-Wave USB adapter by clicking to the Interface tab.

Be sure to configure the correct COM port. With the USB adapter attached, open Device Manager and choose Ports. Check the port number of the USB stick. and enter that in the HS2 configuration page; if you have the wrong COM port, the software won't show the adapter, and it

won't reveal a clear error either. When you've configured the software properly, you can import all of the details about the Z-Wave lamp module.

You can now control the lamp from your PC, turning it on, shutting it off, and setting the brightness. That's a good start, but your home won't be truly smart until it can sense its environment and configure devices automatically. Let's say

that you want to install a motion sensor in the hallway; to do so, just configure the USB adapter and add the Z-Wave motion sensor just as you did the lamp module.

Now that your PC can recognize motion in the hallway and can control the lamp, you should set up a "scene" to connect the two. If, for instance, you typically get up to use the bathroom at night, you can set the lamp to automatically turn on only at night, and to do so at just 40 percent brightness.

Arrange this in the Events tab in HS2. Under the Trigger

setting, add the Z-Wave motion sensor, and specify that this behavior should happen only at night. Under the Action tab, set the lamp to turn on at low brightness.

Control Your Home Security System

Once you understand homeautomation basics, you can install additional modules-Z-Wave-enabled thermostats, faucet switches for irrigation, door sensors, and much more-to make your home even smarter.

You can boost your home's security, too. ADT is launching a Z-Wave-enabled service, ADT Pulse, that works with many devices. (An ADT representative told me that only ADT-approved Z-Wave devices are supported; I anticipate that any Z-Wave hardware could work, but Pulse wasn't available for testing in time for this article.)

ADT's system (\$47 to \$60 per month after up-front hardware fees ranging from \$399 to \$1299) will monitor and control your home, including disarming your security system from your phone. ADT Plus should be available across the United States by the time you read this.

You don't have to pay monitoring fees to automate your home security, however. A number of Z-Wave-enabled door locks and deadbolts can help your smart home recognize when you are manually opening them (and can automatically open them for you in certain situations, as well).

Black & Decker, Kwikset, and Schlage make >>

THE SCHLAGE ILINK Deadbolt communicates with a Z-Wave network so that







Z-Wave deadbolt locks that run from about \$200 to \$400. You install the lock, and then connect it to the HS2 software.

The locks include keypads for password entry. so within the software, you can program specific codes for certain people, such as a dog walker. You can also set each code to allow access only at a certain time of the day. Since the locks send Z-Wave updates when opened, the HS2 software could e-mail you each time your pup gets picked up, for example.

Control Your Home From Anywhere

You can also check on your smart house while you're at the office or on vacation. Most home-automation software has an online component, but some companies charge extra for the service.

You don't have to pay anything else if you have a VPN or remote-access setup. With LogMeIn Hamachi or another free VPN app, your remote PC will act as if it were on your home network; after establishing the link, you simply connect to your software's Web server.

Another option is remote-access software such as GoToMyPC for connecting directly to your server PC so you can control the automation system in a window as if you were there.

Software made for the iPhone and other smartphones can work in both situations: You can run a remote-access app or connect to a VPN. Native



FOR BETTER HOME security, you can deny browser access to the home's automated controls to any user who doesn't supply an approved password.

iPhone software can control your home devices from anywhere, however. The free HSTouch works with HSPRO (or you can add it to HS2), giving an app view into your automated home. To set it up at the HSPRO configuration Web page, click Interfaces and then select Disabled next to 'HSTouch for iPhone'. Click Save at the base of the page.

Wake Up in Luxury

Home automation works for utilitarian tasks-configuring the system to inform you by e-mail if it senses a water leak, for example-but it should offer a dash of luxury, too. Here's how to configure the ultimate weekday wake-up.

Half an hour before your

7:00 a.m. reveille, your house can begin brewing coffee for you. All you need to do in advance is set a dumb coffeemaker in the 'on' position and connect it to a Z-Wave appliance module that controls its power. When you configure your software, set the script to signal the module to turn on electricity to the coffeemaker at 6:30 a.m.

As the aroma wafts up to your bedroom, your lights can gently turn on. Schedule the Z-Wave-enabled light dimmer to gradually increase the brightness between 6:50 a.m. and 7:00 a.m.

At 7:00, your system can play your favorite MP3s or tune in to a streaming-audio station. HS2 can work with

many audio devices, such as a PC running iTunes. I chose to connect mine to a stand-alone Logitech SqueezeBox. If you want to do the same, begin by installing the SqueezeBox Plug-In (\$40). In the HS2 Web interface, choose Interfaces, and then select Install more interfaces. Click Next, wait for the page to load, and then click Next

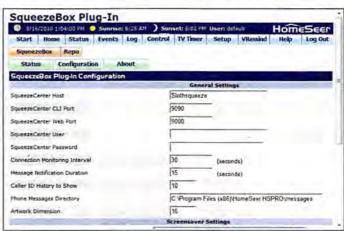
again. Check the box next to the plug-in, and click Next once more. After you have installed it, you can configure it in your script.

And that's just the beginning. You could have the system open your shades, turn on the shower, and do nearly anything-simply add more sensors and modules.

Set up a system that triggers a Z-Wave garage-door opener and starts your car on a winter morning. Add a network camera so your house can e-mail you a picture of the kids when they get home from school. Use a Z-Waveto-IR translator with your home entertainment system to dim the lights, make popcorn, and start a movie-all

with one button press.

If the particular Z-Wave device you want doesn't exist, why not hack your own? You can easily wire Z-Wave relay switches to electronic devices to close a low-voltage circuit instead of toggling power, yielding a self-contained electronic pet feeder, a variable-speed fan, or even an NES controller. Want to unlock your smart home's game room by punching in the Konami code? You can.



THOUGH THE INTERFACE for the Logitech SqueezeBox Plug-In is ugly, it lets you configure and control a SqueezeBox player through your system.

Are you ready

You're a technology expert, and you have the valuable insight that we're looking for about a wide variety of personal and business technology topics. We want to hear what you have to say. Please join us on the PC World Connect Member Panel. You'll partake in exclusive member surveys and receive access to special offers, contests, and events.

Learn more at www.pcworldconnect.com

to connect?

PCWorld Connect.com

10 Things to Know Before You Buy an HDTV

HIGH-DEFINITION televisions have come a long way in just the past two years. In 2008, a 1080p HDTV set was still a high-end item; today, it's pretty much the norm (as it should be for optimal Blu-ray Disc playback). LEDbacklit sets were only beginning to appear back then, and their price tags were astronomical-Sony charged \$5000 for its first 46-inch LED-based Bravia. These days, such models are widely available, and their prices have dropped dramatically.

TV features have diversified, too. Many sets today are networkable and come with built-in software that affords easy access to popular Internet sites and services such as Netflix on Demand, Twitter, and YouTube.

Support for playing back still images, music, and video has grown by leaps and bounds, but it varies widely among vendors and models. This is something you can easily look into online, along with information on connectivity options (such as how many HDMI, componentvideo, and other inputs you get, and how well they match up in format and number to your media sources).

These and other changes in the high-def landscape have definitely affected what you see in stores when you shop for an HDTV. Much of our past advice about shopping wisely (see find.pcworld.com/ 70811) and avoiding HDTV showroom pitfalls (see find. pcworld.com/70812) still applies, but here are a few updated pointers for you to

From sneaky salespeople to misleading movie demos, buying a new HDTV can be tough. Here's how to see through the in-store demo tricks and save money on the set that's right for you.

keep in mind as you check out today's increasingly sophisticated television sets.

1. Forget old flat-screen technology notions. It used to be easy to see the difference between plasma and LCD sets. The plasmas were larger, with a cinematic picture

to achieve very dark blacks, and we're seeing more and more of these sets in the 46to 50-inch category, where plasma once ruled supreme. So when you're in stores, don't judge a TV set on its flat-screen display technology alone. For an extended

long run on your power bill.

At the very least, try to research the set's energy consumption (we test this in the PCWorld Labs for all the sets we review), and don't just settle for vague Energy Star claims (although compliance with current Energy Star standards is obviously better than noncompliance).

3. Bring your own test content. Many issues that may arise in real-world use won't



quality that resulted from their ability to achieve very dark blacks and to handle fast motion; LCDs were smaller and very bright.

But those distinctions are fading in the 40- to 50-inch sweet spot, especially with the arrival of LCDs that use full-array LED backlighting with local dimming (as opposed to less expensive but typically not as attractive edge-lit LED backlighting).

Local dimming-the ability to dim individual LEDs or groups of LEDs to produce dark tones-allows LCD TVs discussion of current distinctions in HDTV technologies, see find.pcworld.com/70813.

2. Factor in the cost of energy consumption. This plasmaversus-LCD distinction has become even more significant in recent years. LCDs have always consumed less power than plasmas have, but LED-backlit LCDs are even more energy-efficient than their CCFL-based cousins. If you're a heavy-duty couch potato, you might want to pay a little more for a high-quality LED-backlit set; you'll save money in the

be apparent in the video loops or live programming that sets in stores display. As we've said in the past, the ideal setup would be to look at a Blu-ray Disc movie on a player connected to the TV via an HDMI cable.

If you might use your set to view content from other sources, bring any devices you plan on using, from USB flash drives (SD Card viewers are becoming increasingly rare) to camcorders, netbooks, or even some cell phones. Persuade the sales reps to let you hook them >>









For details, please visit www.intsig.com

up-and load them with content that will stress the set. A few examples follow.

4. Look for movement in pictures. By that, we mean elements that jiggle when they should instead remain perfectly still. Do straight lines in buildings or brick walls wiggle in panning shots?

Do you see moiré effects in certain fabrics or other patterned surfaces? In our juried tests we particularly look for these issues in certain scenes in the Blu-ray releases of Mission Impossible 3 and The Dark Knight.

5. Examine pictures with movement. In this case, you are looking for similar problems that stem from the set's handling of sweeping movement. Do you notice fixed shadows in panning shots (which can happen with some edge-lit LEDbacklit sets)? Do details become blurry? In our lab tests of HDTVs, performance on motion has increasingly become a big differentiator between television sets.

Again, this was once plasma's forte, but now we're seeing LCDs with increasing refresh rates (240Hz and even the odd 480Hz set at the high end, as opposed to 60Hz and 120Hz a couple of years ago), plus proprietary technologies for dealing with motion. Don't simply depend on the numbers or marketing hype, though. Do your own testing.

6. Have the set put in homeuse mode. Almost all current HDTVs have first-time-use wizards that begin with the option to put the set in home-use or store-demo mode-and it's a pretty safe



SOME POORLY ADJUSTED TVs will show buildings whose windows or facades appear to 'wiggle,' due to off-kilter motion-blur functions.



THE BRICK WALL in this scene from a movie is a good place to look for artifacts such as moiré patterns. Do the bricks seem to wiggle?

bet that what you see in a showroom is the latter.

Store-demo mode turns the brightness way up because people are attracted to bright images, but in a darkened living room the same picture might look annoyingly glaring. Ask the sales rep to let you see what the default home-use setting looks like (usually you can run the first-time setup routine again from the HDTV's settings menu).

7. Inspect the presets. Most HDTV models have preset picture modes that adjust key image controls (brightness, contrast, tint, and the like) to optimize for games,

sports, movies, and so on. Check them out; most menus allow you to see how changes affect whatever you're watching. Make sure that you have a way of creating a custom preset or two, in case you don't agree with the vendor's tastes.

8. Love the skin you're seeing. Do you like the colors you see on the television? One good way to answer this question is to look at clips with people and adjust the set's picture controls so that the skin appears lifelike and pleasing-and then check whether everything else on the screen looks good to you.

If you're enjoying bright

colors in a scene, make sure that the people in it don't look sunburned—a problem we notice when some colors are oversaturated.

9. Don't use animated material for your tests. There's a reason many vendors choose popular animated features as the content to display on their sets-and it's not because they're family friendly. Today's computer-generated cartoons look great on almost all digital displays.

For your test video content, you're much better off using live-action movies or TV shows, which can't always be engineered to perfection. As for gaming shots, unless you plan on playing lots of games on your HDTV set, you don't really need to pay attention to the vendor's gaming demo footage.

10. Look and listen. Because most big-box stores display dozens of HDTVs in closely packed rows, you don't get to hear what any of them sound like. Of course, if you plan on hooking up your set to a home theater audio system or to other external speakers, this isn't an issue.

If you do plan to use the television's audio, though, see whether you have a Bluray movie that you can use to test the surround-sound capabilities of the set. Fortunately, the built-in audio on HDTVs is improving on newer sets, with morerobust speakers and with surround-sound simulation that is increasingly capable. Some sets even have threespeaker systems. But again, don't judge on the specs alone—listen for yourself.

-Yardena Arar



MAKE SURE YOU can adjust the set's picture controls so skin tones look lifelike; then see if everything else on the screen is pleasing.

YOU ASKED, WE BUILT



MAINGEAR SHIFT with Super Stock Options Pushes the Limits

Our customers' feedback has always been the foundation of MAINGEAR's difference and when we hear they want more power and design options, we listen. Through research and testing, MAINGEAR introduces Super Stock option upgrades with performance and design enhancements to satisfy customer needs. MAINGEAR's Redline™ overclocked Intel® Core™ i7 processor Extreme Edition up to 4.5GHz, NVIDIA® GeForce® GTX 480 graphics cards in 3 way SLI®, and MAINGEAR's LiquidX 2700 or 2900 Super Cooler package in our exclusive patent pending vertical heat dissipation chassis, you'll have one hell of a beast running silent, cool, and powerful. Throw in NVIDIA's 3D Vision bundle for the absolute best 3D PC gaming and entertainment experience. With nearly 200 car quality, hand painted color options, for both the interior and exterior of the chassis, the look will speak for itself. Experience the MAINGEAR difference with Super Stock Options.

Visit: WWW,MAINGEAR.COM/PCWORLD to learn more about the Super Stock options



Open Your Favorite Daily Sites With Just One Click

MOST OF US have a batch of favorite sites we like to hit every morning (with or without a hot beverage). For example, I routinely head to PCWorld, followed by Gizmodo, TV Squad, Facebook, WeatherBug, and Lifehacker.

Firefox add-on Morning Coffee (find.pcworld.com/70814) instantly loads those and other designated favorites into their own tabs, effectively splaying them out across my browser like the sections of a newspaper.

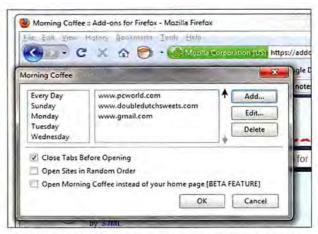
After installing the add-on, you'll see a new coffee-cup icon to the left of the Firefox address bar. Head over to a

site that you want to designate as a favorite, click the down arrow next to the coffee cup, and then mouse over Add to My Morning Coffee.

In the resulting menu, you will see choices like 'Every Day', individual days of the week, and 'Weekends'. And Morning Coffee lets you designate different favorites for different days of the week.

For example, you might want to look at work- and business-related sites during the week but leisure-oriented stuff on the weekend.

To manage your picksremoving entries, changing the display order, and the



THE MORNING COFFEE add-on for Firefox lets you designate precisely when to display specific favorite sites—daily or only on certain days.

like-click that same down arrow and then choose Configure Morning Coffee.

Savvy Firefox (and IE) users know that they can configure the browser to load multiple "home" pages at startup automatically-but that's not quite the same thing.

With Morning Coffee on

hand, loading your favorites is optional-and just a click away. After a few days of enjoying this convenience, you'll wonder how you ever got along without it. Morning Coffee just brewed its way onto my list of musthave Firefox add-ons.

-Rick Broida

ANSWER LINE

How do I convert a collection of vinyl records from analog to digital form?

-Ferenc Hutterer

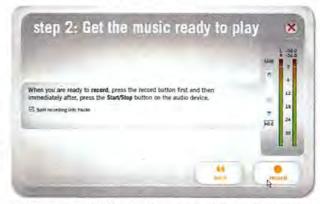
YOU CAN DIGITIZE your analog music collection in various ways, but the resulting sound quality is always disappointing. And any analog-to-digital transfer done from an LP in your home is almost certain to be inferior to one done from the master tape in a studio.

That's why I prefer to buy the music again as easy-to-rip CDs or as downloads. For downloads, I recommend buying from a site that

sells unprotected MP3 files. such as Amazon and Napster, so you can play it as you like.

If your vinyl collection is big, repurchasing everything may be prohibitively expensive. But transferring them all may be prohibitively time-consuming. So you have to choose between your money and your time. (For out-of-print songs, transferring may be your only option.)

The easiest way to transfer songs is with a USB turntable. You set it up, plug it into a PC,



MIXMEISTER'S EZ VINYL/TAPE Converter simplifies the file-ripping process by providing a few basic, easy-to-master manual controls.

ASK YOUR QUESTION AT FORUMS.PCWORLD.COM

install the bundled software, and rip away. The Ion Profile LP Vinyl Conversion Turntable (\$100 list, find.pcworld.com/70815) works well. It plays 33s and 45s (but not 78s). I had no trouble setting it up.

The Profile LP comes with two programs on a CD, but Ion Audio recommends downloading newer versions. The simpler of the two is MixMeister's EZ Vinyl/Tape Converter. After buying the turntable, you can download the current version from Ion Audio's Website.

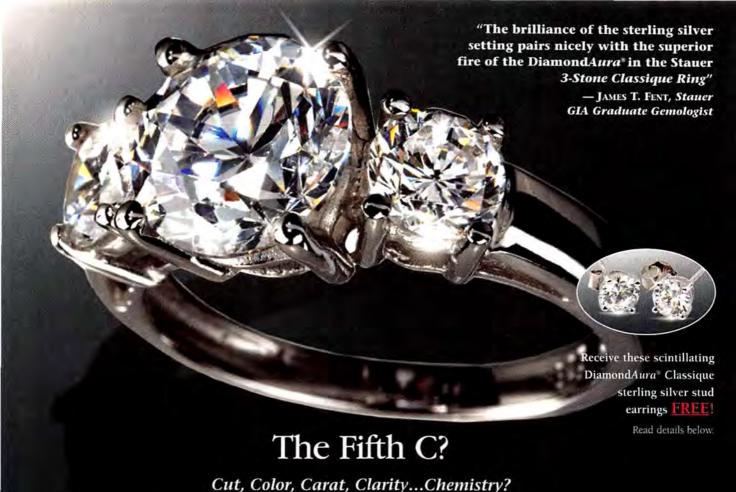
This program comes as close to start-it-and-rip as any analogrecording software I've tried. But that simplicity poses some problems. For instance, it can guess where the tracks begin and end, but if it guesses wrong (which happened to me on one side out of

five LPs), there's no way to fix it.

EZ digitizes your music and then uses iTunes to convert the files into 160-kbps MP3s (you can alter that setting in iTunes). However, if you don't already have iTunes, you must install it. Another iTunes issue: EZ works better if you launch iTunes first.

The free, open-source Audacity (find.pcworld.com/70816) is a much more versatile and powerful program, but it has a very challenging learning curve.

-Lincoln Spector



scientist can create more beauty and romance than Mother Nature? The laboratories at DiamondAura* were created with one mission in mind: Create brilliant cut jewelry that allows everyone to experience more clarity, more scintillation and larger carat weights than they have ever experienced. So, we've taken 2 ½ carats of our lab-created DiamondAura* and set them in the most classic setting—the result is our most stunning, fiery, faceted design yet! In purely scientific measurement

s it possible that the mind of a

to mined diamonds.

Perfection from the laboratory.
We named our brilliant cut stones
DiamondAura, because, "they dazzle
just like natural diamonds but without
the outrageous cost." We will not bore

terms, the refractory index of the

DiamondAura is very high, and the color dispersion is actually superior

COMPARE FOR YOURSELF AT 2 1/2 CARATS				
	Mined Flawless Diamond	DiamondAura Compares to: Cuts Glass		
Hardness	Cuts Glass			
Cut (58 facets)	Brilliant	Brilliant		
Color	"D" Colorless "D" Color			
Clarity	"IF"	Clear		
Dispersion/Fire	0.044	0.066		
2 1/2 c.t.w. ring	\$60,000+	\$145		

you with the incredible details of the scientific process, but will only say that it involves the use of rare minerals heated to an incredibly high temperature of nearly 5000°F. This can only be accomplished inside some very modern and expensive laboratory equipment. After several additional steps, scientists finally created a clear marvel that looks even better than the vast majority of mined diamonds. According to the book Jewelry

and Gems-the Buying Guide, the technique used in DiamondAura offers, "The best diamond simulation to date, and even some jewelers have mistaken these stones for mined diamonds."

The 4 C's. Our DiamondAura 3-Stone Classique Ring retains every jeweler's specification: color, clarity, cut, and carat weight. The transparent color and clarity of DiamondAura

emulate the most perfect diamonds—D Flawless, and both are so hard they will cut glass. The brilliant cut maximizes the fire and radiance of the stone so that the light disperses into an exquisite rainbow of colors.

Rock solid guarantee. This .925 sterling silver ring is prong-set with a 1 ½ carat DiamondAura round brilliant in the center, showcased between two DiamondAura round brilliants of ½ carats each. Adding to your 4 C's, we will include the DiamondAura stud earrings for FREE! Try the DiamondAura 3-Stone Classique Ring for 30 days. If for any reason you are not satisfied with your purchase, simply return it to us for a full refund of the purchase price and keep the stud earrings as our gift.

Not Available in Stores

DiamondAura* 3-Stone Classique Ring (2 ½ c.t.w) • \$145 + S&H

FREE stud earrings with purchase of Classique Ring—a \$59.95 value!
Available in ring sizes 5-10

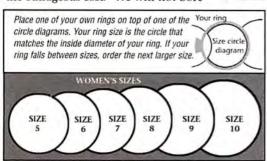
Call to order toll-free, 24 hours a day, 7 days a week.

<u>1-888-201-7095</u>

Promotional Code DAR790-02 Please mention this code when you call.

Stauer

14101 Southcross Drive W., Dept. DAR790-02, Burnsville, Minnesota 55337 WWW.Stauer.com



Keep Your Computer Awake With Mouse Jiggler

HOW MANY TIMES has this happened to you? You're on an airplane, watching a movie on your laptop, when all of a sudden the screen goes dim. Or you're giving a Power-Point presentation and your PC suddenly goes to sleep.

Hassles of this kind can happen after a period of supposed idleness, when the operating system detects no mouse or keyboard input. Blame Windows' power settings, which by default try to conserve power if the OS thinks that you aren't doing anything. (Funny how even

Windows 7 still isn't smart enough to know whether a movie is playing on your laptop, or whether a projector is connected to it.)

As you probably know, all it takes to keep a PC humming along without interruption is an occasional jiggle of the mouse. That's the simple idea behind Mouse Jiggler (find.pcworld. com/70864), a free utility that simulates mouse input so you don't have to mess with Windows' power settings.

Just run this tiny app as



MOUSE JIGGLER LETS you choose between standard and Zen (hidden) jiggle modes.

needed-before you start your movie or presentation, say-and click Enable Jiggle. Then take your hands off the mouse for a couple seconds. You'll see that your pointer starts to hop back and forth, just enough to trick Windows into stayin' alive.

In some programs (including Windows Media Player), mouse activity like this can have the undesirable effect of making on-screen controls become visible. For such situations, enable Zen liggle, which handles

the jiggling behind the scenes, with no actual cursor movement. Clever!

Mouse Jiggler works with all versions of Windows; it requires Microsoft's .Net Framework 2.0 or later.

-Rick Broida

ANSWER LINE

ASK YOUR QUESTION AT FORUMS.PCWORLD.COM



How could my protected PC have gotten infected with Trojan horses?

THERE'S NO SUCH thing as perfect protection. Even if you have the best firewall and antivirus software available, and keep it up to date, something might still get through. But knowing how malware tries to sneak in can help you block it.

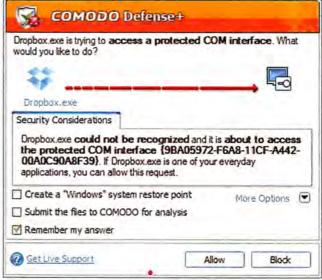
First, do you really have the best security software? Windows' own firewall, for instance, doesn't protect as well as a good thirdparty firewall. I currently use Comodo's free 32-bit firewall (find. pcworld.com/70817); a separate 64-bit version is available as well (find.pcworld.com/70818). It's an annoying product that constantly interrupts my work to ask if it should allow something or other to get through-but the security is worth it.

I really like my Comodo firewall, but for antivirus protection I prefer the free Avira AntiVir Personal (find.pcworld.com/70819).

Whatever software you use, keep it up-to-date. It should do this itself automatically, but every so often, check it yourself. Avira pops up a notice every day when it has finished updating. You can turn the notification off, but I like the regular reassurance.

Don't stop at backing up your security software. Other programs, especially browsers, can let malware slip by undetected. So keep your operating system and browser up-to-date, too.

Be suspicious. Don't click links in a dubious e-mail message. If a program you didn't install and launch tells you your PC is infected, assume it's about to infect your PC. Download software only from reputable sites. And every week or so, scan your hard drive with an alternative antimalware program to get a second opinion.



THE COMODO FIREWALL asks a lot of questions about activity on your PC-which is what it should do to keep your system safe.

You probably won't get hit if you do everything properly-but you might. New malware appears in the wild every day, and some people's systems will get infected with it before their security software has a chance to update itself. The unlucky one might be you.

Finally, if a scan finds something malicious, don't ignore the possibility of a false positive. I've seen a program that had been sitting on my PC unchanged for years suddenly identified as containing a brand-new, quite evil Trojan horse. It turned out to be innocent.

-Lincoln Spector



VERSOSHOCK TRAMPOLINE FOOTWEAR

Steroid Syringe? ttention, Try Gravity Defyer EE for 30 Days

SHOES ON STEROID

VersoShock™ Trampoline Shock-Absorbing Membrane Heel

> Removable Comfort-Fit™ Insole Accommodates most orthotics

> > Smart Memory™ Master Spring
> > Propels you forward and reduces follows

Semi-Rigid Heel Stabilizing Cage

AVS³ Ventilation Port

Rugged Polymer Sole

Resilient High Grade Ethylene-Vinyl Acetate (EVA) Midsole Rocker construction protects metotarsal

Scientifically Engineered to Defy Pain, Defy Aging & Defy Fatigue

Slick Seed of Life Logo

This is my story

I used to be more active. I used to run, play basketball, tennis, football... I was more than a weekend warrior. I woke up every day filled with life! But now, in my late 30's, I spend most of my day in the office or sacked out in front of the TV. I rarely get to the gym-not that I don't like working out, it's the nagging pain in my knees and ankles. Low energy and laziness has got me down. My energy has fizzled and I'm embarrassed to admit that I've grown a spare tire (I'm sure its hurting my love life). Nowadays I rarely walk. For some reason it's just harder now. Gravity has done a job on me.

Wear them and you'll know

That's what my doctor recommended. He said, "Gravity Defyer shoes are pain-relieving shoes." He promised they would change my life -like they were a fountain of youth. "They ease the force of gravity, relieving stress on your heels, ankles, knees and back. They boost your energy by propelling you forward." The longer

he talked, the more sense it made. He was even wearing a pair himself!

Excitement swept through my body like a drug

I received my package from GravityDefyer.com and rushed to tear it open like a kid at Christmas. Inside I found the most amazing shoes I had ever seen –different than most running shoes. Sturdy construction. Cool colors. Nice lines...

I was holding a miracle of technology. This was the real thing.

GDefy Benefits

- Relieve pain
- · Ease joint & spinal pressure
- Reduce fatigue & tiredness
- Be more active
- Have more energy
- Appear taller
- Jump higher, walk and run faster
- Have instant comfort
- Cool your feet & reduce foot odor
- Elevate your performance

I put them on and all I could say was, "WOW!" In minutes I was out the door. I was invincible; tireless in my new Gravity Defyer shoes. It was

as if my legs had been replaced with superpowered bionics. What the doctor promised was all

correct. No more

Customer Satisfaction Speaks for Itself!

4 out of 5 customers purchase a 2nd pair within 3 months.

knee pain. I started to lose weight. At last, I was pain free and filled with energy! I was back in the game. Gravity had no power over

Nothing to lose: 30 Day Free Trial*

So, my friend, get back on your feet like I did. Try Gravity Defyer for yourself. You have nothing to lose but your pain.

Tell us your story! Login at Gravitydefyer.com and share your experience.



fuce fatigue. Be more active



a \$129.95 value MEN (Shown above) TB902MWBS sizes 7 - 13 Med/Wide and ExtraWide/ XXWide Widths WOMEN (Silver with Navy)

TB902FWBS sizes 5 - 11 Med/Wide and ExtraWide/XXWide Widths



EXCLUSIVE ONLINE OFFER

FREE 30 DAY RISK-FREE trial*. Not available in stores.

Visit ShoesOnSteroids.com/MQ9LBB8 or take advantage of this exclusive offer by phone, and dial (800) 429-0039 and mention the promotional code below.

Promotional Code:

MQ9LBB8

*Shipping and handling non-refundable. Gravitydefyer.com!

PHOTOGRAPH: ROBERT CARDIN

RICK BROIDA'S HASSLE-FREE PC



Laptop Tips: Add RAM, Recycle a Hard Drive, Tweak Power Settings

IT'S BEEN ABOUT a year since I last served up any laptop tips (see find.pcworld.com/70820), so here's some useful advice on adding memory to a laptop, turning an old laptop hard disk into an external drive, and using your laptop's power settings effectively.

Add RAM to a Laptop

My dad griped that his Acer Aspire 9300 laptop was taking forever to boot. I inspected it for spyware, excessive startup programs, and the other usual suspects, but everything checked out.

Then I remembered that the machine was about three years old and wasn't a powerhouse to begin with. So I checked the RAM, and bingo: just 1GB. Vista needs at least 2GB to run smoothly (so does Windows 7, though I've seen it run adequately on less).

Upgrading a laptop's RAM may sound daunting, but it's actually a very easy task. First, though, you need to determine how many RAM modules your system currently has and what kind they are.

Turn off your system, unplug it, remove the battery, and flip it over. You should see at least one panel that a small screwdriver can remove. Consult your manual if you can't find the one covering the RAM sockets-or open them all. Here's what you're looking for:

Most laptops have two sockets. If only one of them is occupied in your laptop, buy and insert a module that exactly matches the existing one. Doing so will effectively double your system's RAM.

UPGRADING A LAPTOP'S RAM may sound like a big deal, but it's actually the single easiest upgrade there is.

If both sockets are filled, you'll have to replace both modules. My dad's Aspire, for example, had a pair of 512MB modules for a total of 1GB of RAM. We elected to replace them with a pair of 1GB modules for 2GB total. Not sure what kind of memory your laptop takes? Head to a site like Crucial, which can identify

nearly every make and model of memory. (Of course, once you know what you need, you can shop around to find the best price.)

Repurpose an Old Laptop Hard Drive

Inexpensive hard-drive enclosures are ideal for giving old laptop drives new responsibilities. An enclosure is an external case that lends an internal drive a USB interface, so it can act as a compact USB hard drive for backups, storage, transporting files, and so on.

An enclosure lets you easily transfer your data to the new drive by dragging and dropping. Once you're done, you'll have to decide whether to wipe the drive or keep it intact, as disaster insurance.

Make sure to choose an enclosure that offers the proper kind of

Learn how to add memory to a laptop, use an old laptop PC drive for external storage, and adjust your laptop's power settings most effectively.



WHEN SHOPPING FOR an external enclosure, look for one whose interface is compatible with your old drive-whether IDE or SATA.

interface for your old drive. If it's more than a few years old, it's probably IDE. Anything newer is more likely SATA. Either way, you can find one for just \$10 to \$15 at sites like Meritline and Newegg.

Learn Your Laptop's Power Settings

My aunt had a problem with her new laptop: Whenever she'd step away from it for more than a few minutes, she'd close the lid. Upon returning, she'd open the lid, only to be faced with a blank screen and no response from the mouse or keyboard.

That's because the default lid-closing action for most laptops is to put the system in Sleep mode, and Windows is notoriously bad at waking up properly. I advise most laptop users to use Hibernate mode instead, as it lets the laptop wake up much more reliably.

Sleep (aka Standby) mode puts your system into a low-power state, so you can pick up where you left off after just a few seconds (in theory, anyway). But a PC in Sleep mode continues to consume battery power, so it's not uncommon to return to a "sleeping" PC to find that it's just plain dead. Or, in my aunt's case, unresponsive.

In contrast, Hibernate mode saves your machine's current state to a temporary hard-drive file, and then shuts down completely (much like Off). When you start the laptop up again, it loads the file and returns you to where you left off-no booting required.

Hibernate mode takes a little longer than Sleep mode to enter or leave (usually 10 to 20 seconds, in my experience), but you avoid the issues that can arise when Windows suddenly loses power.

As noted, Sleep mode is, by contrast, notoriously flaky. And if your system refuses to wake up properly, you'll end up losing whatever documents and/or Web pages you had open. That's why I recommend using Hibernate most of the time.

LEGAL NOTICE

ATTENTION DELL COMPUTER OWNERS

If you purchased a Dell Inspiron Notebook Computer Model Nos. 1150, 5100 or 5160, this Notice is to inform you of a proposed class action settlement that could affect your legal rights – please read it carefully.

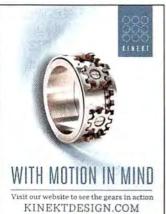
This summary notice informs you about the settlement of Kristin Carideo and Catherine Candler, Individually and on behalf of all others similarly situated v. Dell Inc., A Delaware Corporation, United States District Court, Western District of Washington, Case No. C0 06-1772-JLR. Kristin Carideo, Catherine Candler, Michael Omstead, Melissa Malloy and Lisa Smith represent a class of customers who own or have owned Dell Inspiron Notebook Computer Model Nos. 1150, 5100 and 5160.

If you are a class member and you paid Dell for an out of warranty repair to an Inspiron Notebook Computer Model No. 1150, 5100 or 5160, then you may be entitled to reimbursement of all or a portion of the cost of those repairs. If you are not notified of a specific reimbursement, you may submit a Proof of Claim Form by April 5, 2011 to seek reimbursement. You may submit a Proof of Claim Form online at www.carideosettlement.com or request a Proof of Claim Form from the Claims Administrator at the address below.

To exclude yourself from this settlement, or to object to the settlement, you must follow the instructions in the Notice described below. The deadline to opt out of the settlement or submit any objection is December 6, 2010.

This is only a summary of the settlement. For additional information regarding this settlement, the full Notice of Pendency of Class Action and Proposed Settlement ("Notice") is available at www.carideosettlement.com or from the Claims Administrator at Carideo Settlement Claims Administrator, c/o Analytics, Inc., P.O. Box 2009, Chanhassen, MN 55317-2009.





Reach the most influential community of technology product buyers.

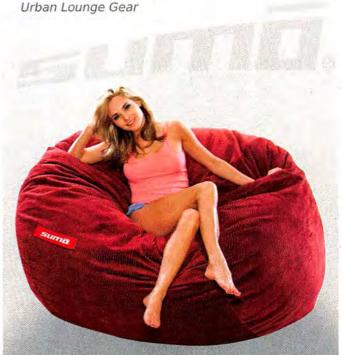
PCWorld MARKETPLACE

PCWorld.com



BEAN BAGS 2.0

www.sumolounge.com Urban Lounge Gear

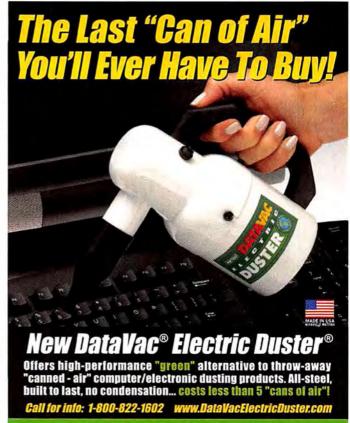




datarecovery.com
ess data recovery labs

800.237.4200

USA: 110 N. Research Drive, Edwardsville, Illinois | 1241 Quarry Lane, Pleasanton, California 6043 Hudson Road, Woodbury, Minnesota CANADA: 7300 Warden Ave., Toronto, Ontario



METRO Family Owned Since 1939

Metropolitan Vacuum Cleaner Co., Inc., Suffern, NY 10901 - 845-357-1600 - Fax 845-357-1640

PHONE: 415/243-0500

415/442-1891

E-MAIL: letters@pcworld.com

WEB: www.pcwartd.cam

MAIL PC World Editorial 501 Second St. #600 San Francisco, CA 94107



PRESIDENT, CEO Mike Kisseberth SENIOR EXECUTIVE ADMINISTRATOR Caroline Ward

ADVERTISING SALES

SENIOR VP, SALES & MARKETING Stacey Levy (415/978-3255)

DIRECTOR OF SALES Gabe Rogol (415/974-7373)

ACCOUNT DIRECTORS Amy Singer (201/634-2317) Kathy Rebello (508/820-0440)

ACCOUNT EXECUTIVE

Paul Moretti (415/243-3575) SALES ASSOCIATE

Shari Redan (207/899-2099)

SOUTHWEST

ACCOUNT DIRECTOR Cindy Hamilton (949/442-4005)

SENIOR ACCOUNT EXECUTIVE Duane Hampson (415/978-3133)

SALES ASSOCIATE

Chrissy Schneider (415/978-3269)

NORTHWEST

ACCOUNT DIRECTORS Elaine Ebner (415/267-4578) David White (415/243-3664)

ACCOUNT EXECUTIVE

Carol Johnstone (415/978-3390) SALES ASSOCIATE Nelson Hong (415/978-3266)

MARKETING

MARKETING MANAGER Jim Hopkins

MARKETING INTERN

Kelly Winterhalter PC WORLD REPRINTS

permissions@pcworld.com

PRODUCT DEVELOPMENT

SENIOR DIRECTOR, PRODUCT DEVELOPMENT Brian Buizer

AD PROJECT MANAGER Leilani Lopez

SALES ASSOCIATES Shari Redan, Chrissy Schneider,

PCWORLD.COM AD **OPERATIONS**

DIRECTOR, AD OPERATIONS Kevin Barden

AD OPERATIONS SPECIALIST Keri Campbell

AD OPERATIONS COORDINATOR Lauren Martinelli

PCWORLD I MACWORLD CONTENT WORKS

CONTENT DIRECTOR Ted Greenwald

CONSUMER MARKETING

PROCIRC, SUBSCRIPTION MANAGEMENT Shawne Burke Pecar

PROCIRC, SUBSCRIPTION MANAGEMENT Megan Guard

PROCIRC, RETAIL SOLUTIONS Mark Peterson, Scott Hill

PRODUCTION

DIRECTOR, PRODUCTION Nancy Jonathans

PREPRESS MANAGER Tamara Gargus

PRODUCTION SPECIALIST Jerry Wandel

ONLINE MANAGEMENT

EXECUTIVE VP/GENERAL MANAGER. ONLINE Stephan Scherzer

VP, BUSINESS DEVELOPMENT Ulla McGee

SENIOR DIRECTOR, AUDIENCE **DEVELOPMENT & ANALYTICS** Alexa Wriggins

DIRECTOR, PROGRAM MANAGEMENT David Lake

PRODUCT MANAGER, MOBILE Jacky Lee

EMAIL MARKETING MANAGER DW Malouf

NEWSLETTER SERVICES MANAGER Michael E. England

RESEARCH MANAGER Miguel Beteta Rodrigo

RESEARCH ANALYST

Kyle Flick

E-COMMERCE MANAGER Alisha Billingsley

SOCIAL MEDIA COORDINATOR Toni Panayotov

WEB DESIGN

SENIOR USER INTERFACE DESIGNER Johnathan Andersen

USER INTERFACE DESIGNER Sky Collins

INTERACTIVE DESIGNER Eliza Wee

SENIOR VIDEO PRODUCER

TECHNOLOGY

CHIEF TECHNOLOGY OFFICER Aaron Jones

SENIOR DIRECTOR, IT & WEB OPERATIONS Sean Greathouse

IT MANAGER Walter Clegg SYSTEMS ANALYST Eileen Quan

IT TECHNICIAN Dan Dudziak SENIOR SYSTEM/NETWORKS

ADMINISTRATOR Wil Schultz SENIOR WEB OPERATIONS

ADMINISTRATOR Andrew Trice DIRECTOR, SOFTWARE

DEVELOPMENT Jim Hutson SOFTWARE DEVELOPMENT

MANAGER Kieran Fitzpatrick SENIOR SOFTWARE DEVELOPERS Wei Ming Xu, Bill Cappel, Alexis Barrera, Justin Counts, James Motch, Christian

HUMAN RESOURCES

VP. HUMAN RESOURCES Kate Coldwell

HUMAN RESOURCES REPRESENTATIVE Ellen Cobb

McKeegan

SENIOR VP. COO/CFO Vicki Peilen

DIRECTOR, FINANCE Diane Ryczek DIRECTOR, ACCOUNTING Michelle Reyes

DIRECTOR, FINANCIAL AD **OPERATIONS** Diane Hacker

DIRECTOR, ADVERTISING ACCOUNT SERVICES Kevin Greene

STAFF ACCOUNTANT Scott Lum-Duenas ACCOUNTING ASSISTANT Jose Rodas

ADVERTISER'S INDEX

Type find.pcworld.com/ plus the five digit number below, to go directly to any advertiser in this list.

1&) Internet Inc. (C2	69778	Intsig Information 109	70534
Civilization V 14	70522	iProlog Inc. 68B	7052
A-Data 62A	70515	IRIS Inc. 22	6979
Acer America Corp. 149	69779	Kaspersky Lab I 21, 23, 25	89792
Adorama 103	69767	KVC Hosting (42	70530
Alibre Inc. 31	70533	MAINGEAR I III	69777
APC117	69787	Microsoft Office 15	70523
Bose 89	69768	Moneual Lab 79	70524
B&W Group I 20	69769	The Neat Company Inc 61	69774
Carbonite 99	69770	Newegg.com192	69788
Archerfish 26	69771	OCZ Technology 29	70532
Citrix Systems (37	69780	Patriot Memory 24	70525
CMS Products, Inc. 162B	70517	PC Tools (32	70535
Comodo I 10	69788	Qwest 35	69795
Crucial Technology 91	70537	Retina-X Studios 71	7053
CyberDefender 38	70518	Rosetta Stone I 65	69775
CyberPower Inc. 69	69781	Samsung Americas I C4	69796
DSolution I 6	69789	Siber System, Inc. 167	69797
Eset (NOD32) 141	69782	Siber System, Inc. 97	69798
Fujitsu (11	69783	SpectorSoft Corp 43	69795
G7 Productivity Sys. 62	70520	Sprint12	70527
GEICO I 81	69790	Stauer I 113	69776
Gravity Defyer I 115	70536	TP-Link(8	70516
IBM 19	70529	TRENDnet 59	69785
IEM I C3	70528	Webroot Software 15	69784
BuyPower (101	70519	Western Gov. Univ. I 68	70526

Volume 28, number 11. PC World** (ISSN 0737-8339) is published monthly at \$24.95 for one year (17 issues), \$49.90 for two years (24 issues), \$74.95 for three years (36 issues) by PC World Communications, Inc., 501 Second Street #800. San Francisco, CA 94107. Foreign orders must be prepaid in U.S. funds with additional postage. Add \$12 per year for Canada; Canada Post Publications & Mail Agreement #40612608. Return undeliverable Canadian addresses to: Bleuchip Int. P. 0. Box 25542. London, ON N6C 682. POSTMASTER: Send address changes to PC World. Subscription Dept. PO. Box 37571, Boone, IA 50037-0571 Editorial and business offices 501 Second St. #800. San Francisco, CA 94107. #15;243-0500. Copyright © 2009, PC World Communications, Inc., All rights reserved. The trademark PC World is owned by International Data Group and used under license by PC World Communications, Inc., Technology Advice You Can Trust**, PC World Top 10**, Top 10**, PC World Top 100". Top 100", and Consumer Watch" are trademarks of International Data Group. Inc., and used under license by PC World Communications, Inc. Printed in the United States.

The Back Page

Spot the Fakes

Tech products keep getting more inventive—not to mention weirder. Consider the five matched pairs here. Within each duo, one product is real, and the other is a phony. Can you tell which is which? Answers appear below. (No peeking!)



Real or Fake: Remotecontrolled attaché case or self-propelled suitcase?



Real or Fake: USB travel iron or USB hand warmer?



Real or Fake: Gmail keypad or Microsoft Office keypad?



Real or Fake: Ropeless jump rope or weightless weight set?



Real or Fake: Windows microwave or Android washer/dryer?

Answers: 1. Hammacher, Schlemmer's suitcase offers "power assistance when you encounter inclines or are straining to roll the luggage" (find.pcworld.com/70849). 2. The Gmail-specific Gboard is available at ThinkGeek and elsewhere (find.pcworld.com/70850). 3. We want the travel iron, but we'll have to settle for the real product, a USB hand warmer, available from multiple sites. 4. Stay in shape with a ropeless jump rope (find.pcworld.com/70851). 5. The Android washer/dryer, a protospape, can text you when the laundry is done (find.pcworld.com/70852).

Plugged In



Care to Share? Facebook launches a new feature that lets you share

your location throughout the day. It's called "I Want to Get Robbed."



Sexy Smartphones

According to a recent online survey, iPhone users

have more sexual partners than Android fans do. Their relationships would probably last longer if they'd stop using the "grip of death."



Flesh-Bots Synthetic skin, developed at the University of California,

Berkeley, should allow robots to "feel." iPhone users, having depleted the pool of human partners, rejoice.



GOOG Booth Google will install free phone booths at airports across

the United States. Now if Clark Kent could just figure out a way to sneak the cape and boots past security...



E-Mail Overload A

OnePoll survey found that 7 out of 10 office workers

receive "irrelevant" e-mail messages —proving that 30 percent of the population doesn't know the meaning of the word "irrelevant."

-JR Raphael and Steve Fox

Have an idea for The Back Page, from an offbeat screenshot to a wacky Windows hack? Send it to TheBackPage@pcworld.com. You'll earn a small slice of fame, our undying gratitude, and a nifty PCWorld mug to boot.

Building the engines of a Smarter Planet:

Workloads will grow. Your number of servers doesn't have to.

As a smarter planet generates more and more data, the strains on existing infrastructures intensify. Yet in today's competitive business environment, midsize businesses need more performance with fewer resources. Fortunately, a solution now exists from IBM: the first x86 servers with memory decoupled from their processor, which eliminates the need to buy additional servers to support growing workloads. It's enterprise-level performance without enterprise budgets. Here's how IBM and our Business Partners can help you work smarter:





Get up to 261% more performance. The IBM System x3690 X5, featuring the Intel® Xeon® processor 7500 series, is the first scalable 2-socket system designed to offer the performance, memory capacity and reliability of an enterprise 4-socket system.

Simplify your IT. The new x3690 can accomplish the same job as 33 servers² from previous generations. Consolidating your aging servers can simplify your IT while minimizing server sprawl, and can help reduce the costs of managing multiple systems.

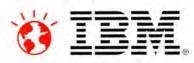
Gain 82% more virtual servers for the same license cost. Now you can virtualize to reduce complexity. With IBM's unique MAX5 memory that scales independently of the processor, you'll have the available memory you need for your demanding virtualization environment.

The IBM System x3690 X5 is designed and priced with midsize businesses in mind. Starting at \$275 per month for 36 months:

Learn how you could see ROI in as little as 3 months. With increased performance and simplified IT, you can dramatically reduce overall IT costs such as power, cooling and facilities by up to 98%.

Midsize businesses are the engines of a Smarter Planet.

Connect with an IBM Business Partner now and start reaping the benefits of smarter systems. Call **1-877-IBM-ACCESS** or visit **ibm.com**/systems/x3690 to access the IBM Systems Consolidation Evaluation Tool.



Execution of party remainds for the Court of the court of

Innovation #1,574

40% More Efficient LED-Backlit Monitors

Greater impact. Smaller footprint.



As a world leader in R&D Samsung develops groundbreaking products that deliver bottom-line results. Products like our eco-friendly PX2370 LED-backlit monitors that consume 40% less power than conventional CCFL monitors. Go green and reduce costs in style with our complete line of innovative LED products and experience more vivid displays and longer product lifespans. Because at Samsung, it's not just business. It's business, innovated.

Discover our future-forward line of LED products at samsung.com/proLED.







