

PC

MAGAZINE

WWW.PCMAG.COM

Best Digital Cameras

Compact Point-and-Shoots • Superzooms • D-SLRs

Wi-Fi Survival Tips



- The Best Routers
- Top Hot Spots
- Most Connected College Campuses

10
EASY
STEPS

Ultimate PC Upgrade Guide

**Affordable
Ways to
Get More
from Your PC**



OCTOBER 2008

U.S. \$6.99 / U.K. £4.00



PLUS

Upgrade or Toss It?

3 Essential Rules to Help You Decide



The Smarter Choice.

Plan A is simply printing your big ideas.
My plan is to make them look even bigger.



MFC-5490cn
Print, Copy, Scan, Fax
Built-in Networking
\$129⁹⁹*



Color Inkjet All-in-Ones

MFC-5890cn
Plus, Up to 11x17 Printing
Uses hi-yield ink cartridges
\$199⁹⁹*



MFC-6490cw
Plus, Wireless Networking
Up to 11x17 Print/Copy/Scan/Fax
\$299⁹⁹*



Welcome to Plan B from Brother.[®] The smarter way to print business documents in color. The new Professional Series color inkjet all-in-ones deliver brilliant color output, along with fast print speeds and a best-in-class two-year limited warranty, all at a remarkably affordable price. Most models can also print up to 11 x 17, giving you the flexibility to print large format marketing materials, proposals, and spreadsheets. So make your big ideas look even bigger. Make the smarter choice. Plan B from Brother. **Visit us online at www.brother.com**

Available at: Staples, Office Depot, Office Max, Best Buy, Fry's Electronics, Costco.com, Microcenter, J&R Computer World, CDW, Insight, PC Connection, PC Mall, Zones, Quill, PC Nation, TigerDirect.com, Provantage, Amazon.com, Buy.com, Newegg.com and other fine resellers.

*Estimated street price may vary.

brother[®]
at your side

© 2008 Brother International Corporation, Bridgewater, NJ
Brother Industries, Ltd. Nagoya, Japan

It pays for businesses to "go green"

Protecting the environment is not only good for the planet—it's also good for business. When you make smarter choices that minimize toxins, lower your power and cooling costs, and bring your organization into compliance with regulatory standards, your

company can boast about being a good corporate citizen while simultaneously reducing ongoing expenses in the datacenter. Call PC Mall for expert advice on minimizing your company's environmental impact while maximizing its bottom line.



Great technology! Great advice! Great prices!
1.877.233.0516 pcmall.com



Phaser® 6180/N Color Laser Printer

The Phaser 6180/N offers exceptional solid ink output for workgroups that are committed to quality, economy and ecology. It delivers stunning colors while producing just 1/40th of the waste of a typical color laser printer.

- Up to 20ppm color; up to 26ppm black*
- PANTONE color approved ■ Adobe PostScript 3
- Ethernet, USB 2.0 and parallel connectivity

~~\$599~~ **\$399** #7201694

Price after \$200 instant rebate. Price before rebate is \$999. HURRY! Ends 8/31/08.
*Print speeds will vary with use.



521 Wireless Express Access Point

This single-band 802.11b/g access point with antenna has a maximum power draw of only 9.9 Watts.



only **\$323⁹⁹** #7251012

We're now
Cisco Gold
Certified!
Call to learn more.

Virtual Infrastructure High Availability Acceleration Kit for Four Processors



only **\$6039⁹⁹** #7358558



Essential Surge Arrest 7RCPTL with TEL 120



only **\$23⁹⁹** #7432826



APC Back-UPS ES

Offers advanced charging technologies that are up to five times more efficient than comparative UPS solutions and allows you to conserve energy further by automatically shutting down unused peripherals.



only **\$92⁹⁹** #7371005



Lower datacenter costs with IBM BladeCenter HS21



only **\$1299** #7506318



MENTION CODE: PCMAGAZINE

Notebooks | Desktops | Servers | Networking | Apple Systems | Storage



Additional PC Mall Services:

Easy Leasing Program,
Extended Service Plans,
Software Licensing Programs,
Employee Purchase Programs,
CAP Sites, Design Services,
Imaging and Replication,
Asset Tagging and More.

Go to pcmall.com to sign up for our e-mail subscriptions!

Lenovo takes an active role in combating climate change

Lenovo is committed to providing environmentally responsible, energy-efficient technology choices. In 2007, they joined the Board of Climate Savers Computing to support their efforts in reducing CO₂ emissions related to IT by 50% by 2010.

Lenovo's green strategies include:

- All Lenovo ThinkPad notebooks, ThinkVision monitors and many ThinkCentre products launched from 2008 are ENERGY STAR® 4.0 compliant and deliver up to 70% energy efficiency improvements
- Lenovo systems with EPEAT Gold ratings contain up to 90% reusable and recyclable materials and ship in packaging that is 90% recyclable
- Lenovo Power Manager and BatteryStretch technologies offer adjustable power management



All Lenovo LCDs launched from 2008 are ENERGY STAR 4.0 and EPEAT Gold certified.

lenovo

Lenovo helps you save money while meeting your energy goals



Choose Lenovo systems from these cutting-edge series and you'll meet both ENERGY STAR® and EPEAT Gold standards.

SMBs		Large Enterprises
		
ThinkCentre A61e Desktops	ThinkPad X300 Notebooks	ThinkCentre M57p Desktops
Full size performance at a low price point in an energy-efficient and whisper-quiet design.	The thinnest, lightest and most power savvy Lenovo notebook.	The most energy efficient model in the ThinkCentre family.
starting at \$399 #7299022	starting at \$2799 #7386775	starting at \$936 #7304200

EcoSmart™

The Targus EcoSmart™ family of products is PVC-free and features recyclable plastic accents and nickel-free metals that help reduce the amount of toxins released into our environment.

- #7323404 Grove Topload Notebook Case
#7323403 Grove Messenger Notebook Case



#7323404

\$55⁹⁹
\$49⁹⁹



#7323403

- #7323400 Grove Sling Carrying Case
#7323401 Grove Convertible Messenger/Backpack



#7323400



#7323401

\$55⁹⁹
\$69⁹⁹

ThinkVision L171p 17" Flat-Panel LCD



only \$249⁹⁹ #7182947

ThinkVision L193P 19" Flat-Panel LCD



only \$299⁹⁹ #7351173

LCD175VXM+BK 19" MultiSync Flat-Panel LCD



only \$279⁹⁹ #7296044
#7295782 LCD175VXM+BK 17" MultiSync Flat-Panel \$252⁹⁹

Media | Printers | Scanners | Projectors | Cameras | Displays | Software

1.877.233.0516 pcmall.com



ROADWARRIOR™

THE COMPLETE PROFESSIONAL MOBILE SCANNING SOLUTION



**Paper work done,
before you get home!**



HOME



OFFICE



AIRPORT



HOTEL



ON-SITE

✓ SCAN

Scans Receipts, Business Cards, Documents, and Handwritten Notes.

✓ ORGANIZE

Arrange Your Documents and Leave Paper Behind

✓ SHARE

Searchable PDF Makes Finding Information Easy

SCANNED RECEIPTS ARE
ACCEPTED BY THE IRS
AND MOST COMPANY ACCOUNTING DEPARTMENTS

YOUR SOLUTION FOR A PAPERLESS ROAD!

www.visioneer.com

© 2006 Visioneer, Inc. All rights reserved. The Visioneer brand name, logo and Visioneer RoadWarrior are registered trademarks of Visioneer, Inc. Price, features, specifications, capabilities, appearance and availability of Visioneer products and services are subject to change without notice.

PCcontents

VOL. 27 NO. 11

OCTOBER 2008

COVER STORY

PC Magazine's Essential Upgrade Guide

73

These days, stretching your dollar is a necessity. It's also vitally important to have your tech equipment running at optimal levels. In this story, we walk you through ten easy upgrades that will show immediate returns with faster computing and increased efficiency. We cover everything from boosting RAM and storage to productivity apps, and even include upgrades for your small office.



23 FIRST LOOKS



23 Hardware

MSI Wind

Lenovo ThinkPad X200

HP Pavilion dv5t

Sony VAIO VGN-FW198UH

Plus Quick Looks at the Velocity Micro Edge E2250, Maxtor One-Touch Mini, Canon Selphy CP760 photo printer, and more

28 Business

Brother MFC-7840W

Toshiba Satellite Pro U400-S1001X

32 Consumer Electronics

Panasonic TH-46PZ85U

HP iPAQ 910

Palm Treo 800W

Microsoft LifeCam VX-5000

Samsung YP-S2

Sonos Bundle 150

Plus Quick Looks at the LG Glimmer smartphone, Pentax Optio M50 camera, Philips DC910 speaker dock, and more

44 Software

MobileMe

Spyware Doctor with AntiVirus 6
SafeCentral

Plus Quick Looks at Bufferzone Pro 3.0, the new Facebook, Google Lively, iTunes 7.7, and more



Access Everywhere

87

Getting a good Wi-Fi signal on the road can be an adventure in itself. This definitive wireless guide shows you how to stay connected wherever you are, be it an airport, a Starbucks, or the boonies.



BUYING GUIDE: DIGITAL CAMERAS

Snap Decisions

95

If you don't like it, you won't use it. That's especially true of digital cameras. Here we guide you through the top compact, superzoom, and SLR cameras to help you choose one that suits your style. And one of these eight cool camera accessories is bound to come in handy.

14 FEEDBACK

Letters from our readers.

FRONT SIDE

16 News

The country's most wired colleges; eBay's travails and future plans.

19 Best of the Blogs

Our most popular posts from the PC Mag Network blogs.

20 Connected Traveler

How to take better vacation photos.

OPINIONS

9 First Word: Lance Ulanoff

Clearing up the Mac vs. PC debate—once and for all.

50 John C. Dvorak

How fashion-forward is Vista?

67 Inside Track: John C. Dvorak

68 Sascha Segan

What other product reviewers won't tell you.

70 Dan Costa

The future of social networks.

SOLUTIONS

103 Controlling E-Mail Antisperm

Keep legit e-mails out of the spam filter.

105 Ask the Experts

Lloyd Case and Neil J. Rubenking answer readers' questions.

108 Office

Handy, lesser-known Word tools.

110 Security

Keep bots off your system.

112 Tech Tips

130 THE BEST STUFF

An at-a-glance list of our Editors' Choices in all product categories.

This Month on PCMag.com



Learn how to do darn near everything with PCMag.com's Solutions. Our experts show you how to build new machines, upgrade old ones, and make better use of your hardware and software. Get tips, hacks, and more at go.pcmag.com/solutions.

What are the best colleges for geeks? In addition to our Front Side coverage in this issue, there's more to check out online, including expanded survey results and head-to-head comparisons of the top high-tech schools. Just surf on over to go.pcmag.com/wiredcampus.

Want more Dvorak?

Get a double dose of everyone's favorite crank with his weekly online column and his Cranky Geeks show, available only at PCMag.com.



Stay safe with our Security Watch blog,

which provides you with the latest security advice, malware alerts, and news. You'll find it at blogs.pcmag.com/securitywatch.

Use PCMag.com's

Product Finder to search for the gear that fits your needs and budget. Start your search at go.pcmag.com/reviews.

RECENT BUZZ

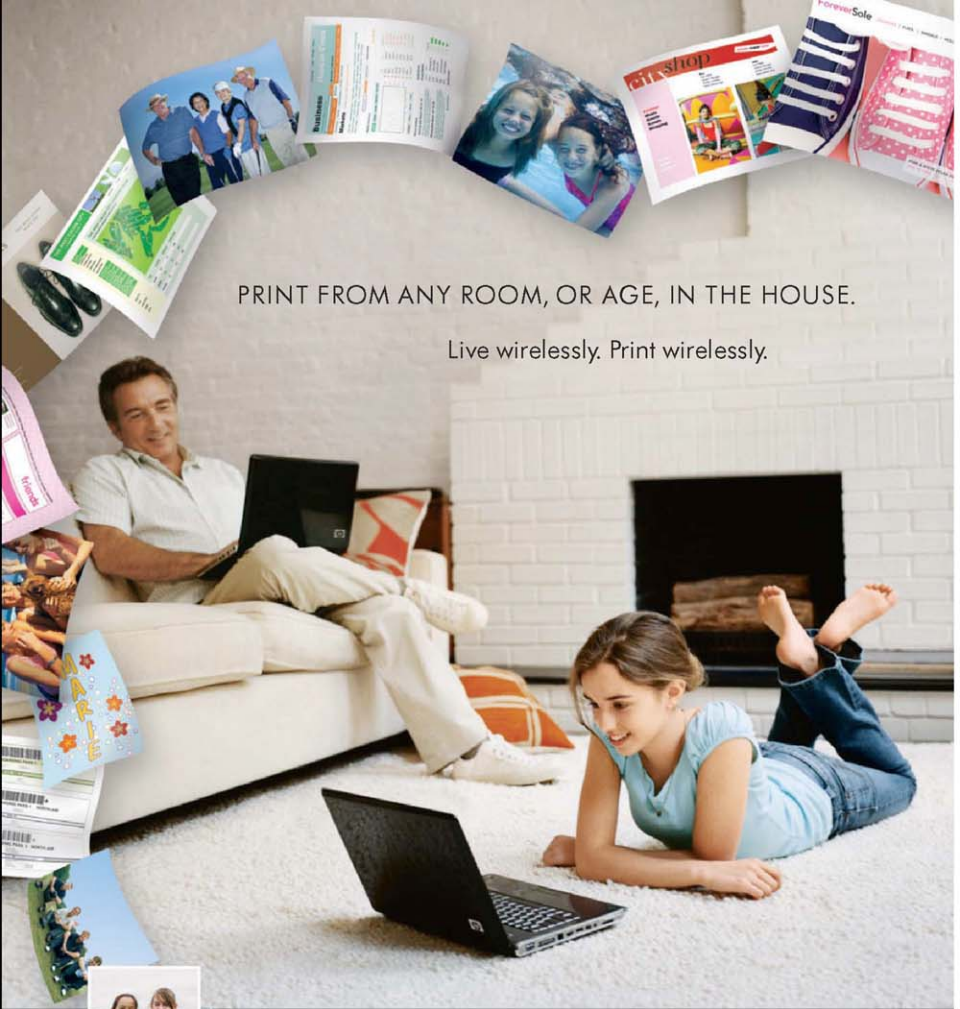
Most Popular Stories



- The Best Superzoom Digital Cameras
go.pcmag.com/superzoom
- Build It: A Living-Room Media Center PC
go.pcmag.com/buildmcp
- Where's SuperSpeed USB 3.0?
go.pcmag.com/usb3


Most E-Mailed Stories

- The 10 Best Unsung Webcomics
go.pcmag.com/webcomics
- Security's Dirty Dozen
go.pcmag.com/dirtydozen
- The Best Tech You Can't Get
go.pcmag.com/foreigntech
- 8 Tricks to Beat Airport Delays
go.pcmag.com/delays



PRINT FROM ANY ROOM, OR AGE, IN THE HOUSE.

Live wirelessly. Print wirelessly.



NOW SAVE \$70 when you buy an HP wireless printer with any notebook. hp.com/go/hpwireless

Available at Best Buy, Circuit City, Office Depot, OfficeMax and Staples.

WHAT DO
YOU HAVE
TO SAY?



©2008 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. Wireless access point and Internet service is required and not included. Availability of public wireless access points is limited. Wireless performance is dependent upon physical environment and distance from access point. Mail-in or instant rebate depending on qualifying retailer, while supplies last.

Home,

I'm going to be home late tonight.

I'm totally alarmed at work that you wouldn't believe.

DRAGON® NATURALSPEAKING® 10. BECAUSE YOUR HANDS HAVE BETTER THINGS TO DO THAN TYPE.

The world's most advanced speech recognition software lets you write, edit and email documents three times faster than typing with up to 99% accuracy. Now common tasks that take several steps to perform, such as searching the web or your desktop, can be executed with a single voice command. To learn more, visit nuance.com/talk.

Turn Talk... into Text

Preferred

Dragon®

NaturallySpeaking® 10

SPEECH RECOGNITION SOFTWARE

Faster and More Accurate than Typing

amazon.com



STAPLES
that was easy

Copyright © 2008 Nuance Communications. All rights reserved. Nuance, Dragon, and NaturallySpeaking are trademarks or registered trademarks of Nuance Communications, Inc. in the United States and/or other countries. All other trademarks referenced herein are the properties of their respective owners.



FIRST WORD LANCE ULANOFF

Macs Are PCs, Dammit!

"I'm a Mac. And I'm a PC." I've heard these phrases countless times on TV and the Web. Heck, the ad is even running on the *PC Mag* Web site right now.

This brilliant ad campaign from Apple, which manages to make PC users look like uptight boobs, is entertaining and impressively effective. It also helps foster one of the greatest misconceptions of our still relatively young digital age: that Windows-based computers are PCs while Macs are, well, something else. Of course, that's wrong—dead wrong.

For the Apple ad to be accurate, when John Hodgman (the actor who plays the "PC") says, "I'm a PC," Justin Long (the actor who plays the "Mac") would have to say, "And I'm a PC, too." Why? Because a Macintosh is a PC!

Pardon my frustration, but this artificial distinction has had a long and lasting impact on the venerable brand you're patronizing right now. Here's a typical conversation I have on an alarmingly frequent basis.

A few weeks ago, I attended my brother-in-law's wedding in Virginia. He started teasing me, saying that even though I was the editor of *PC Magazine* he, and his extended family, still loved me. He felt the need to poke fun because his is a "Mac family." (In fact, while I was there, his wife was using iChat on her 15-inch MacBook to talk to friends in Europe). My brother-in-law couldn't understand why anyone would use a PC. In any case, this ribbing continued throughout my visit, with his constantly making snide comments about how it was "okay that I was at the wedding even though..." Then he'd trail off as if he were stating a widely known fact: "Lance is a PC guy; he doesn't care about the Mac."

Finally, after a few days of this, I couldn't stand it anymore, and I cut him off mid-jibe with: "Not for nothing, but *PC Magazine* has been covering the Mac since 1984. We regularly test Apple products, and many of them win our Editors' Choice award." I

was talking fast, and while my brother-in-law seemed ready to offer some apology or joking rejoinder, I plowed ahead with what I thought was a zinger. "And by the way, the PC in *PC Magazine* stands for 'personal computer,' and the Mac is a *personal computer*." My brother-in-law laughed, but he did look a bit startled by my intensity.

I'm sure I overreacted, but I think he ended up serving as a proxy for all the Macheads who somehow manage to forget that they're simply using a computer and not some otherworldly device that was born instead of built.

PC Magazine has been covering the Mac since 1984. And by the way, the PC in PC Magazine stands for personal computer, and the Mac is a personal computer.

Back in 1984, *PC Magazine*, as well as the industry in general, typically referred to PCs as IBM PCs. Then Apple—after the collapse of the Apple III program and the dismal reception of the "Lisa"—launched its new system, the "Macintosh." Virtually all IBM PCs (and non-IBM PCs, which we referred to as "clones") ran the text-based MS-DOS operating system. The Mac was the first to have a graphical interface; that and its OS made it unique at the time. Even so, it was still just a PC, with a keyboard, an integrated display, a floppy disk drive, a CPU, a hard drive, memory, and a file-system structure. The inclusion of a mouse made it special, too, but IBM PCs soon had mice of their own.

I'm not saying that Macs are not wonderful products. We almost always love them when we test them here at *PC Magazine* Labs. Apple is, without a doubt, the most capable company in computing. But Steve Jobs is not God, and

his products are not grown on trees and picked by loving workers who let them ripen on cotton sheets by the window sill. If you need further evidence that Macs are not vastly different from Windows-based PCs, remember that all Macs now use Intel CPUs—the same CPUs you find in Windows PCs. With Boot Camp, Macs can even run the Windows OS. I wonder if the folks who do this refer to their Macs as PCs.

Enough already. Put simply, we all use computers that run different operating systems. If the Apple ad campaign were

really correct, Long would say, "I'm a Mac," and Hodgman would say, "And I'm a Windows." Oh, wait, that sounds odd. How about this: Long says, "I'm a Mac PC," and Hodgman says, "And I'm a Windows PC"? Of course, the ads would then be far less effective, because consumers might realize that the differences Apple is trying to tout aren't quite as huge as Apple would like them to believe.

I'm under no illusions that Apple will change, or even drop, the most effective ad campaign technology has ever seen. I also know that people will forever assume that *PCMag.com* and *PC Magazine* are Windows-only destinations. They'd be wrong. But who am I to argue with good old-fashioned American marketing?

TALK TO THE CHIEF You can contact Lance at Lance_Ulanoff@ziffdavis.com. For more of his columns, go to go.pcmag.com/ulanoff.

PC MAGAZINE

WWW.PCMAG.COM

Technology is an indispensable part of life, work and play. It drives the most exciting new developments and hottest trends, and PC Magazine is at its leading edge. Don't miss these upcoming issues of PC Magazine:

NOVEMBER PC Blockbuster

Our annual roundup of the best systems for all types of users. Plus our HDTV Guide. On Sale: 10/14/08

DECEMBER Best Products of the Year

Plus a look at the best smart phones available. On Sale: 11/18/08

JANUARY Make the Most of Your New PC

On Sale: 12/16/08



EDITOR-IN-CHIEF, PC MAGAZINE NETWORK Lance Ulanoff

EDITOR Stephanie Chang

DIRECTOR OF ONLINE CONTENT, EXECUTIVE PRODUCER Vicki B. Jacobson

EXECUTIVE EDITORS Dan Costa (reviews), Jeremy A. Kaplan (online)

ART DIRECTOR Richard J. Demier

EDITORIAL PRODUCTION DIRECTOR Nicholas Cosmo

PC LABS DIRECTOR, SENIOR EDITOR (HARDWARE) Laarni Almendrala Ragaza

SENIOR EDITORS Sean Carroll (software, Internet, networking), Wendy Sheehan Donnell (consumer electronics), Carol Mangis (blogs), Sarah Pike (Solutions), Erik Rhey (print)

SENIOR WRITER Eric Griffith

REVIEWS EDITORS Gary Berline (software, Internet, networking), Dan Evans (consumer electronics), Tony Hoffman (hardware)

COPY CHIEF Elizabeth A. Parry **COPY EDITORS** Margaret McVeigh, Ann Ovodow

PC LABS LEAD ANALYSTS Cisco Cheng (laptops), Tim Gideon (audio and video), Robert Heron (HDTV and home theater), Michael Muchmore (software), Neil J. Rubenking (security), Joel Santo Domingo (desktops), Sascha Segal (mobile devices), M. David Stone (printers and scanners) **JUNIOR ANALYSTS** PJ Jacobowitz (digital cameras and camcorders), Brian K. Neal **INVENTORY CONTROL COORDINATOR** Nicole Graham **STAFF PHOTOGRAPHER** Scott Schedivy

PCMAG.COM MANAGER, ONLINE PRODUCTION Yun-San Tsai

PRODUCERS Mark Lamorgese, Whitney A. Reynolds

NEWS EDITOR Mark Hachman **NEWS REPORTER** Chloe Albanesi

ASSOCIATE EDITORS Jennifer L. DeLoe, Brian Heater (blogs), Molly K. McLaughlin (reviews), Kyle Monson

ASSISTANT EDITOR Corinne Iozzio **REVIEWS PRODUCERS** Errol Pierre-Louis, Nicole Price Fasig

COMMERCE PRODUCERS Iman Edwards, Arielle Rochette

UTILITY PROGRAM MANAGER Tim Smith **COMMUNITY MANAGER** Jim Lynch

VIDEO EDITORIAL DIRECTOR, VIDEO AND DIGITAL EVENTS Sebastian Rupley **PRODUCER** Veanne Cao **ASSOCIATE PRODUCERS** Scott Asnault, Brooks Rowlett **ASSISTANT PRODUCER** Sam Arbizo

PCMAG RADIO HOST Robyn Peterson

CONTRIBUTING EDITORS Helen Bradley, John R. Delaney, Richard V. Dragan, John C. Dvorak, Craig Ellison, Galen Fott, Bill Howard, Don Labriola, Jamie Lendino, Jim Louderback, Bill Machrone, Edward Mendelson, Jan Ozer, Neil Randall, Matthew D. Sarre, Larry Seltzer

INTERN Chris Gampat

EXTREMETECH.COM EDITOR Loyd Case **SENIOR TECHNOLOGY ANALYSTS** Jason Cross, Joel Durham

PRODUCER Jeremy Atkinson **JUNIOR PRODUCER** Chris Contolini

THE INDEPENDENT GUIDE

PC Magazine is the Independent Guide to Technology. Our mission is to test and review computer- and Internet-related products and services and report fairly and objectively on the results. Our editors do not invest in firms whose products or services we review, nor do we accept travel tickets or other gifts of value from such firms. Where noted, PC Magazine reviews are of products and services that are currently available. Our reviews are written without regard to advertising or business relationships with any vendor.

HOW TO CONTACT THE EDITORS

We welcome comments from readers. Send your comments to Internet address pcmag@ziffdavis.com or to PC Magazine, 28 E. 28th St., New York, NY 10016-7940. Please include a daytime telephone number. PC Magazine's general number is 212-503-3500. The West Coast Operations number is 415-547-8000. We cannot look up stories from past issues, recommend products, or diagnose problems with your PC by phone. An index of past issues is at www.pcmag.com/previous_issues. For a list of upcoming stories, browse www.pcmag.com. For a full description of who on staff covers what, go to www.pcmag.com/whocoverswhat.

If you are dissatisfied with a product advertised in PC Magazine and cannot resolve the problem with the vendor, write (do not call) Anne Kling, Advertising Department, at the above address. Please include copies of your correspondence with the vendor.

Why Limit Yourself to Only One Display...



UV PLUS+ A USB VGA Display Adapter

An easy solution for expanding your virtual workspace

EVGA

Coupon Promotion from Oct. 1st to Oct. 31st 2008

Promo Code: **UV12PM10/UV16PM10**

For Detailed Information Visit: www.evga.com/uvplus

*Window XP, Vista and OS X Support *DVI to VGA dongle is included

*Up to 1440X900(UV12) *Up to 1680X1050(UV16) *USB 2.0 Powered

*Stackable and Portable

DisplayLink[™]
certified



COMPUSA.com



MICRO CENTER

NCIX.com

newegg.com

TigerDirect.com



global warming.
taxes. guns.
immigration.
iraq. energy.
environment.
economy.
gay marriage.
freespeech.
freechoice.
my rights.
your rights.
show up or
shut up.

VOTE

November 4, 2008



the people of santa fe natural
tobacco company

**SURGEON GENERAL'S
WARNING: Smoking Causes
Lung Cancer, Heart Disease,
Emphysema, And May
Complicate Pregnancy.**

www.sfntc.com

Natural American Spirit® is a registered trademark of
Santa Fe Natural Tobacco Company. © SFNTC 3

CHIEF EXECUTIVE OFFICER Jason Young

BUSINESS DIRECTOR Christopher Urcioli

VICE PRESIDENT, MARKETING James Seiden 212-503-4689

MARKETING DIRECTOR Ashley Kinley Kamil

RESEARCH DIRECTOR Fred Doscher

ADVERTISING/PRODUCTION MANAGER Monet Whitaker

WEST COAST SALES ASSISTANT Alycia Eakin 415-547-8036

ADVERTISING OFFICE

28 E. 28th St., New York, NY 10016-7940

Phone, 800-336-2423, 212-503-3500; fax, 212-503-5000

For advertising information go to www.pcmagmedia.com

NORTHEAST Hunter Millington 212-503-5422

MIDWEST Anne King 312-836-0771

DETROIT RPM Associates 248-557-7490

NORTHWEST Angela Mueter 415-547-8807

SOUTHWEST Susan Narta 949-459-2931

SOUTHEAST Amy Loria 352-873-4288

MARKETLINK DIRECTOR Kathy Pavlak 212-503-4847

CONSUMER MARKETING CONSUMER MARKETING DIRECTOR Todd Klyver

FINANCE AND PLANNING MANAGER Glenn Collucci

ZIFF DAVIS MEDIA INC.

CHIEF EXECUTIVE OFFICER Jason Young

CHIEF FINANCIAL OFFICER Neil Glass

CHIEF TECHNOLOGY OFFICER Robyn Peterson

EXECUTIVE VICE PRESIDENT Steve Sutton (General Manager, Interactive)

SENIOR VICE PRESIDENTS Neil Glass, Robyn Peterson, Marci Yamaguchi (Game Group)

VICE PRESIDENTS Norris Boothe (Product Marketing, Game Group), Simon Cox (Content,

Game Group), Shirin Maikani (General Counsel), Paul O'Reilly (Event Marketing Group),

Beth Repeta (Human Resources), James Seiden (Marketing and Sales Development,

Consumer/Small-Business Group), Lance Ulanoff (Content, PC Magazine Network),

Monica Villa (Event Marketing Group)

EXECUTIVE DIRECTORS, WORLDWIDE LICENSING, RIGHTS AND PERMISSIONS Larry Chevrès (Internet

Technology), Olga Gonopolsky (Worldwide Licensing, Rights and Permissions)

PERMISSIONS, REPRINTS

For permission to reuse material in this publication or to use our logo, contact Ziff Davis Media's Executive Director of Rights and Permissions, Olga Gonopolsky, at permissions@ziffdavis.com, or by phone at 212-503-5438 or by fax at 212-503-5420. Material in this publication may not be reproduced in any form without written permission. For reprints, please contact the YGS Group: telephone, 800-290-5460; fax, 717-399-8900; e-mail, pcmag@theygsgroup.com.

The following are registered trademarks of Ziff Davis Publishing Holdings Inc.: i-Bench, NetBench, PC DIRECT, PC Labs, PC MAGAZINE, PC MAGAZINE AWARD FOR TECHNICAL EXCELLENCE, PC MAGAZINE EDITORS' CHOICE, PC MagNet, ServerBench, WinBench, Winstone, Ziff Davis Media's corporate logo, and PCMAG.com. The following are trademarks of Ziff Davis Publishing Holdings Inc.: After Hours, CPUbench, EasyComputing, ExtremeTech, First Looks Plus, i-Bench, Lab Notes, Lab Tales, PC Bench, PC Labs Scorecard, PC Magazine At Home, PC Magazine CD, Front Side, PC Magazine Extra, PC Magazine Marketplace, PC Solutions, PC Tech, Power Programming, Quick Clips, ScreenDemos, SMB Boot Camp, Tech Notes, and WinDrain. Other trademarks and trade names used throughout the publication are the property of their respective owners. Copyright © 2008 Ziff Davis Publishing Holdings Inc. All rights reserved. Reproduction in whole or in part without permission is prohibited.

SUBSCRIPTION INFORMATION

For subscription service questions, for address changes, or to order, please contact us:

INTERNET: service@pcmag.com (for customer service) or subscribe@pcmag.com (to order).

TELEPHONE: 800-289-0429 or 386-697-4372 in the U.S. and Canada, 386-697-4370 elsewhere.

MAIL: PC Magazine, PO Box 54070, Boulder, CO 80322-4070 (please include your mailing label with any correspondence, as it contains information that will expedite processing).

FAX: 386-447-2321 in the U.S., Canada, and elsewhere.

E-MAIL: subhelp@pcmag.com (please type your full name and the address at which you subscribe).

SUBSCRIPTIONS: The one-year subscription rate is \$24.97. PC Magazine is published monthly. Outside the U.S., add \$20 per year for surface mail; U.S. funds only. Please allow four to six weeks for your first issue to arrive or for any changes in your subscription to take place. If the postal service alerts us that your magazine is undeliverable, we have no further obligation unless we receive a corrected address within two years.

BACK ISSUES: Back issues are \$8 each in the U.S., \$10 each elsewhere. Prepayment is required. Contact customer service (above) for availability. **MAILING LISTS:** We sometimes make lists of our customers available to mailers of goods and services that may interest you. If you do not wish to receive their mailings, please write to us at PC Magazine, PO Box 54070, Boulder, CO 80322-4070.

ZIFF DAVIS MEDIA®

**Audit Bureau
of Circulation**

www.xezo.com

Mirror finish • 316L stainless steel • Curved case • Curved sapphire crystal glass • 50M/165FT water-resistant • Case: 35 x 48 mm • Thickness: 8 mm

For a limited time, Xezo is offering the Architect limited-edition watch for just \$554.00 (shipping is free within the U.S.). To order this finely handcrafted timepiece, visit the manufacturer's Website at www.Xezo.com, or call 800-779-0102 within the U.S.



Limited Edition of 500 Pieces

The Swiss-made Architect by Xezo --- as unique as your environment

XEZO
Time Evolves™

FeedBack

Get with the Times, Dvorak

In John C. Dvorak's Inside Track column (July, page 55), he states in the "Disaster Waiting to Happen Dept." that "The switch [to digital TV] should never have been planned this way." He goes on to say, "Analog and digital should coexist and transition with a slow pullback of analog over a couple of years."

On the contrary, 98 percent of U.S. TV stations have already been transitioning to DTV over the last two to four years. Most stations have been broadcasting their main analog channel in Simulcast with their new DTV transmitters right under our noses. Some stations have also increased the number of available digital channels they can transmit on the same digital channel carrier (for example, channels 7.1, 7.2, and 7.3 DT). This has been a godsend for station program managers who wish to make alternate programming available for the viewer to watch from the same station.

Perhaps Mr. Dvorak was not an "early adopter" like most of us with DTV. The only confusion that will occur on February 17, 2009, is the DTV consumer getting used to switching to channel 7.3 on the remote control instead of just channel 7.

—Timothy Sternberg

A Loo Opinion of Costa's Theory

Dan Costa's column "Three Steps to a Paperless Office" (May, page 60) states that "Like most serious writers, I get my best ideas when I'm in the bathroom." He apparently doesn't know very many serious writers. That is not the way we writers get our best ideas. He does a disservice to "serious" writers everywhere. —Paul T. Jackson

Dealing with Data

Regarding John C. Dvorak's timely column "The Trouble with Terabytes," which appeared on PCMag.com, in the bad old days when I stored my data on 360K floppy disks, I had a solution to the space problem. When a data disk filled up, I simply copied the current data—the 10 percent that I was still actually using—to a blank floppy disk

Forcing customers to give up rights to their own content seems like a copyright wrong if there's no other choice but to agree in order to receive software updates.

and used the new one as my data disk. I labeled the old disk and saved it. No deleting files, no reorganizing. Later, if I needed a file from the other 90 percent, all I had to do was copy it over. But I still had a new data disk that was mostly empty. And my old data was automatically archived. This solution was quick and easy, and it solved the problem.

Interestingly, the same technique works just fine with hard disks—even 5-terabyte hard disks (though it may take longer to copy today's files). Hard drives are cheap, so why not just use the old ones as archives when they fill up? And the new one will be mostly empty. The biggest problem with this technique—as compared with 1985 when I first used it—is that we no longer keep data and programs on separate volumes. Nowadays the programs are intimately interwoven with Windows itself, and the data may be intimately interwoven with both. Separating the current stuff is harder, and you have to reinstall your software on the new drive to access it. But it still beats the "housekeeping" one has to do with thousands, even millions, of files on a 5TB hard drive. —Mike Robinson

Clicking Your Rights Away

Commenting on Sascha Segar's August column, "Copyrights—and Wrongs" (page 54), I want to point out a related area of concern: Companies that seek to grab copyright from the customers who use their products. For example, I love the Pure Digital Flip video recorder, but I don't love the license agreement that Pure Digital wants to impose. Here's an excerpt: "You hereby grant to Pure Digital a non-exclusive, worldwide, perpetual, irrevocable, transferable, royalty-free license to use, reproduce, distribute, prepare derivative works of, display, and perform all of your Content, with the right of Pure Digital to grant sub-licenses, in connection with Pure Digital's websites and Pure Digital's (and its successors' and assigns') business. You also

hereby grant each user of Pure Digital's websites a non-exclusive license to access your Content through the websites and to use, reproduce, distribute, prepare derivative works of, display, and perform such Content as may be permitted through the websites' functionality."

Forcing customers to give up rights to their own content seems like a copyright wrong if there is no other option but to agree in order to receive software updates. Imagine if I had to grant Google all rights to comments I post on my Blogger blog, just because I use Blogger. Copyright or wrong? —Marian B. Wood

Not So Fast, PC Mag

Have we learned nothing from recent history?

Straight on the heels of a botched OS release from Microsoft, Lance Ulanoff is hyping the next version of Windows in his August column "Win 7: Already a Threat to Vista" (page 9). Even the cover of that issue is dedicated to a vaporware OS.

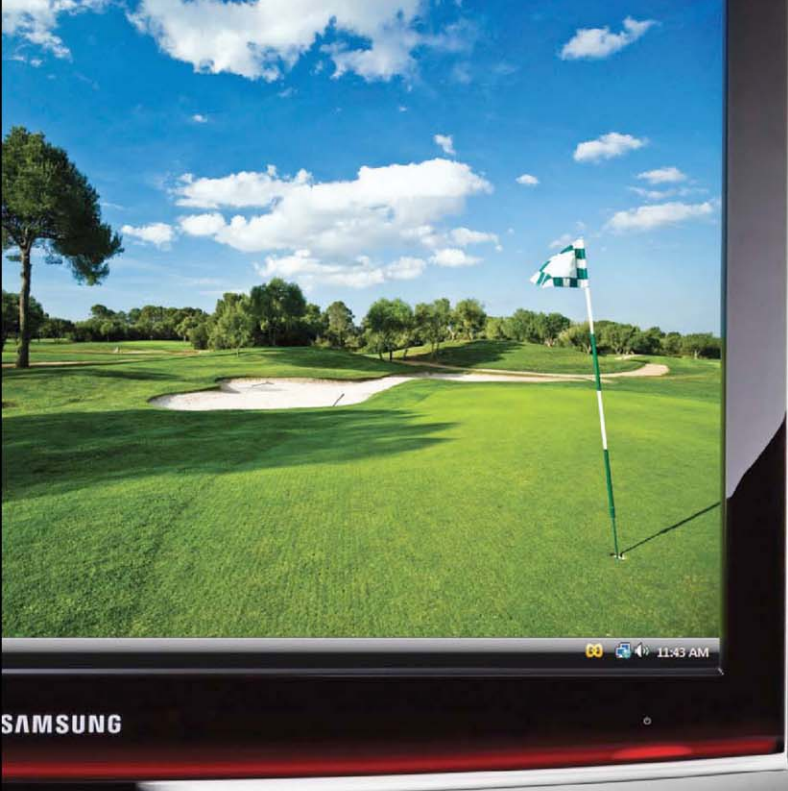
This is how we got into this mess in the first place. Remember how a year before Vista's release the Microsoft marketing machine went into action plugging Vista's advantages, such as the NTF's replacement? Well, a good number of those features were dropped before shipping. How about doing your readers a favor and not parroting Microsoft hype? Wait until Windows 7 actually ships and you can put it through its paces before talking about "major innovations in Windows 7." —Zareh Gorjian

CORRECTIONS AND AMPLIFICATIONS

In our August buying guide "Prints Charming," we incorrectly cited the prices of the products in the Features and Performance chart on page 64. You can find the corrected version of the chart online at www.pcmag.com/printerguide.

In the sidebar "Wiring Your Home with Cat 5e" in our August feature story "Build Tomorrow's Network Today" (page 66), we incorrectly listed the order to arrange the Ethernet cable wires. The correct order should be orange, white, orange, green, white, blue, blue, white, green, brown, white, brown.

HOW TO CONTACT US We welcome your comments and suggestions. When sending e-mail to Feedback, please state in the subject line of your message which article or column prompted your response. E-mail pcmag@zfhdavis.com. All letters become the property of PC Magazine and are subject to editing. We regret that we cannot answer letters individually.



SAMSUNG

(R)evolutionary

Every Samsung monitor is more than an evolution. It's a revolution. Our new Touch of Color™ PC/HDTV monitors feature an innovative design using a dual-injection technique. It's akin to a fine blown glass with a touch of deep ruby red. And the revolution doesn't stop there. We offer up to a stunning 20,000:1 contrast ratio with 2ms response time, as well as features like an HDTV tuner, built-in speakers and dual HDMI inputs, allowing you to use as a monitor or as a 1080p HDTV. These monitors will turn any drab workspace into a beautiful, truly revolutionary environment. For more information on another revolutionary monitor from the #1 monitor brand in the world*, call 1-800-SAMSUNG or go to www.samsung.com/revolutionary



SAMSUNG

FrontSide



The Most Wired Campuses

The University of Illinois tops our annual list of the 20 most digitally connected college campuses in America. Others on the list? You may be surprised.

With millions of higher-ed students in the United States sporting laptops and smartphones, schools are constantly trying to keep up with technology. And not just for students, but also staff, faculty, and even parents and alumni. That's why we've once again partnered with The Princeton Review to find the most connected schools in the country. But our search did not focus simply on which school has the most advanced comp sci or robotics program. We also scrutinized the day-to-day technology that can greatly improve a stu-

dent's experience, such as online lectures and test-taking, Ethernet in dorm rooms, and 24-hour tech support.

What we found is a vastly different landscape from our previous survey. Of our top 20 schools in 2006 (see go.pcmag.com/wiredcollege), only six made the list this year. Villanova University, the former number one, dropped to number 15. High-tech poster child MIT, the former number two, dropped to 20. At the same time, the University of Illinois at Urbana-Champaign (UIUC) went from number six to

number one; other climbers included Pomona College (number 5), Eckerd College (7), and Stanford University (9).

Advanced classes in technology are nothing new, but what schools offer today is getting more varied and eclectic. For example, all the schools in the top 20 offer Web design as a course option, but game development, 3D animation, and robotics are gaining in popularity. A few schools also offer classes on hacking and PC security. Some unique class offerings include the University of Pennsylvania's (16) intel-

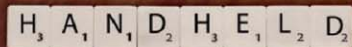
Panasonic recommends Windows Vista® Business.



LEGALLY, WE CANNOT SAY THERE'S A NEW WORD FOR HANDHELD.



Actual Size: 5.9" (L) x 7.2" (W) x 2.2" (H)



The Panasonic Toughbook® U1 is a new kind of mobile computer, a one-two punch of Toughbook ruggedness with twin batteries for full-shift productivity. We wouldn't want to put words in your mouth, but being able to run a full Windows® OS while still maintaining its convenient lightweight design is something other handhelds can't begin to imagine. Couple that with its seemingly endless integrated options like GPS, mobile broadband, a 2MP camera and fingerprint and barcode scanners, and you might forget you're not carrying a laptop. We won't say we've reinvented the handheld. We'd rather wait and hear you say it.

panasonic.com/toughbook/u1 1.888.223.1184

TOUGHBOOK®
THE RUGGED ORIGINAL.

Panasonic ideas for life

Intel, the Intel logo, Intel Atom, and Intel Atom Inside are trademarks of Intel Corporation in the U.S. and other countries. Toughbook notebook PCs are covered by a 3-year limited warranty, parts and labor. To view the full text of the warranty, log on to panasonic.com/business/toughbook/support.asp. Please consult your Panasonic representative prior to purchase. Panasonic is constantly enhancing product specifications and accessories. Specifications subject to change without notice. ©2006 Panasonic Corporation of North America. All rights reserved. New_Word_H_FY06-2

THE TOP HIGH-TECH COLLEGES OF 2008

1. University of Illinois at Urbana-Champaign, Urbana, Illinois, www.uiuc.edu
2. Kansas State University, Manhattan, Kansas, www.k-state.edu
3. University of Utah, Salt Lake City, Utah, www.utah.edu
4. Bentley College, Waltham, Mass., www.bentley.edu
5. Pomona College, Claremont, California, www.pomona.edu
6. Boston College, Boston, Massachusetts, www.bc.edu
7. Eckerd College, St. Petersburg, Florida, www.eckerd.edu
8. Hollins University, Roanoke, Virginia, www.hollins.edu
9. Stanford University, Stanford, California, www.stanford.edu
10. University of Oklahoma, Norman, Oklahoma, www.ou.edu
11. The Catholic University of America, Washington, D.C., www.cua.edu
12. Loyola College in Maryland, Baltimore, Maryland, www.loyola.edu
13. Franklin W. Olin College of Engineering, Needham, Mass., www.olin.edu
14. Rice University, Houston, Texas, www.rice.edu
15. Villanova University, Villanova, Pennsylvania, www.villanova.edu
16. University of Pennsylvania, Philadelphia, Pennsylvania, www.upenn.edu
17. University of Southern California, Los Angeles, California, www.usc.edu
18. Carnegie Mellon University, Pittsburgh, Pennsylvania, www.cmu.edu
19. Bowdoin College, Brunswick, Maine, www.bowdoin.edu
20. Massachusetts Institute of Technology, Cambridge, Mass., web.mit.edu

lectual property law classes and UIUC courses in parallel computing and data mining. The vast majority of the schools in the top 20 also offer their classes online, typically in the form of podcasts.

As for student resources, every school offers some variety of antivirus solution, free online storage, and Web access to library catalogs. Only a handful, however, could make the claim of including laptops (either given or on loan during students' tenure): Bentley College (4), Villanova, Franklin W. Olin College of Engineering (13), UIUC, Eckerd, Bowdoin College (19), and Stanford. Most schools assume that students will already arrive with their own systems.

To help students get the most out of those laptops, a truly high-tech school offers many ways and locations for using them. Only a couple of colleges in the top 20 said they have less than 100 percent wireless coverage at the student union, libraries, and even dining areas. And despite federal legislation meant to crack down on peer-to-peer connections, of these 20 only Kansas State University (2) said it bans the technology on its networks.

The area in which there are great divisions in these schools is tech support. While the ubiquitous FAQ (frequently asked questions) is a 24/7 option at all schools, some go the extra mile. For example, Pomona, Catholic University of America (11), and Bowdoin have 24-hour on-campus repair, and Stanford and Penn

have trained peer-support personnel living in residence halls. Kansas State has live online support and remote diagnostics, while UIUC offers 24-hour phone support and online diagnostic tools. Such services can be invaluable when it's 3:00 a.m. and your essay on *The Illiad* is due in 4 hours. —Eric Griffith and Erik Rhey

Has eBay Outbid Itself?

The monolith of online auctions is weathering big changes, lawsuits, and customer backlash.

For years, eBay has been an iron-clad ship boldly navigating the rough waters of buyouts, bursting Internet bubbles, competition from start-ups, and a stagnant economy. But recent changes in leadership, revisions to its auction policies, lawsuits from retailers, and signs of a new revenue model have led some to believe that eBay has strayed off course.

Tim Church, one of eBay's original power sellers, launched a full-scale boycott of the site, challenging the company in an online statement to "get control of your greed." Church organized two boycotts—one in February and one in March—with minimal success. Although there was a slight downturn in traffic, an eBay rep declared that "there was no impact of the so-called boycott."

The boycotts were in response to auction changes by CEO John Donahoe after the departure of former CEO Meg Whitman. Donahoe mandated that sellers can no longer leave feedback, effectively dismantling eBay's "mutual feedback withdrawal system" (buyers also cannot withdraw their comments). Also, eBay cracked down on those with multiple listings, forcing them to consolidate.



Donahoe defended the actions, saying that eBay altered its feedback system because it had "lost some of its balance and fairness." He conceded that the changes "generated a lot of passion from our community" but also insisted that "this is a good thing."

Another bold move by the company is to cultivate a retail sales model through its eBay Stores, its "Buy It Now" feature, and a partnership with Buy.com. Although this has bolstered eBay's bottom line, it has also caused several lawsuits from luxury-goods powerhouses such as LVMH (owner of Louis Vuitton) and Tiffany, claiming the site violated trademarks by allowing fake items to be sold.

Whether these signs point to a permanent departure from eBay's egalitarian auction past remains to be seen. Power seller and online auction blogger Skip McGrath questions in a blog post whether the Buy.com deal means the end of the auction format, or the beginning of a system that focuses more on deals with large sellers than on smaller sales of things like antiques and collectibles. —Chloe Albanesius, Brian Heater, and Erik Rhey

BEST OF OUR BLOGS

TECHNORIDE

www.technoride.com

New Web Site Lets You Lock in Gas Prices

Think of it as a way of locking in your mortgage interest against potential rate hikes. The Miami-based Web service MyGallons.com lets drivers buy gas in the future at present prices. The assumption here is that gasoline costs will only go up, the underlying principle of the scheme. So far, this has been a fairly safe bet. In fact, the upward trend in gas prices is largely responsible for drawing nearly 2,000 Web users across the country to purchase gas from MyGallons.com since its initial launch in January.

—Steven Volynets



GEARLOG www.gearlog.com

A 50-Megapixel Monster

The new 50MP Hasselblad H3DII-50 boasts a sensor, built by Kodak, that's the world's largest at 36mm by 48mm. But don't expect high-speed shooting; the H3DII-50 can record at 1 frame per second. The camera features a 3-inch display, a CCD cooling sink, and optional GPS accessories. The price is still unknown, but the next model down costs around \$40,000.—Chris Gampat

SECURITYWATCH www.securitywatch.com

Supreme Court Justice Among Investment Clients Affected by Data Breach
A data breach at Wagner Resource Group, a Northern Virginia investment firm, compromised client data, including that of U.S. Supreme Court Justice Stephen Breyer. According to a *Washington Post* story, the breach happened because an employee set up LimeWire on his company PC and set it to share company data. The problem went unnoticed for six months.—Larry Seltzer



GOODCLEANTECH www.goodcleantech.com

A Next-Gen Electric Bicycle

The moped is making a comeback. The Ultra Motors A2b hardly resembles the clunkers of yore. This electric bike has a 500W motor and can go up to 20 mph and 20 miles on a charge. A second battery can get up to 40 miles. The A2b is available for \$2,500.—Jeremy Kaplan

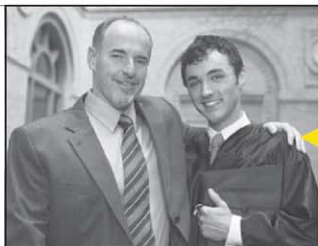
@WORK

blogs.pcmag.com/atwork

Airport-Security Laptop Rule May Be Relaxed Soon

According to a piece in UPI.com's Business News, you may soon not need to remove your laptop from its case at airport security. The U.S. Transportation Security Administration says the security measure may be outmoded. The catch: All laptop cases may now be required to be "checkpoint friendly," meaning that they must allow a clear X-ray image.

—Jared Preusz



One day, his son would speak to the world.

He wanted them to understand.

Rosetta Stone. The fastest and easiest way to learn **CHINESE**.



Only Rosetta Stone® uses **Dynamic Immersion®** to teach you a language quickly and efficiently without tedious translation, mindless memorization and boring grammar drills. It's the world's leading language-learning software.

- You'll experience **Dynamic Immersion** as you match real-world images to words spoken by native speakers so you'll find yourself engaged, and learn your second language like you learned your first... for a faster, easier way to learn.
- Our proprietary **Speech Recognition Technology** evaluates your speech and coaches you on more accurate pronunciation. You'll speak naturally.
- And only Rosetta Stone has **Adaptive Recall™**, that brings back material to help you where you need it most, for more effective progress.

Plus, Rosetta Stone now offers **Audio Companion™** to help you make even faster progress. Simply download the CDs to your audio or MP3 player and use Rosetta Stone on-the-go!

Get Rosetta Stone—The Fastest Way to Learn a Language. Guaranteed®

31 Languages Available

SAVE 10%!

100% GUARANTEED
SIX-MONTH MONEY-BACK

Level 1	Reg. \$219	NOW \$197
Level 1&2	Reg. \$359	NOW \$323
Level 1,2&3	Reg. \$499	NOW \$449

©2009 Rosetta Stone LLC. All rights reserved. Patent rights pending. There are no other trademarks or service marks. Six-month money-back offer is the best to protect purchase made directly from Rosetta Stone and does not include other shipping. Shipping dates will apply to Rosetta Stone Online or Audio Companion purchased separately from the software product. All materials included with the product at the time of purchase must be returned together and undamaged to be eligible for a refund.

Call
(866) 357-3118

Online
RosettaStone.com/pcs108

Use promotional code pcs108 when ordering.
Offer expires January 31, 2009.

RosettaStone®



BEST of the Internet



UBERSPAT

www.uberspat.com
This site gives you a way to debate an issue, collect information about it, and watch the debate change as more information becomes available. You can start an argument on any topic and watch as other members discuss.
—Alan Henry



TWITFIRE

www.twitfire.com
A free job listing service for Twitter users. Twitfire aims to connect businesses that are using Twitter to promote themselves with job hunters who may be using Twitter already to keep in touch with their friends. —AH



GAZELLE

www.gazelle.com
Looking to get rid of your old electronics? Just type in the specs at this site and answer a few questions about its condition and whether you have accessories. Gazelle will give you an instant quote. If you accept, the company will send you a prepaid envelope or box to ship the item in.
—Chloe Albanesius

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

CONNECTED TRAVELER

Take Better Vacation Photos

A few simple tricks can make your digital snapshots pop.



GET IN CLOSE Zooming in on your subject to block out a distracting background or foreground (such as in the photo at the far left) puts the focus where it belongs (near left).

Let's face it, looking at others' vacation photos is often a complete bore. Why? Because the photos just aren't very good. Blurry or poorly composed images can turn the most exotic adventure into a yawn fest. Follow these few tips to make sure your trip gets the stunning record it deserves.

FORGET MEGAPIXELS. Most digital cameras have at least 6 megapixels—more than enough for the average user. So if you're in the market for a new camera, spend less on megapixels and more on a good-quality, faster lens with an f-stop of f/2.8. This will allow you to shoot in lower-light situations without always using the flash—which is generally only effective within 12 to 25 feet of the camera anyway. (For more tips on buying a digital camera as well as camera reviews, see page 95.)

FOLLOW THE SUN. Make sure the sun or your primary light source is behind you (not behind the subject of your photo) to avoid washed-out colors and shadowy faces.

BACKGROUND CHECK. I've seen people meticulously line up family members for a group shot at the Grand Canyon—with nothing but the parking lot behind them. Put the camera down and survey the scene before you shoot. Moving a few feet can also help eliminate ugly elements like power lines,

garbage trucks, and billboards. Also make sure there are no random passersby in your shots.

KILL THE COUNTDOWN. Every so often, break away from hollering "1, 2, 3, smile!" before you shoot—it's annoying for everyone around you and mortifying for the people you're photographing. More important, opting for a few candid photos of family and friends will help tell the story of your summer vacation in a much more compelling way.

STOP CENTERING. It feels natural to put the subject of your photos in the center of the frame—and there's nothing really wrong with that. But a more interesting photo often results from applying the "rule of thirds," which states that an ideal location for the subject is one third of the way into the frame either horizontally or vertically (see the photos below).

HOLD STEADY. Image stabilization isn't just a gimmick to get you to spend more on a camera. It really does help compensate for hand-shake so you can take sharper pictures even when you're shooting at slow shutter speeds (necessary in darker situations) or when you're extremely zoomed in. Try using a tripod or mini-tripod, or at least stabilize your hand on a rock, wall, or other stationary object. —Eric Mohl

SHOOTING OUT OF CENTER

Instead of centering your subject in the frame (near right), you can often take more compelling shots by using the "rule of thirds" (far right).



make your mark

PERSONALIZE. WRITE. NAVIGATE. SIMPLIFY.

Now there's a simple, easy, and more natural way to bring your big ideas to life. Use Bamboo, a new pen tablet from Wacom, to transform your thoughts into powerful communications. Touch the pen tip to the tablet to handwrite notes, mark up digital documents, make quick sketches, and sign your name.

Combine Bamboo with your Mac or Microsoft® Windows Vista™ and Office 2007. Handwrite email. Enter text by hand anywhere typed text is accepted. Navigate your desktop with a flick of the pen, and more. Starting at \$69.

www.BambooPenTablet.com

BAMBOO™



wacom®





CDW can help you upgrade your technology. Your wardrobe is entirely up to you.



HP Compaq Business Desktop dc5800

- Intel® Pentium® Dual-Core Processor E2200 (2.20GHz)
- Memory: 2GB
- 80GB SATA hard drive
- DVD±RW (±R DL)/DVD-RAM drive
- Windows Vista® Business Edition¹



\$699.99
CDW 1302450

HP SMART BUY²



HP Flat Panel Monitor L2045w

- 20" analog/digital, widescreen LCD with 600:1 contrast ratio
- Panel brightness: 300 cd/m²
- Three-year limited parts, labor and biddlight warranty

\$279.99 CDW 1070837



Licensing available³

Adobe® Creative Suite® 3.3 Design Premium For Windows®

- Includes new Adobe Acrobat® 9 Pro plus Adobe Fireworks® CS3
- Produce professional page layouts, engaging Web sites, dynamic PDF documents, and rich interactive experiences

Upgrade⁴ **\$153.99** CDW 1458556
Full version **\$1885.99** CDW 1458555



We're there with the technology solutions you need.

Music and vintage clothing still have a place in the world today. Old technology? Not so much. From upgrades to the latest operating system, or even switching to a new one altogether, CDW has the desktops to suit your needs. Of course, we also offer a personal account manager who knows the needs of your business, as well as technology specialists to answer questions and a host of configuration services. Bottom line – we'll make sure you get what you want, when you want it. So call CDW today and upgrade to where you need to be. Technologically speaking, of course.

CDW.com | 800.399.4CDW



The Right Technology. Right Away.®

¹HP Smart Buy instant savings reflected in advertised price; HP Smart Buy instant savings is based on a comparison of the HP Smart Buy price versus the standard list price of an identical product; savings may vary based on channel and/or direct standard pricing. ²Windows XP Professional Downgrade CD included. ³Adobe Open Options (AOO) volume licensing; call your CDW account manager for details. ⁴Additional upgrade paths available; call your CDW account manager for qualifying products. Offer subject to CDW's standard terms and conditions of sale, available at CDW.com. ©2008 CDW Corporation

First Looks

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

MSI Wind

\$480 street

●●●●○



PROS: Aggressively priced (under \$500). Runs the Intel Atom platform. Big 10-inch screen. Very light. 80GB hard drive. Windows XP Home Edition.

CONS: Needs a bigger battery. Although pleasant to type on, the keyboard should be full size.

For more: go.pcmag.com/msiwind

10.1 inch screen,
2.6 pounds



MSI WIND

A Mighty Wind

It's hard to one-up one's rivals when the price of an ultramobile PC must fall within the \$500 range to compete. But the MSI Wind has done just that, taking on the ASUS EeePC 900. The Wind doesn't go out of its way to stand out from the crowd, but it's still a top-tier UMPC. The Wind comes complete with the Intel Atom platform, Windows XP Home Edition, and a very good user experience. The HP 2133 Mini-Note PC still has the upper hand in configuration options, but until the Mini-Note can deliver a cheaper price, the Wind is our Editors' Choice for UMPCs.

The Wind's 10-inch screen is practical for both Web surfing and word processing. Its keyboard isn't full size (92 percent), but it's still bigger than the ASUS EeePC 900's (84 percent). The mouse buttons, on the other hand, are tiny and narrow. As for internal components, MSI, for the most part, put in the right ones: an 80GB hard drive, three USB ports, a four-in-one media card reader (SD, MS, MS Pro, MMC), VGA-out, an Ethernet port, and a 1.3-megapixel webcam, as well as Bluetooth and 802.11g Wi-Fi.

The Wind's 1.6-GHz Intel Atom N270 processor is more energy efficient and a much better performer

than the HP Mini-Note's VIA C7-M—and it won't heat up your lap. Its video-encoding score of 5 minutes was almost twice as fast as the HP's (9 minutes). And the 1GB of memory is more than enough to run Windows XP. Although the Atom processor packs a punch, the small 24-Wh battery yielded only 2 hours 24 minutes on our MobileMark 2007 battery life test.

Unfortunately, even standouts like the Wind can't help suffering from UMPCs' innate limitations, such as a relatively underpowered processor and limited features. Any UMPC will almost certainly serve as a second laptop rather than a primary one. But of the ones we've reviewed so far, the Wind has the best feature-to-price ratio, thus earning our Editors' Choice for this category.—Cisco Cheng

INSIDE

- 23 Hardware
- 28 Business
- 32 Consumer Electronics
- 44 Software

PERFORMANCE TESTS

▲ High scores are best.
▼ Low scores are best.
boldtype denotes first place.

	MOBILEMARK 2007 ▲ first place	SYSMARK 2007 OVERALL ▲	MULTIMEDIA	
			WINDOWS MEDIA ENCODER ▼ first place	PHOTOSHOP CS3 ACTION SET ▼ first place
MSI Wind	2:24	40	5:00	N/A
HP 2133 Mini-Note PC*	N/A	N/A	9:11	4:06

RED denotes Editor's Choice. *Reported for comparison. N/A—Not applicable: The product could not complete the test.

Intel's New Mobile Powerhouse

The Centrino 2 platform is a triple threat of processing, wireless, and graphics muscle. Here's a look at the first C2 laptops off the line. *By Cisco Cheng*



Lenovo ThinkPad X200
\$1,199 direct (as tested)

Green Rating: ●●●●●●●●

PROS: Performance-chart topper. Phenomenal battery life. Industry-leading keyboard and typing experience. Wealth of wireless connectivity options. 7,200-rpm hard drive. Environmentally friendly.

CONS: No optical drive. Could be lighter.

For more: go.pcmag.com/x200



HP Pavilion dv5t

\$1,525 direct

Green Rating: ●●●●●●●●

PROS: Chrome interior is a different look. Powerful discrete graphics card. Multiple battery options. Integrated HD tuner. HDMI out. eSATA/USB 2.0 combo port. Intel Centrino 2 processor. Good 3D graphics card.

CONS: Should have been lighter than its predecessor.

For more: go.pcmag.com/hpdv5t

The introduction of a new platform has been a yearly event for Intel. And with it inevitably follows the scramble to launch new laptops based on the standard. Last year, the Santa Rosa platform became the Centrino line. Now Intel has unveiled its successor: Centrino 2 (code-named *Montevina*).

Centrino 2 has a smorgasbord of new features, including six new Intel Core 2 Duo processors, a faster (1,066-MHz) front-side bus (FSB), the Intel Wi-Fi Link 5000 Series, support for DDR3 memory, and the 82567LM Gigabit network controller. There's also an energy-saving element: Centrino chips with the "P" designation are the first 25-watt processors, which are energy efficient while maintaining standard voltage speeds. The other half of the batch are Core 2 Duos with a higher thermal design power (TDP). Intel is also including switchable graphics, which result in projected battery life savings of up to 50 minutes. This roundup presents some of the first Centrino 2 laptops to market.

Lenovo ThinkPad X200

The X200 isn't likely to outshine Lenovo's (astronomically priced) superstar X300 anytime soon, but it does have several features that make it a terrific business ultraportable. Its powerful 2.4-GHz Intel Core 2 Duo P8400 processor boosts battery life. And it puts every wireless technology imaginable at your disposal.

The X200 is a bit thicker and heavier (3.7 pounds) than the X300, but it has a smaller footprint, because of its 12-inch widescreen. The optical drive is the most glaring omission, but you can buy the Ultrabase dock for \$219. The X200 also includes three USB ports, an SD card slot, a webcam, and a fingerprint reader. Its internal WWAN connectivity lets you choose from AT&T, Sprint, or Verizon. You also have options for GPS, ultra wideband (a type of wireless USB), Bluetooth 2.0, and support for WiMAX.

The X200 won our GreenTech Approved seal by complying with Energy Star 4.0 and RoHS standards

and achieving an EPEAT Silver rating. It also passed our energy consumption tests, registering 14 watts in idle mode.

Centrino 2 rockets the X200 to the rank of fastest Lenovo ultraportable—for now. Its SYSmark 2007 Preview Overall score bested the X300's by 41 percent. Because of the X200's energy-efficient processor and 84-Wh battery, it lasted 6 hours 10 minutes on our MobileMark 2007 tests. The Sony VAIO VGN-FW198UH still has the upper hand in overall performance, but if you're a big fan of the ThinkPad X line, you should be thrilled with the X200.

Specs: 2.4-GHz Intel Core 2 Duo P8400; 2GB DDR2 SDRAM; 160GB, 7200-rpm hard drive; 771MB Intel Graphics Media Accelerator 4500MHD; 12.1-inch, 1,280-by-800 display; Intel Wireless Wi-Fi Link 5300; 3.7 pounds (4.3 lbs travel); 2 USB ports; 84-Wh, 7.8-Ah lithium ion battery; Windows Vista Business.

HP Pavilion dv5t

The dv5t is part of a group of HP consumer laptops to receive an interior chrome treatment. And with the inclusion of the Centrino 2 platform, the dv5t is one of the first to get a full performance tune-up.

This wasn't an extreme makeover, however, by any means. The dv5t is still slightly overweight at 6.3 pounds. The chrome job is better at concealing fingerprints than a black polish, although under fluorescent light the reflected glare can be a distraction.

HP offers several options for screen resolution. The 1,600-by-1,050-pixel screen in the dv5t really made videos and photos pop. The laptop also comes with four USB ports (one of which is an eSATA/USB combo port), an HDMI-out port, 1.3-megapixel webcam, a FireWire port, and five-in-one card reader.

Despite the dv5t's 2.53-GHz Intel Core 2 Duo T9400, the its SYSmark 2007 Preview Overall score lagged behind the VAIO's by 4 percent. The VAIO has 4GB of memory, compared with the dv5t's 2GB, which could account for the slight difference. The dv5t comes with a 55-Wh (six-cell) battery, which lasted 3 hours 12 minutes on MobileMark 2007.

The HP Pavilion dv5t doesn't get the kind of makeover you'd expect from the number one PC retailer, but the new frameless widescreen and built-in HDTV tuner will appeal to media enthusiasts.

Specs: 2.53-GHz Intel Core 2 Duo T9400; 2GB DDR2 SDRAM; 320GB, 5,400-rpm hard drive; ATI Mobility Radeon HD 3470, 256MB graphics; 16.4-inch, 1,600-by-900 display; Intel Wireless Wi-Fi Link 5100AGN; 6.3 lbs (7.1 lbs travel); 4 USB ports; 1 FireWire port; 55-Wh, 4.4-Ah lithium ion battery; Windows Vista Ultimate.

Sony VAIO VGN-FW198UH

This laptop's Blu-ray drive and 16.4-inch widescreen offer a mobile HD experience that's a bit different from the usual. Even with a revamped platform, however, a bloated software suite and



Sony VAIO VGN-FW198UH

\$2,099 list

●●●●●

Green rating ●●●●●

PROS: Intel Centrino 2 platform. Breathtaking 16.4-inch widescreen. Relatively light. 4GB of DDR3 memory. Very nice keyboard.

CONS: Blu-ray burner is overkill. Standard battery is way too small. Meager battery life. Riddled with bloatware.

For more: go.pcmag.com/fw198uh

high prices are issues that continue to haunt Sony laptops.

Although this VAIO is tastefully designed, it trails the competition in the materials used and the overall look. Its gray plastic frame is reminiscent of older Sony designs, and the placement of the VAIO logo hasn't changed since the 1990s.

More thought was given to the components. Along with the XWrite display, this system has three USB ports, FireWire, and an HDMI-out port (though, unlike the HP Pavilion dv5t, it lacks an eSATA port). You also get a 320GB hard drive, a 1.3-megapixel webcam, and Intel Wi-Fi Link 5100AGN wireless.

Thanks to its 2.53-GHz Intel Core 2 Duo T9400 processor, this system's performance numbers were impressive. Its SYSmark 2007 Preview Overall score of 132 beat out that of the Pavilion by 4 percent. But its 49-Wh battery is simply not enough for this system. A MobileMark 2007 score of 1 hour 56 minutes is too meager for a laptop of this stature.

Despite being one of the first laptops to incorporate a breathtaking 16.4-inch screen and the Centrino 2 platform, this Sony VAIO inherits some of the problems of its predecessors, including a huge software load and a small battery.

Specs: 2.53-GHz Intel Core 2 Duo T9400; 4GB DDR2 SDRAM; 320GB, 5,400-rpm hard drive; ATI Mobility Radeon HD 3470, 256MB graphics; 16.4-inch, 1,600-by-900 display; Intel Wireless Wi-Fi Link 5100AGN; 6.4 lbs (7.1 lbs travel); 3 USB ports; 1 FireWire port; 49-Wh, 4.4-Ah lithium ion battery; Windows Vista Ultimate.




PERFORMANCE TESTS

▲ High scores are best.
▼ Low scores are best.
Boldtype denotes first place.

	MOBILE-MARK 2007 ▲ Overall	SYSMARK 2007 ▲ Overall	MULTIMEDIA TESTS		
			WINDOWS MEDIA ENCODER SET RIP ▲	CINEBENCH R10 ▲	PHOTOSHOP CS3 ACTION SET RIP ▲
Lenovo ThinkPad X200	610	117	1:06	4,907	0:32
Sony VAIO VGN-FW198UH	156	132	1:05	5,244	0:31
HP Pavilion dv5t	312	127	1:07	5,251	0:31

Quick Looks

Visit pcmag.com for the full reviews of these and scores of other hardware products.

RED indicates Editor's Choice		PROS	CONS	BOTTOM LINE	SPECS
DESKTOPS					
	Velocity Micro Edge E2250 \$1,999 direct ●●●●○	<ul style="list-style-type: none"> • Easy to find • Speedy, overclocked liquid-cooled quad-core processor • High-end GeForce graphics • No crapware • Great gaming scores • Lots of expansion space 	<ul style="list-style-type: none"> • No security software • 64-bit Vista can give you problems with older hardware and software • 500W power supply 	Consider this general-purpose high performer if you really want to treat your kids (adult or otherwise) to a hot new system. It has a gaming-class graphics card, large hard drive, and overclocked quad-core power.	2.66-GHz Intel Core 2 Quad Q9450 processor; 4GB 800-MHz DDR2 SDRAM; 150GB 7,200-rpm SATA hard drive; 512MB Nvidia GeForce FX 9800GTX graphics card; dual-layer DVD-RW drive; Windows Vista Home Premium.
LAPTOPS					
	Sony VAIO VGN-T2298N \$3,699 list ●●●●○	<ul style="list-style-type: none"> • Dazzling looks • Ultra slim and light • Huge storage capacity • Phenomenal battery life 	<ul style="list-style-type: none"> • Insanely expensive • Eliminating the optical drive was not a good idea • Severely underpowered • Massive software load • Only a 91 percent keyboard 	While sleek and light, this Sony ultraportable is plagued by a slow processor and bloatware, and its shedding of the optical drive.	1.33-GHz Intel Core 2 Duo U7700; 2GB DDR2 SDRAM; 150GB, 5,400-rpm, and 64GB SSD hard drives; 11.1-inch display; Intel Wireless 4965AGN; 2.7 pounds (3.3 pounds travel); 63-Wh lithium ion battery; Windows Vista Business.
STORAGE					
	Maxtor OneTouch 4 Mini \$129.99 direct ●●●●○	<ul style="list-style-type: none"> • Fast data transfer • Can fit comfortably in a coat pocket • Five-year warranty 	<ul style="list-style-type: none"> • SafetyDrill does not work with FAT32 drives or Mac OS • Data can be shared but not synced between Windows Vista and Windows XP machines • Extra power occupies two USB ports 	With a more robust software package than its rivals and a cheaper price to boot, the Maxtor OneTouch 4 Mini remains the external hard drive to beat.	0.6 by 4.3 by 3.2 inches (HWD); 250GB; 5,400 rpm; NTFS only.
PRINTERS					
	HP Photosmart A636 Compact Photo Printer \$149.99 direct ●●●●○	<ul style="list-style-type: none"> • Touch screen • Prints 5-by-7s, 4-by-6s, and up to 4-by-12-inch panoramas • Installs driver from printer itself 	<ul style="list-style-type: none"> • Speed is acceptable but slower than that of some other dedicated photo printers 	This compact, dedicated photo printer is strong on convenience, with a kiosk-like touch screen and effortless installation.	Cost per print (4x6): 29.2 cents; 5.3 by 9.9 by 4.6 inches (HWD); 3.4 pounds; 3.5-inch LCD; also prints 5-by-7 and 4-by-12.
	Canon Selphy CP760 \$99.99 direct ●●●●○	<ul style="list-style-type: none"> • Fast • Generally high photo quality • Low initial cost and reasonably low running costs 	<ul style="list-style-type: none"> • Colors in some photos are a little too punchy • Straight lines—the spokes of a wheel, for one—can look ragged 	This dedicated photo printer melds a low cost per page with more-than-acceptable speed, output quality, and convenience.	Cost per print (4x6): 27.8 cents; 3.3 by 7.9 by 5.6 inches (HWD); 2.1 pounds; 2.5-inch LCD; maximum print size: 4 by 8 inches.
	Samsung ML-2851ND \$300 street ●●●●○	<ul style="list-style-type: none"> • Fast • High-quality text • Built-in duplexer • Low cost per page 	<ul style="list-style-type: none"> • Although photo and graphics quality are both typical for a monochrome laser, they're less than ideal 	This small-office monochrome laser leaves its closest competition in the dust, with fast speed, high-quality text, flexible paper handling, and low operating costs.	Cost per page: 2 cents; 8.3 by 14.3 by 15.5 inches (HWD); 19.4 pounds.
	Brother HL-2170W \$150 street ●●●●○	<ul style="list-style-type: none"> • Small • Fast • Network and Wi-Fi connections • Ample paper capacity • Low cost per page for an inexpensive laser 	<ul style="list-style-type: none"> • Graphics quality—typical for a monochrome laser—is less than ideal 	This personal monochrome laser delivers a lot of printer for the price, with high speed, more-than-acceptable output quality, and suitable paper capacity for a small or home office.	Cost per page: 2.7 cents; 6.7 by 14.5 by 15.5 inches (HWD); 15 pounds; rear-exit tray.
	Kyocera FS-1300D \$530 list ●●●●○	<ul style="list-style-type: none"> • Low cost per page • Reasonably good paper handling, with built-in duplexer 	<ul style="list-style-type: none"> • Slow performance for the price and engine rating 	This small-office monochrome laser is relatively expensive to buy, but its low cost per page can make up the difference and then some—if you print enough pages.	Cost per page: 1.2 cents; 9.8 by 14.8 by 15.5 inches (HWD); 22.1 pounds.
DISPLAYS					
	NEC AccuSync LCD24WMCX \$535 street ●●●●○	<ul style="list-style-type: none"> • Good light-gray-scale and color reproduction • Great text readability • Lots of connectivity options 	<ul style="list-style-type: none"> • So-so dark-gray-scale performance • Tiny speakers • Limited adjustability 	This business LCD offers good overall performance, and a variety of multimedia connections make the NEC AccuSync LCD24WMCX a good choice for both work and play.	24-inch screen; maximum resolution: 1,920 by 1,200; ports: HDMI, component audio and video, DVI, and analog (RGB); SPDIF audio; embedded speakers.

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

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



cabin, the bustle of the city or the distractions in the office, Bose QuietComfort 2 headphones help them fade softly into the background with the flick of a switch. You can savor delicate musical nuances without disturbing others. And

when you're not listening to music, you can slip into a tranquil haven – where you can relax and enjoy peace and solitude. Clearly, these are no ordinary headphones. It's no exaggeration to say they're one of those things you have to experience to believe.

"It's as if someone behind your back reached out, found the volume control for the world, and turned it way, way, down," reports *TechnologyReview.com*. Bose QC² headphones incorporate patented technology that electronically identifies and dramatically reduces noise, while faithfully preserving the music, movie dialogue or tranquility you desire. We designed these headphones primarily for airplane travelers. But owners soon started telling us how much they enjoy using them in other places to reduce distractions around them. They're excellent for listening to music whether you're on the go, at home or in the office.

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



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

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



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

Use them as a concert hall – or a sanctuary.

Try the QC2 headphones for yourself, risk free. You really must experience them to believe it. Call toll free to try these headphones for 30 days. Use them on your next trip, in your home or at the office – satisfaction guaranteed. If you aren't delighted, simply return them for a full refund.

Call 1-800-901-0256, ext. Q6741 today. The QC2 headphones are available

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

**FREE
shipping
with your
order.**

To order or learn more:

1-800-901-0256, ext. Q6741
www.Bose.com/QC

BOSE®
Better sound through research®

*Bose payment plan available on orders of \$299-\$1500 paid by major credit card. Separate financing options may be available for select products. See website for details. Down payment is 1/12 the product price plus applicable tax and shipping charges, charged when your order is shipped. Then, your credit card will be billed for 11 equal monthly installments beginning approximately one month from the date your order is shipped, with 0% APR and no interest charges from Bose. Credit card rules and interest may apply U.S. residents only. Limit one active financing program per customer. ©2008 Bose Corporation. Patent rights issued and/or pending. The distinctive design of the headphone oval ring is a trademark of Bose Corporation. Financing and free shipping offer not to be combined with other offers or applied to previous purchases, and subject to change without notice. Risk free refers to 30-day trial only and does not include return shipping. Delivery is subject to product availability. Quotes reprinted with permission: *Smsen Garfield*, *TechnologyReview.com*, 7/3/03; *Travel + Leisure Golf*, 7/03; *Rich Warren*, *News-Gazette*, 5/19/03.



35-page automatic document feeder

Brother MFC-7840W
\$300 street

●●●●○



PROS: Fast. Prints, scans, faxes from a PC. Standalone copier and fax. Ethernet and Wi-Fi connections. Automatic document feeder.

CONS: No duplexer.

For more: go.pcmag.com/mfc7840w

BROTHER MFC-7840W

Small-Office Superstar

Generally, inexpensive monochrome laser all-in-ones (AIOs)—that is, the few that cost \$300 or less—tend to be for personal use. Most connect only by USB cable. Even those with network connectors typically offer limited networking features, allowing printing over a network, for example, but not scanning. The Brother MFC-7840W breaks that mold, delivering a full set of AIO features for a small-office or home-office network.

The MFC-7840W's talents include printing, faxing, and scanning over a network. It can send e-mail via a PC, adding the scanned document as an attachment to an e-mail message. It also works as a standalone copier and fax machine. The MFC-7840W includes a 35-page automatic document feeder (ADF), an essential touch for any office that scans, faxes, or copies multipage documents. It even offers both Ethernet and Wi-Fi for network connections.

Brother has managed to shoehorn all of these features into a compact 12 by 16.9 by 15.6 inches (HWD)—small enough to make finding room for the MFC-7840W easy. It's also light enough, at 24.5 pounds, for one person to move around.

According to Brother, the MFC-7840W is built around the same 23-page-per-minute (ppm) print engine as the company's Editors' Choice-winning HL-2170W printer. The MFC-7840W proved to be a touch slower on our tests, however, presumably because the AIO has to monitor other functions—like potential incoming faxes. On our business applications suite, it took a total 7 minutes 51 seconds, compared with 7:30 for the HL-2170W.

The MFC-7840W's text output quality was above average for a monochrome laser. Most fonts qualified as readable and well formed at 6 points, with some qualifying at 4 points. Graphics quality is good enough for any internal business use, but a bit below the level I'd want for clients. Photos were about as good as you can expect from a monochrome laser.

The one disappointment in the MFC-7840W is that it's missing a duplexer for printing on both sides of the page. For most small offices, however, the MFC-7840W's network and Wi-Fi support more than make up for the lack of a duplexer, even at the MFC-7840W's higher price, meriting our Editors' Choice for a personal and small-office monochrome laser AIO.—*M. David Stone*

**ALSO REVIEWED AT
PCMAG.COM**

Brother MFC-9440CN
\$700 street

●●●●○

Canon imageClass MF4270
\$299 list

●●●●○

HP Color LaserJet CM1312nfi MFP
\$499 direct

●●●●○

Ricoh Aficio SP C222SF
\$850 street

●●●●○

RED denotes Editor's Choice.



HP recommends
Windows Vista® Business.

YOUR MOBILITY PLAN

SHOULDN'T FLY
STANDBY.

THE COMPUTER
IS PERSONAL
AGAIN.

Now there are even more reasons to go mobile with HP. There's our wide selection of notebooks, our range of long-lasting batteries, AMD's PowerNow!™ Technology to optimize battery life, plus a choice of leading built-in broadband wireless² providers. And the new U.S. economic stimulus bill can help make it all easier. It's big news for small business.

HP Compaq 6735b Business Notebook

AMD Turion™ 64 X2 Dual-Core
Mobile Technology RM-70 (2 GHz)¹

Genuine Windows Vista® Business
with downgrade to Windows® XP Professional
custom installed³

\$829 Was \$1,026. Price reflects
\$197 instant savings⁴

SmartBuy PN: KK986UTRABA



Service redefined to
help you get the most
from your technology.

1-888-291-7965 | hp.com/go/plan12

All offers available from HP Direct and participating retailers. Prices shown are HP Direct prices, are subject to change and do not include applicable state and local sales tax or shipping to recipient's destination. Simulated screen. Photography may not accurately represent exact configuration printed. Associated value represents HP published list price. *Windows Vista Business disk, which is included for future upgrade if desired. To qualify for this downgrade an end user must be a business (including governmental or educational institutions) and is required to order at least 25 customer systems with this same custom image. †Certain Windows Vista product features require additional or additional hardware. See www.microsoft.com/windowsvista/getready/hardware.aspx and www.microsoft.com/windowsvista/getready/capabilities.aspx for details. Windows Vista Upgrade Advisor can help you determine which features of Windows Vista will run on your computer. To download the tool, visit www.windowsvista.com/getready/upgradeadvisor. ‡Instant savings available through HP Direct and participating retailers. Offer valid through January 1, 2009. For details, visit www.hp.com/go/specials/2. Broadband service sold separately on HP Compaq 6735b Business Notebook. Wireless use requires separately purchased service contract. Check with service provider for coverage area and availability in your area. 3. This section requires a separately purchased 64-bit operating system and 64-bit software products to take advantage of the 64-bit processing capabilities of AMD technology. Dual/quad core processing available with AMD technology is a recent technology innovation designed to improve performance of this system. Given this wide range of software applications available, performance of a system including a 64-bit operating system and a dual-core processor will vary. 4. AMD's membership is not a requirement of disclaimers. Microsoft and Windows are U.S. registered trademarks of Microsoft Corporation. Windows Vista is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries. AMD, the AMD logo, AMD Turion and AMD mobile logos, and AMD PowerNow! Technology are trademarks of Advanced Micro Devices, Inc. © Copyright 2008 Hewlett-Packard Development Company, L.P. This information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in this express warranty statements accompanying such products and services. Nothing herein shall be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.



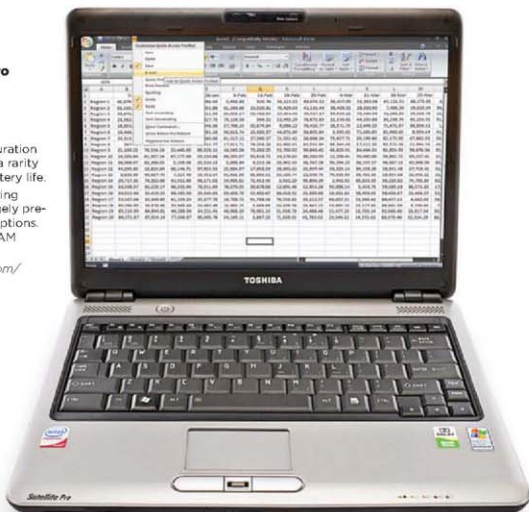
**Toshiba Satellite Pro
U400-S1001X**

\$1,049 direct


PROS: Inexpensive.

Bloatware-free configuration option. "Penryn" chip a rarity at this price. Good battery life.

CONS: Unpleasant typing experience. Unit is largely pre-configured, with few options. Should have 2GB of RAM standard.

 For more: go.pcmag.com/satu400


TOSHIBA SATELLITE PRO U400-S1001X

A Fast, Affordable Small-Biz Laptop

**ALSO REVIEWED AT
PCMAG.COM**
ASUS U2E-A2B

\$2,499 list


Fujitsu LifeBook
U810 (WWAN)

\$1,199 list


Lenovo IdeaPad U110

\$1,899 direct


Toshiba Portégé
R500 (SSD)

\$2,599 direct



Choosing a suitable laptop to outfit a small business is an important decision for an entrepreneur. If enterprise laptops are way over your budget and consumer laptops are not professional enough, a small-business laptop like the Toshiba Satellite Pro U400-S1001X is a viable option.

The U400's design is what you'd expect for a laptop meant for a financial institution or an insurance company. It tips the scales at 4.6 pounds, and the 13-inch screen offers only one resolution: 1,280-by-800.

Typing on the U400 was an unpleasant experience. I noticed significant flexing as I was typing, such that the left-hand side of the keyboard had some bounce to it. Even more annoying was a characteristic of the touchpad: Double-tapping it (easy to do by mistake) makes it act like a left-click mouse button. And the area above the keyboard is completely bare of any quick-launch or multimedia buttons.

The feature set was lackluster, though without any glaring omissions. You get a built-in dual-layer DVD burner, three USB ports, one FireWire port, a fingerprint reader, and a webcam. The one outstanding feature: You can choose to receive the system without any junk applications or trial software.

Although the U400's design and features are ho-hum at best, this laptop really shines on benchmark tests, thanks to its 2.1-GHz Intel Core 2 Duo T8100 processor—a rare find for small-biz laptops at this price. The U400 runs Windows XP Pro, which gives it a performance advantage over a Vista system. It performed exceptionally well on SYSmark 2007 tests and garnered top scores on the video-encoding and Photoshop CS3 tests. And its score of 3 hours 28 minutes on MobileMark 2007 is more than satisfactory for its 52-Wh (six-cell) battery.

The U400 performs very well for an inexpensive small-business laptop, and the "no bloatware" option is a plus. Personally, however, I couldn't get past the unpleasant typing experience. —Cisco Cheng

PERFORMANCE TESTS

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

	MOBILE-MARK 2007 ▲ FIRMS	SYSMARK 2007 OVERALL ▲	MULTIMEDIA TESTS WINDOWS MEDIA ENCODER ▼ MPC-BE CINEBENCH R10 ▲	PHOTOSHOP CS3 ACTION SET ▼ MPC-BE	
Toshiba Satellite Pro U400-S1001X	328	106	117	4,354	0:36
Lenovo ThinkPad T61 Widescreen*	1:57	109	121	N/A	N/A

* Editors' Choice, reported for comparison. N/A—Not applicable: The product could not complete the test.

Specs: 2.1-GHz Intel Core 2 Duo T8100 processor; 1GB DDR2 SDRAM; 160GB, 5,400-rpm hard drive; 13.3-inch, 1,280-by-800 display; 358MB Intel Graphics Media Accelerator X3100; 4.6 pounds (5.5 pounds travel); DVD+R DL; three USB ports; one FireWire port, 52-Wh, 4.8-Ah, lithium ion battery; Windows XP Professional.

DON'T BE SO SAD. YOU WERE VERY GOOD, ONCE UPON A TIME.

Most of today's Internet security technologies are awkward and cumbersome. They just plain slow you down. But with Kaspersky, you can experience a whole new level of security unlike anything you've known before. A system so intelligent it actually knows what's good, what's bad, and what to keep a close watch on.

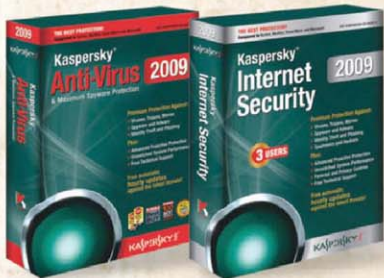
It's the first of its kind. A revolutionary approach combining the greatest possible security with the highest performance and a no-hassle experience that virtually eliminates security pop-ups. So you can work better, faster. And never ever worry.

Compared to Kaspersky, other security software options are positively medieval.

INTRODUCING
THE NEW STANDARD
IN INTERNET SECURITY.

KASPERSKY lab

Learn more at usa.kaspersky.com/2009.





46-inch, 1080p screen

Panasonic
TH-46PZ85U
 \$1,199.95 direct
 ●●●●○

PROS: Impressive contrast ratio. Excellent SD video processing. **CONS:** Slightly oversaturated colors. Overscan with 720p video sources. No 1080p input with VGA or component video ports.

For more: go.pcmag.com/th-46pzs85u

PANASONIC TH-46PZ85U

This Plasma Is a Black Beauty

The Panasonic 46-inch 1080p TH-46PZ85U (\$1,199.95 direct) not only provides more than 22 percent more screen real estate than its smaller sibling, it also produces a video black that's twice as dark, resulting in an impressive average contrast ratio of 1,408:1, as well as significantly improved picture contrast and color saturation. This iteration also improves upon Panasonic's historically solid video processing of standard-definition material, ensuring that non-HD video will look exceptional on this TV.

The TH-46PZ85U has Panasonic's traditional glossy black bezel, measuring about 3 inches wide on the sides and 2 inches wide along the top. A curved dark mirror-finish stereo speaker bar centered below the screen (and containing two 10W speakers) offers a pleasing contrast. Broadcast and disc-based materials sounded good, with no distortion (or internal rattle) at maximum volume levels, and the speakers' bass response reproduced lower frequencies that are better than most HDTVs. With its stand attached, the set measures 31 by 46 by 15.2 inches (HWD) and weighs 81.6 pounds.

The main port panel, centered on the set's back, has two HDMI, two component, one VGA, and an RF input that feeds an NTSC/Clear QAM/ATSC tuner.

A set of right-side-mounted ports adds another HDMI port and an additional set of analog inputs. A small door on the TV's left side conceals on-display controls and an SD card slot. The remote's command over the TV was very thorough, even at wide angles and at distances exceeding 20 feet.

The 46-inch screen features native 1080p resolution. When displaying 1080i/p video material, it produces a picture that's exceptionally crisp and detailed, due in part to the TV's default picture-size mode. As a plasma display, the TH-46PZ85U delivers excellent picture consistency from a wider range of viewing angles compared with LCD TVs. It also proved superior at handling the HQV Benchmark's odd frame-cadence tests, though its performance with HD video was solid but not exceptional. Aside from a small degree of oversaturation in red and green, the TV's color accuracy was good. My oft-watched selection of DVD videos (fed to the TV in the 480i format) produced terrific picture detail and image consistency.

Although Panasonic offers more costly models with advanced picture controls, this TV strikes a fine balance between price, features, and performance that any fan of plasma technology is sure to appreciate. —Robert Heron

PORTS INCLUDED

CableCARD	0
Component	2
Composite	2
DVI	0
Ethernet	0
FireWire	0
HDMI	3
Mini D-sub (15-pin)	1
RF	1
SD memory card slot	1
S-Video	2
USB	0
VGA	1

WARNING:

THIS PRODUCT
MAY CAUSE
MOUTH CANCER



**NEW STRAIGHT POUCHES.
ONE PART EASY.
TWO PARTS HELL-YEAH.**



SKOAL® Smokeless Tobacco

Introducing Straight Pouches

100% straight dip. Now in pouches.
Everything our dippers expect from a straight pinch.
Finally available in a pouch.

Learn more at SkoalBrotherhood.com
Website Access Limited To Age-Verified Adults



HP iPAQ 910

HP Unlocks a Powerful Smartphone

HP's venerable iPAQ handheld line has seen its ups and downs over the years, but the company's tight enterprise focus shows in the unlocked HP iPAQ 910. It comes loaded with Wi-Fi, GPS, and HSDPA data radios, a 3-megapixel camera, and good video playback. First and foremost, though, HP is positioning the iPAQ 910 as a corporate e-mail device that can access workplace data anywhere in the world.

Despite the iPAQ 910's bulging feature set, it's not ungainly. The handset measures 4.5 by 2.5 by 0.6 inches (HWD) and is fairly hefty: 5.4 ounces. With a 2.5-inch, 320-by-240-pixel touch screen, the iPAQ 910 is comfortable to hold and talk into. The QWERTY keyboard is also roomy and easy to use.

Voice calls on the iPAQ 910 sounded crisp and clear in both directions, although the earpiece sounded a little tinny. This tri-band UMTS/HSDPA device also supports 3.6/7.2-megabit-per-second HSDPA data networks. At the iPAQ 910's heart is a 416-MHz Marvell PXA270 processor, 256MB of flash ROM, and 128MB SDRAM, with 76MB free for running programs. These relatively powerful specs brought good performance, but the iPAQ 910 is still a tad sluggish compared with recent BlackBerry and



HP iPAQ 910

\$499.99 direct

●●●●○



PROS: Good voice quality and reception. Includes Wi-Fi, GPS, and HSDPA radios. Useful selection of hardware controls. Superb QWERTY keyboard with built-in document editing.

CONS: A bit hefty. Mediocre camera despite its 3-megapixel sensor. Weak speakerphone. For more: go.pcmag.com/ipaq910

Palm OS devices. This phone also comes with Microsoft Office Mobile and can synchronize e-mail, contacts, and calendar data with Outlook and Exchange Server. Because of its business and multimedia performance, as well as its superior features, the iPAQ 910 earns our Editors' Choice for an unlocked smartphone. —*Jamie Lendino*

PALM TREO 800W

Palm Reboots the Treo

The Palm Treo 800w for Sprint is a significant and overdue revamp of that other Windows Mobile Treo—the 700wx, with its bulky external antenna. No antenna here, but the 800w adds a Wi-Fi radio, a GPS chipset, a 2-megapixel camera, and Windows Mobile 6.1 Professional OS, which are definitely welcome upgrades.

The Treo 800w has a well-balanced design and rubbery grip. The dark-blue handset measures 4.4 by 2.2 by 0.7 inches (HWD) and weighs 5.0 ounces. Its full QWERTY keyboard is identical to those of prior Treos in size, layout, and feel, right down to the raised plastic keys. It's certainly not as slick as the iPhone 3G, but it's very comfortable to hold and talk into. The 2.5-inch display's increased resolution—now 320 by 320 pixels—looks sharp, but the touch screen is picky.

For voice calls, the 800w sounded clear in both directions most of the time. In a first for Sprint handsets, the 800w includes a dual-band (850/1,900-MHz) CDMA device with 3G EV-DO Rev A capability. It's also the first Sprint handset to run Windows Mobile 6.1 Professional out of the box. Alas, the device's internal components—a 333-MHz TI CPU, 169MB of storage, and 99MB of RAM—are not enough for an OS with such a large footprint. Simple tasks such as navigating menus and dialing contacts felt sluggish. But perhaps the 800w's biggest downfall is its poor battery life, 3 hours 21 minutes on our rundown test. Like the Centro, the 800w is a base hit for Palm, but the company really needs a home run. —*JL*



Palm Treo 800w

\$249.99 (with 2-year Sprint contract)

●●●●○

PROS: Superb voice quality. High-resolution LCD. Integrates Wi-Fi and GPS radios. Plenty of bundled software.

CONS: Poor battery life. Lacks enough horsepower for Windows Mobile 6.1 Professional. Finicky touch screen. Flimsy stylus.

For more: go.pcmag.com/treo800w

Paper goes in. Information comes out.

Unlock the information trapped in your paper.

At The Neat Company,[™] we transform paper into information that works for you. We free the data that's trapped in your documents — so you can organize, secure, activate and manage it. After all, what you really want is the information on the paper, not the paper itself. Learn more about Neat scanner + software solutions at www.neatco.com

NeatDesk[™]
NeatReceipts[™]
NeatScanTo Office



PHILIPS SPC 620NC WEBCAM

A Webcam to Avoid

Originally released in the U.K. late last year, the Philips SPC 620NC has made its way to U.S. shores. It's agreeably priced and works with most instant-messaging clients. Alas, the video quality is so muddy that you'll be overpaying if you buy this cam, especially when you can buy the Microsoft LifeCam VX-5000 (below) for the same money, or get our Editors' Choice, the Logitech QuickCam Pro 9000, for \$99.

Along with its dated look, the 620NC has humdrum color choices and a flimsy-feeling stand. Also, you must download the drivers and any IM clients manually. The one included app, VLounge, lets you capture video snippets and take photos, but overall it's a letdown—unintuitive and unstable.

If the setup is a little drawn out, and the bundled software is lacking, the actual video chat performance is probably the biggest disappointment. Although the 620NC's 1.3-megapixel sensor has the same 640-by-480 resolution as the LifeCam VX-5000, the video looked muddy in comparison. Audio quality also lagged behind. The 620NC suffers from the same ailment as most webcams: You can hear the caller only when he or she is very close to the camera. The microphone added a slight distortion effect.



Philips SPC 620NC WebCam
\$49.99 list



PROS: Works with most IM clients. Includes cool face-tracking software.

CONS: Flimsy plastic stand. Cheap design. Subpar video quality.

For more: go.pcmag.com/spc620nc

As for the 620NC's attributes, it does have a face-tracking system that's pretty cool. You can add a logo to the background of your video feed for those chats with clients. Furthermore, the 620NC worked with all popular IM clients and never crashed during testing. If you absolutely must have a face-tracking webcam, the 620NC is a decent option. But for all the other factors, this is a webcam to avoid.

—John Brandon

MICROSOFT LIFECAM VX-5000

Microsoft's Snappy, Solid Video Bargain

Webcams are everywhere. Many PCs (and all Mac laptops) have them built in, and the prices for those sold separately have bottomed out. The \$50 Microsoft LifeCam VX-5000 offers digital pan, tilt, and zoom, and its 640-by-480 resolution yields video quality just a little lower than that of a standard-def DVD. I have a few gripes, however, the biggest being that some of the features work only with Live Messenger. Still, for video chats with friends or geographically remote relatives, it's a good buy.

The VX-5000 looks sharp, thanks to a subtle color ring around the casing. It has a cool bendable hinge that folds easily and clips onto your laptop screen or desktop monitor. The setup is more or less plug-and-play via USB, integrating with Windows Live Messenger. The image quality delivered by the 1.3-megapixel sensor is not stunning, but Microsoft has added a few tricks to improve the feed. For basic video chats, in fact, the VX-5000 looks as good as or better than our Editors' Choice, the \$99 Logitech QuickCam Pro 9000.

Calls using Windows Live Messenger and Yahoo! Messenger were consistently crisp and bright—no



Microsoft LifeCam VX-5000
\$50 street



PROS: Bright and clear video feed. Very easy install. Cool rubber grip. Good bundled software.

CONS: A few minor crashes. Some features work only with Windows Live Messenger. Audio quality only passable.

For more: go.pcmag.com/vx5000

matter the lighting conditions. Audio quality for video chats was just passable.

The VX-5000 comes with a nifty little program called LifeCam 2.0, which lets you shoot a digital photo, record audio, and record a video snippet. You can even e-mail clips in one click, using Windows Mail in Vista, Outlook, or your default mail client. My one big complaint about Live Messenger is that it doesn't support multiuser videoconferencing. A smaller one is that Live Messenger crashed a few times during testing. Still, the webcam's digital controls and strong video quality make it a good choice for the money.—JB

30 million computer users don't trust the power grid.



APC Back-UPS BE750G with SmartShedding™ Technology automatically powers down idle peripherals to save energy and money.



They do trust APC. Shouldn't you?

Think of all that you rely on your computer for: personal and business files, financial information, broadband access, videos, photos, music, and more. Increasingly, computers are the hub for managing our lives. And more people rely on APC to protect their hardware and data than any other uninterruptible power supply (UPS) brand.

Why is APC the world's best-selling power protection? For 20 years, we have pioneered power protection technology. Our Legendary Reliability® enables you to save your data, protect your hardware, and prevent downtime. It also guards against a power grid that is growing less reliable every day.

According to the Department of Energy, electricity consumption will increase by 40% over the next 10 years. Yet today, investment in utilities is at an all-time low. It's a "perfect storm" for computer users, one that makes APC protection even more essential.

APC power protection products are available at:



"The pricetag on the new UPS is \$99.99. While I'm not in the habit of endorsing products in this blog, if you're in the market for a workstation-class UPS, why not opt for the greener option?"

- Heather Clancy,
ZDNet.com

APC has a complete line of power protection solutions to suit a range of applications. Already an APC user? Get the latest replacement battery cartridge for your unit or upgrade to a newer model. For more information on this or our other great products, or for information about environmentally responsible disposal of your old battery, visit www.apc.com

Find out why 30 million people don't need to worry about losing their data to power problems



Energy efficient solutions for every level of protection:

Saves **\$25** per year* on
your electric bill!

Surge Protection

Starting at **\$34**

Guaranteed protection from surges, spikes, and lightning.

7 outlets, Phone/Fax/Modem Protection, Master/Controlled Outlets



Saves **\$40** per year* on
your electric bill!

Battery Back-UPS®

Starting at **\$99**

Our most energy efficient backup for home computers.

10 outlets, DSL and Coax protection, Master/Controlled Outlets, High Frequency Design, 70 minutes of runtime!



APC can help with your other power protection needs. Visit apc.com to see our complete line of innovative products.



Enter to Win a Back-UPS® ES 750G! (a \$99.99 Value)

Also, enter keyword to view other special offers and discounts.

Visit www.apc.com/promo Key Code d696w or Call 888.289.APCC x8034 or Fax 401.788.2797

APC
Legendary Reliability®

©2008 American Power Conversion Corporation. All trademarks are owned by Schneider Electric Industries S.A.S., American Power Conversion Corporation or their affiliated companies.
*Average savings are based on compatible competitive models, and are comprised of two energy saving features: an ultra efficient electrical design, and the master-controlled outlets feature.

SONOS BUNDLE 150

A Deluxe Music System

Sonos, the wireless home audio system, is an ever-evolving combination of hardware, software, and partnerships. The system uses your Wi-Fi network to access your PC's or Mac's music collection and stream it to as many zones as you choose to set up. The latest Sonos creation is the Bundle 150, a new and improved starter system. Enhancements from the previous Sonos iteration include better Wi-Fi range, more amplifier power, and a smaller design. And partnerships with Rhapsody, Napster, Sirius, and Pandora only increase the value of the system.

The Bundle 150 includes the main ZonePlayer 120, the ZonePlayer 90, and the same excellent remote control. The ZP120 eliminates the need for a stereo receiver/amplifier, as it provides plenty of power to the speakers. The ZP90, however, requires powered speakers. Neither ZonePlayer features a 3.5mm output, which seems like an oversight. But the ZP120 has two spring-binding post-speaker connections and an RCA subwoofer-out, and the ZP90 has RCA stereo-outs, a coaxial-out, and an optical-out. Both boxes have RCA stereo inputs and two Ethernet ports.

I was surprised to find that the system is much easier to set up on a Mac than it is on a PC. In terms of audio quality, the output of the ZP120 is plenty power-



Sonos Bundle 150

\$999 direct



PROS: Excellent user interface. Seamless integration with your PC's music collection. Plays different songs in different zones simultaneously.

CONS: If you lose your Wi-Fi signal, the music stops. You can't leave computers in sleep mode while streaming.

For more: go.pcmag.com/sonos

ful, so you'll have no trouble using larger speakers that require more juice. Those who prefer a bit more warmth or low-end boost may wish to run the output of the ZP120 through a stereo amp/receiver. The basic package covers two rooms (or "zones" of your house), and each additional zone costs \$349 for a ZP90 and \$499 for a ZP120. For those who can afford the hefty price tag, however, the Bundle 150 provides a seamless music experience.—Tim Gideon

SAMSUNG YP-S2

Samsung Rocks the Pebble

I'm not sure why the inexpensive MP3 player market has adopted geological names, but the Creative ZEN Stone and the new Samsung YP-S2 (aka, the Pebble) are both rock-solid devices. A screenless, diminutive MP3 player, the S2 has 1GB of flash memory and some other laudable features, including a button for editing playlists on the go and gym-friendly earbuds. Is it a fantastic player? Well, it's a cheap player, and it does its simple job well.

At 1.7 by 1.6 by 0.7 inches (HWD) and a pebble-esque 0.5 ounces, the device has smooth contours that call to mind the ZEN Stone. A color-coded light on top of the S2 tells you what the player is up to. The controls are on the bottom panel, with each button serving different functions depending on how long you press it and what mode you're in. The S2's earbuds stay in place well enough to qualify as gym-friendly, and the cable has an integrated neck strap, as well as a loop for a lanyard.

Less convenient is the fact that the computer connection is achieved not with a cable but with a small adapter that connects the player's 3.5mm headphone jack to your PC's USB port. The S2 supports WMA, MP3, and OGG files, creating a playlist is a snap, and the audio quality is passable.

How to choose between the two players? The S2's battery life, though still unimpressive, is longer than the ZEN Stone's. The Stone costs a bit less. But then, the S2 has a cool button for switching play modes and creating playlists—and it looks a little snazzier.—TG

1.7 by 1.6 by 0.7
inches, 0.5 ounces



Samsung YP-S2

1GB, \$39 list



PROS: Small and lightweight. Cheap. Gym-friendly earbuds. Can create playlists on the go.

CONS: Earbuds lack bass. Neckline earbud design not for everyone. Cable-free PC connection is awkward.

For more: go.pcmag.com/samsungyp-s2

Presenting the Bose® Computer MusicMonitor®

Performance you
may never have
thought possible
from only two
speakers this small.



The Bose Computer MusicMonitor® was developed for the growing number of people who use their computers for personal entertainment, and want accurate sound reproduction from a small and elegant system. According to Rich Warren of the *News-Gazette*, "If you want a pair of exceptionally small speakers with incredibly big sound for any purpose, listen no further."

Our best two-piece computer sound system.

Until now, the rich low tones necessary for high-quality desktop sound have come only from large speakers or three-piece systems with a bass module. The MusicMonitor® establishes for us a new threshold in the accuracy of music reproduction. As Arlen Schweiger of *Electronic House* reports, "The folks at Bose really know how to shrink a product while maintaining a big sound." It is the first time we have been able to produce sound quality like this with only two such small enclosures containing all the electronics and speakers.

Proprietary Bose technologies. The unexpected sound quality is made possible through a combination of unique Bose technologies, including our dual internal opposing passive radiators. This invention allows the

system to deliver faithful low note reproduction and musical accuracy, despite its small size. Dennis Barker says in *Digital TV DesignLine* that "after a listening test, I was quite impressed with this tiny pair of speakers."

Enjoy all your digital entertainment with the richness it deserves.

The contemporary metal design and small size make the MusicMonitor® system a welcome addition to your desk or workspace. Digital music files sound more lifelike than they would with ordinary computer speakers this size. Downloaded videos sound better, too. And setup is simple. It should take you about as long to connect this system as it takes to remove it from the box.

FREE
shipping
with your
order.

Listen risk free for 30 days. The best way to judge the performance of any sound system is in the unique acoustics of the environment where you'll use it. That's why we invite you to try the MusicMonitor® risk free for 30 days. When you call, ask about using your own major credit card to make **12 easy payments**, with no interest charges from Bose.* Then listen, and discover why Bose is the most respected name in sound.



1-800-407-2673, ext. CH313 | www.Bose.com/CMM

BOSE
Better sound through research®

*Bose payment plan available on orders of \$299-\$1500 paid by major credit card. Separate financing offers may be available for select products. See website for details. Down payment is 1/12 the product price plus applicable tax and shipping charges, charged when your order is shipped. Then, your credit card will be billed for 11 equal monthly installments beginning approximately one month from the date your order is shipped, with 6% APR and no interest charges from Bose. Credit card rules and interest may apply. U.S. residents only. Limit one active financing program per customer. ©2000 Bose Corporation. Patent rights issued and/or pending. Financing and free shipping offer not to be combined with other offers or applied to previous purchases, and subject to change without notice. Risk free refers to 30-day trial only and does not include return shipping. Delivery is subject to product availability. Quotes reprinted with permission.

Quick Looks

Visit pcmag.com for the full reviews of these and other consumer electronics products.

RED indicates Editor's Choice	PROS	CONS	BOTTOM LINE	SPECS
HDTVs				
 <p>Samsung LN24A550 \$2,999.99 list ●●●●○</p>	<ul style="list-style-type: none"> Excellent contrast and HD video processing Comprehensive picture controls Backlit remote and swivel stand 	<ul style="list-style-type: none"> Displays some smearing in fast-motion scenes Some advanced picture settings lack fine control Inconsistent color tracking 	<p>This 52-inch LCD TV with a matte-finish screen delivers a detailed HD picture, but stumbles in some fast-motion scenes. And color consistency within the darkest picture details is lacking.</p>	<p>1080p60; 1,920-by-1,080-pixel screen resolution; connections: HDMI, component video, and VGA input; 33.7 by 44.9 by 12.8 inches (HWD); 71.2 pounds.</p>
 <p>Oppo HM-31 Advanced 3x1 HDMI Switch \$99 direct ●●●●●</p>	<ul style="list-style-type: none"> Auto-switching feature Simple setup Listed in Logitech Harmony universal remote database Very good online documentation 	<ul style="list-style-type: none"> No HDMI cable included Auto-switching feature not detailed in manual 	<p>This HDMI switch is simple to use, and its auto-switching feature can handle the trouble usually caused by an "always-on" device.</p>	<p>3 HDMI inputs; 1 HDMI output; maximum resolution supported: 2,560 by 1,600 pixels at 75 Hz; 1.1 by 7.4 by 4.25 inches (HWD); 9 ounces.</p>
SMARTPHONES				
 <p>LG Glimmer AX830 \$419.99 (\$129.99 and up with contract) ●●●●○</p>	<ul style="list-style-type: none"> Good-looking Decent camera 	<ul style="list-style-type: none"> Poorly designed keypad leads to misdialing No e-mail option 	<p>The Glimmer smartphone is pretty, but it has a frustrating keypad and touch screen. Whether you're a fan or not will come down to whether or not you find the phone usable.</p>	<p>CDMA; 37MB onboard RAM; accepts microSD card; 2.8-inch, 240-by-400-pixel screen; 2MP camera; 2.5mm headphone jack; 4 by 2.05 by 0.59 inches (HWD); 4.5 ounces.</p>
 <p>HTC Touch (Alltel) \$499.99 (\$129.99 and up with contract) ●●●●○</p>	<ul style="list-style-type: none"> Inexpensive Speedy processor Plenty of room for third-party apps 	<ul style="list-style-type: none"> Balky touch screen Mediocre voice quality Middling camera 	<p>Alltel's smartphone delivers Windows Mobile power at a palatable price.</p>	<p>Windows Mobile; EV-DO; 130MB onboard RAM; accepts microSD card; 2MP camera; 2.8-inch, 320-by-240-pixel display; 4 by 2.4 by 0.6 inches; 4 ounces.</p>
VoIP				
 <p>T-Mobile @Home \$50 for equipment; \$10 per month with two-year contract ●●●●○</p>	<ul style="list-style-type: none"> Very inexpensive Good call quality Simple to set up 	<ul style="list-style-type: none"> Must have T-Mobile cell-phone service Requires router to switch your cell phone over to T-Mobile's service, but \$10 for unlimited monthly calls within the U.S. is an unheard-of deal. 	<p>Extremely basic. This home VoIP service requires you to switch your cell phone over to T-Mobile's service, but \$10 for unlimited monthly calls within the U.S. is an unheard-of deal.</p>	<p>Comes with two Vtech 6.0 DECT cordless phones; 802.11g wireless; connections: two standard phone jacks; two SIM card slots; UMA calling.</p>
DIGITAL CAMERAS				
 <p>Canon PowerShot SD890 IS \$399.99 list ●●●●○</p>	<ul style="list-style-type: none"> Vivid color in night shots Excellent video quality Can start up in review mode and preview scene modes on LCD Impressive battery life 	<ul style="list-style-type: none"> Pricy Awkward power button Scroll wheel takes some getting used to 	<p>This compact point-and-shooter's quirky design can be a bit of a pain, and it's not the cheapest compact camera you can buy, but it's fully loaded and pumps out high-quality images.</p>	<p>10MP resolution; 5X optical zoom; 2.5-inch LCD; 2.3 by 3.8 by 1.1 inches (HWD); 5.5 ounces.</p>
AUDIO				
 <p>Philips DC910 \$149.99 list ●●●●○</p>	<ul style="list-style-type: none"> Excellent remote control Dock connector rotates horizontally to accommodate Cover Flow view on iPod touch Integrated USB and card reader for playing music files 	<ul style="list-style-type: none"> No iPhone support Audio quality is mediocre Difficult to pause music while navigating 	<p>This speaker dock features a slick look, an excellent remote, and plenty of useful features—just don't expect big sound.</p>	<p>Remote control; alarm clock; connections: USB, auxiliary; FM antenna; SD/MMC slot; 6.5 by 19.7 by 4.8 inches (HWD).</p>
 <p>Audioengine 2 \$199.99 direct ●●●●○</p>	<ul style="list-style-type: none"> Accurate, pristine audio performance Full-bodied but not overpowering bass Handles high volumes well Attractive design 	<ul style="list-style-type: none"> Large footprint Not for those who seek subwoofer rumble No remote or extra features 	<p>Audiophiles who want to amp up their PC sound should look no further than this speaker set, but bass buffs should look elsewhere.</p>	<p>1-inch silk tweeters; 2.8-inch Kevlar woofers; connections: 3.5mm audio-out, stereo RCA; volume knob; 4.1 by 5.3 by 6.3 inches (HWD).</p>
 <p>Genius BT-03A Bluetooth Headphones \$119.99 list ●●●●○</p>	<ul style="list-style-type: none"> Tiny Stylish and comfortable Pairs with phones and music players 	<ul style="list-style-type: none"> Can't pair with more than one device at a time As with all Bluetooth devices, audio quality isn't top-notch 	<p>These Bluetooth headphones sport a more comfortable, stylish design than older models, making them an ideal workout companion.</p>	<p>Supra-aural; Bluetooth 1.2 (supports A2D); 6.5 hours of battery life; 1.7 by 1.5 by 0.7 inches; 13 ounces.</p>

Nobody ever got fired for buying a dependable server.

There is a certain amount of confidence that comes with the HP ProLiant DL385 G5 Server, featuring efficient Quad-Core AMD Opteron™ processors. Not just because it is the best-selling server of its kind.* But with time-tested features like Pre-Failure Notification and Remote Access Management, it unfailingly delivers on the promise of never letting I.T. down.

Technology for better business outcomes.



HP ProLiant DL385 G5
\$2275 (Save \$850)

Lease for as low as \$54/mo for 48 months

Smart Buy (PN: 464211-005)

- 2 Quad-Core AMD Opteron™ processors
- Supports small form factor, high-performance SAS or low-cost SATA hard drives
- Redundant Power
- Integrated Lights-Out (iLO2) System Insight Manager, SmartStart

Get More:

Smart Buy 24x7, 4-hour response, 3 years

(PN: UE094E) \$499

Smart Buy Add 2 GB additional memory

(PN: 408951-021) \$159



HP StorageWorks Ultrium
448 Tape Drive SAS Bundle
\$1649

Lease for as low as \$39/mo for 48 months

Smart Buy (PN: AG739A)

- 400 GB compressed capacity in half-height form factor
- Ships with Data Protector Express Software, One Button Disaster Recovery, a TLU Rackmount Kit, and a Host Bus Adapter



10,000,000 I.T. folks can't be wrong.

To learn more, call 1-888-685-9647 or visit hp.com/go/dependable4



*Based on IDC, Worldwide Quarterly Server Tracker, February 2008. In Calendar 4Q '07, IDC reported worldwide HP ProLiant server shipments at 681,445 units, well ahead of Dell PowerEdge's 499,715 units at #2. IDC also reported ProLiant factory revenue at \$2,743 million vs. \$1,580 million for Dell's PowerEdge family. Prices shown are HP Direct prices; reseller and retail prices may vary. Prices shown are subject to change and do not include applicable state and local taxes or shipping to recipient's address. Offers cannot be combined with any other offer or discount and are good while supplies last. All featured offers available in U.S. only. Savings based on HP published list prices of configure-to-order equivalent (\$3125 - \$850 instant savings = SmartBuy price of \$2,275). 1. Financing available through Hewlett-Packard Financial Services Company (HPFS) to qualified commercial customers in the U.S. and subject to credit approval and execution of standard HPFS documentation. Prices shown are based on a lease of 48 months in terms with a fair market value purchase option at the end of the term. Rates based on an original transaction size between \$3,000 and \$25,000. Other rates apply for other terms and transaction sizes. Financing available on transactions greater than \$349 through September 30, 2008. HPFS reserves the right to change or cancel these programs at any time without notice. AMD, the AMD Arrow logo, AMD Opteron, and combinations thereof are trademarks of Advanced Micro Devices, Inc. ©2008 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice.

**MobileMe**

Individual account, \$99 yearly; Family Pack, \$149
 ●●●●●○

PROS: Push-syncing of mail, calendar, and contacts for iPhone and iPod touch. Better-looking drag-and-drop Web interface. Storage increased to 20GB.

CONS: No more online site building, groups, eCards, Slides Publisher.

For more: go.pcmag.com/mobileme

APPLE MOBILEME

MobileMe: A More Mobile.Mac

The hoopla surrounding the iPhone 3G launch stole the thunder from another major, though not completely unrelated, development at Apple: the unveiling of MobileMe, the reincarnation of Apple's .Mac online services. MobileMe brings the new iPhone up to speed with push syncing for e-mail, contacts, and calendar, as well as other features, but let's not forget .Mac's roots as a service for online storage, backup, e-mail, photo gallery, Web-page hosting, and remote control. Some of these latter features remain unchanged, and some have disappeared entirely.

My initial experience with MobileMe mirrors that of others who have complained publicly of the service's wonkiness. The system occasionally logged me out without my permission and sometimes took an inordinate amount of time to load. E-mail messages wouldn't display, and then I'd be told there was nothing in my inbox, only to have the messages appear a few seconds later. These were early release issues that Apple has acknowledged and reportedly fixed. Despite its rocky start, MobileMe nonetheless has an interface that is quite snappy and desktop-like, thanks to its updated Web 2.0-style coding.

Foremost among the upgrades in MobileMe are the redesigned Web interfaces and the increase in storage to 20GB (up from 10GB). Also, MobileMe's interface much more closely resembles that of Mac PCs, down to the desktop icons. You don't have to worry about losing your .Mac addresses for your e-mail, Web sites, gallery URLs, and purchases



THAT DESKTOP FEEL The new MobileMe interface mirrors that of the desktop Mac OS X, and features such as photo sharing are improved.

from the iTunes and Apple Online stores; your .Mac addresses will still work, but a .me equivalent is added. The Microsoft Exchange-like pushing of e-mail to a mobile device is the banner feature of MobileMe. You can also set up your Outlook 2007 client, and the Contacts app lets you drag and drop contacts into groups.

Some services remain unchanged in the switch to MobileMe. For example, iDisk received just small tweaks to the Web interface. The Backup 3 software is pretty much the same, and there's still no drag-and-drop uploading, but you can drag files that are already in iDisk around to different folders. Support for and integration with iLife apps continue, including iWeb site publishing, as well as photo and movie sharing from iPhoto and iMovie.

Apple has also bidden adieu to some services with MobileMe, which shows that Apple is refining its platform to target more specifically iPhone users. HomePage, Slides Publisher, and the iCards e-greeting Web app have been migrated to iLife. The Learning Center, too, has been scrapped, but MobileMe will include tutorials at Apple.com and help content at me.com. Finally, .Mac Groups have disappeared. The unfortunate fact for Web and desktop users is that they get somewhat less, because of MobileMe's iPhone-centric approach. But in the end, MobileMe is a step forward for Apple, with a clean, elegant interface and tight integration that's impossible to beat. —Michael Muchmore

DESIGN.
PERFORMANCE.
EXCEPTIONAL CRAFTSMANSHIP.
ALL WITH STYLE UNIQUE AS YOUR OWN.



EXPERIENCE THE EXCEPTIONAL LINE OF HANNS-G FLAT PANEL DISPLAYS

No matter what your passion is, HANNspree has a flat panel display to complement it. And it's our passion to infuse design, performance and quality in every exceptional product we produce. Crafted with superior features and sizes ranging from 17 to 28-inch, a Hanns-G monitor by HANNspree is sure to enhance your gaming and video experience while giving new life to your living space. We help you go beyond the ordinary. It's extraordinary. To learn more go to www.hannsg.com/us.

HANNS-G
GO BEYOND
by **HANNspree**

Hanns-G or HANNspree monitors are available at the following locations:

Retail/Online:



Online:



HANNspree STORES

BEVERLY HILLS 420 N. Beverly Drive, Beverly Hills, CA 90210, Phone: 310.288.0208

SAN FRANCISCO 400 Sutter Street, San Francisco, CA 94108, Phone: 415.986.3300

Spyware Doctor with AntiVirus 6\$39.95
(up to 3 computers)

PROS: Detected every malware sample in testing and removed all but one. Detected every malware and keylogger sample that tried to infect a clean system and prevented all from running.

CONS: Installation takes quite a while because it includes a full download of the signature database. Real-time protection allowed some malware executables to install (though it prevented them from running).

For more: go.pcmag.com/spydoc_av6

ALSO REVIEWED AT PCMAG.COM

Ad-Aware 2008 Pro
\$39.95 direct



a-squared Emergency USB Stick
\$20.00 direct



avast! antivirus 4.8 Home Edition
Free



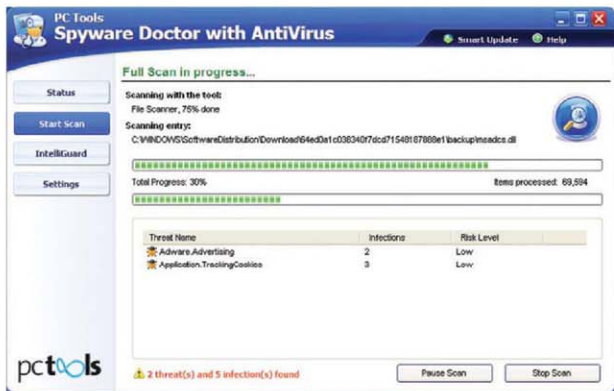
AVG Anti-Virus Free 8.0
Free



Kaspersky Internet Security 2009
3 licenses, \$79.95



VIPRE Antivirus + Antispyware 3.1
\$29.95

**SPYWARE DOCTOR WITH ANTIVIRUS 6**

This Doctor Heals Your Ailing PC

For such a big release, Spyware Doctor with AntiVirus 6 is surprisingly free of wild new features. Instead, PC Tools has concentrated on enhancements that are hidden from view, making the app better at detecting threat variants and cleaning up heavily infested systems while using minimal system resources. Most significant is the fact that it now integrates the company's ThreatFire technology in the form of an add-on called Behavior Guard.

SDAV6 installation takes quite a while, mainly because the signature database isn't included in the installer. To speed the install process even on malware-infested systems, the company raises the installer process's priority. But even with that priority boost, the entire process can take as much as 10 or 15 minutes, especially if the signature download is interrupted and has to restart (which happened several times). However, SDAV6 jumps into action even before it finishes these program updates.

Scanning on my resource-poor, malware-infested virtual machine test systems took a long, long time; nearly 2 hours in some cases. But this was in part because I turned on an option entitled "Scan for rootkit hidden files," which can double the scan time. A full scan of my standard, clean test system was much quicker: just a bit over half an hour.

The results were worth the wait. Spyware Doctor detected every single one of the malware samples and successfully removed all but one of them. In most cases it removed almost every trace of the malware threats. On this test it scored 9.8 out of 10,

better than any other product I've tested with this particular collection of malware.

Spyware Doctor wasn't as effective at detecting installed commercial keyloggers, however. It didn't detect two of the samples at all, and it failed to completely remove several others, scoring 6.8 out of 10. Webroot AntiVirus with AntiSpyware and Firewall topped this test with 7.3 of 10. Remember, however, that I attach much less weight to the keylogger test: If someone can access your computer and install a commercial keylogger, you've got bigger problems than a security app can solve.

It's great to get active malware out of your computer, but it's even better if the nasty programs never establish a foothold in the first place. Spyware Doctor relies on a set of protections called IntelliGuards to detect and prevent malware infestation at many different levels. This version also adds Behavior Guard, a new feature that watches every process and looks for patterns of behavior that indicate a malicious program.

The latest edition of Spyware Doctor cleaned up infested test systems better than any product I've tested with my current sample set. With help from its new Behavior Guard, it detected every malware and keylogger sample that tried to infect my clean test system and prevented them from running (though it allowed some to install executable files on the system). It also scans faster than its predecessor. This is powerful protection, and easily takes version 5.5's place as our Editors' Choice. —Neil J. Rubenking

Four Billion Years in the Making ...

Explore How the Earth Works in This 48-Lecture Series
by Award-winning Professor Michael E. Wyssession

Continents move. Glacial cycles come and go. Mountains spring up and erode away. We live on a planet that is constantly in motion—except we see it in extreme slow motion. In this exciting course of 48 half-hour lectures, you effectively speed up the action to witness the history of our planet unfold in spectacular detail, learning what the Earth is made of, where it came from, and, above all, how it works.

How the Earth Works takes you on an astonishing journey through time and space. You will look at what went into making our planet—from the big bang, to the formation of the solar system, to the gradual evolution of the planet into what it is today. You will travel to the center of the Earth and out again, charting the geological forces that are constantly reshaping the continents and seafloor.

Earthquakes, volcanic eruptions, and tsunamis are byproducts of our planet's ceaseless activity, and you will focus on specific examples of each to learn why and when they occur. Earth's surface is mostly water, and you will explore the cycling of this vital substance throughout the planet, along with its role in climate, erosion, plate tectonics, and biology.

Not only are humans at the mercy of our planet's natural forces, but we ourselves have become agents of change. We are altering the Earth's land, water, and air faster than any geological process and this will be another theme of your journey.

Whether your interest is geology, cosmology, biology, climate science, or history, **How the Earth Works** shows how these disciplines fit into the comprehensive picture of the remarkable world we call home.

About Your Professor

Michael E. Wyssession, Professor of Geophysics at Washington University in St. Louis, earned his Ph.D. from Northwestern University. An international innovator in seismology and geophysical education, he is a recipient of a Science and Engineering Fellowship from the David and Lucille Packard Foundation, and a National Science Foundation Presidential Faculty Fellowship.

About Our Sale Price Policy

Why is the sale price for this course so much lower than its standard price? Every course we make goes on sale at least once a year. Producing large quantities of only the sale courses keeps costs down and allows us to pass the savings on to you. This also enables us to fill your order immediately: 99% of all orders placed by 2 pm eastern time ship that same day. Order before November 14, 2008, to receive these savings.



Yellowstone contains more than 10,000 beautiful and dangerous geothermal features.

© 1997-2008. Used under license from Shutterstock, Inc.

About The Teaching Company®

We review hundreds of top-rated professors from America's best colleges and universities each year. From this extraordinary group, we choose only those rated highest by panels of our customers. Fewer than 10% are selected to make The Great Courses®.

We've been doing this since 1990, producing more than 3,000 hours of material for intelligent, engaged, adult lifelong learners. If a course is ever less than completely satisfying, you may exchange it for another, or we will refund your money promptly.

Lecture Titles

1. Geology's Impact on History
2. Geologic History—Dating the Earth
3. Earth's Structure—Journey to the Center
4. Earth's Heat—Conduction and Convection
5. The Basics of Plate Tectonics
6. Making Matter—The Big Bang and Big Bangs
7. Creating Earth—Recipe for a Planet
8. The Rock Cycle—Matter in Motion

9. Minerals—The Building Blocks of Rocks
10. Magma—The Building Mosh of Rocks
11. Crystallization—The Rock Cycle Starts
12. Volcanoes—Lava and Ash
13. Folding—Bending Blocks, Flowing Rocks
14. Earthquakes—Examining Earth's Faults
15. Plate Tectonics—Why Continents Move
16. The Ocean Seafloor—Unseen Lands
17. Rifts and Ridges—The Creation of Plates
18. Transform Faults—Tears of a Crust
19. Subduction Zones—Recycling Oceans
20. Continents Collide and Mountains Are Made
21. Intraplate Volcanoes—Finding the Hot Spots
22. Destruction from Volcanoes and Earthquakes
23. Predicting Natural Disasters
24. Anatomy of a Volcano—Mount St. Helens
25. Anatomy of an Earthquake—Sumatra
26. History of Plate Motions—Where and Why
27. Assembling North America
28. The Sun-Driven Hydrologic Cycle
29. Water on Earth—The Blue Planet
30. Earth's Atmosphere—Air and Weather
31. Erosion—Weathering and Land Removal
32. Jungles and Deserts—Fest or Famine
33. Mass Wasting—Rocks Fall Downhill
34. Streams—Shaping the Land
35. Groundwater—The Invisible Reservoir
36. Shorelines—Factories of Sedimentary Rocks
37. Glaciers—The Power of Ice
38. Planetary Wobbles and the Last Ice Age
39. Long-Term Climate Change
40. Short-Term Climate Change
41. Climate Change and Human History
42. Plate Tectonics and Natural Resources
43. Nonrenewable Energy Sources
44. Renewable Energy Sources
45. Humans—Dominating Geologic Change
46. History of Life—Complexity and Diversity
47. The Solar System—Earth's Neighborhood
48. The Lonely Planet—Fermi's Paradox



THE TEACHING COMPANY®
"The Joy of Lifelong Learning Every Day!"
GREAT PROFESSORS. GREAT COURSES. GREAT VALUE.
GUARANTEED.™

SAVE \$390!

OFFER GOOD UNTIL NOVEMBER 14, 2008

1-800-TEACH-12 (1-800-832-2412)

Fax: 703-378-3819

Special offer is available online at

www.TEACH12.com/6pcm



The Great Courses®
THE TEACHING COMPANY
4151 Lafayette Center Drive, Suite 100
Chantilly, VA 20151-1232

Priority Code 30054

Please send me **How the Earth Works**, which consists of forty-eight 30-minute lectures plus Course Guidebooks.

- ☐ DVD \$129.95 (std. price \$159.95) **SAVE \$390!**
plus \$20 shipping, processing, and Lifetime Satisfaction Guarantee

- ☐ Check or Money Order Enclosed

- ☐ Non-U.S. Orders: Additional shipping charges apply.
For more details, call us or visit the FAQ page on our website.
*** Virginia residents please add 5% sales tax.

Charge my credit card:

☐ VISA ☐ MC ☐ AMEX ☐ DISC

Account Number

Exp. Date

Signature

Name (please print)

Mailing Address

City/State/ZIP

Please *do not* have questions regarding your order—required for nonreturnable orders!

☐ FREE CATALOG. Please send me a free copy of your current catalog (no purchase necessary).

Special offer is available online at www.TEACH12.com/6pcm
Offer Good Through: November 14, 2008

SafeCentral

\$39.95 yearly, or \$4.95 monthly



PROS: Secures and verifies Internet access to thousands of sensitive sites. IE/Firefox plug-in for quick access. Blocks keyloggers, prevents screen capture. Bypasses easily fooled Windows DNS.

CONS: Significantly slows browsing when pages have a lot of data and images. Doesn't directly identify fraudulent sites. Prevents use of password managers.

For more: go.pcmag.com/safecentral

**SAFECENTRAL**

Safe Online Banking, Trading, and Shopping

Modern browsers are designed to make Web surfing fun and easy. But when managing your bank account or paying bills online, you want security, not jollity. That's where Authentium's SafeCentral comes in. It offers a stripped-down, armored-up browser whose one goal is to keep your online transactions private.

The SafeCentral browser is based on Firefox, but it's seriously simplified to avoid leaving security

holes. Anything unnecessary or potentially dangerous is gone. With SafeCentral, your home page is hard-coded to SafeCentral's portal page, which lists thousands of verified banking and shopping sites. You choose your Favorites from the list, and they show up on a 3D virtual deck of cards with company logos; one click takes you to a site. SafeCentral does not include a password manager, so you'll have to log in to secure sites manually. Also, unfortunately, it doesn't take advantage of the antiphishing feature built into Firefox, and it can't protect you from phishing e-mails. But it did a thorough job on my tests of blocking a wide variety of monitoring activities.

To protect your private information, SafeCentral suspends other functions while you're browsing. Clicking on the desktop brings you back to those other activities—but suspends SafeCentral, so malware can't meddle with what you're doing within SafeCentral. The protections in SafeCentral make it noticeably slower to load sites than other browsers, so it's not for casual surfing. But for online banking and other business it's worth the wait.—NJR

Give your iPhone double the juice.

The first pocket-sized battery that packs a full 1200 mAh.

by Richard Thalheimer

My iPhone is my favorite product, though I use it so much, it gets low on battery power by dinner. This led me to develop the rechargeable Smart Backup Battery specifically for iPhone and iPod. Just snap it on (no cable), and it begins to charge the iPhone battery. This powerful 1200 mAh has 20% more capacity than its closest competitor. You can charge the iPhone while using it, and you can charge the battery and iPhone together with included USB or wall plug charger — like getting an extra charger for free!



There's nothing quite like it.

Other chargers use disposable AAs, or cheap plastic cases, or gray-market connectors, and may even damage your iPhone. Ours has a tough aluminum case, and is certified for iPhone. Polymerized Lithium-Ion takes hundreds of charges and doesn't develop memory. Three LED lights indicate charge status. **Works with 2G/3G iPhone and iPod models except shuffle**

Hours of use may vary, depends upon many factors, including type of use, network, and connection speed. *Estimate of "double the juice" is based on charging iPhone when its battery shows red. iPod is a trademark of Apple Inc., registered in the U.S. and other countries. iPhone is a trademark of Apple Inc.

Reviewers give it top marks.

"So does the RichardSolo Battery (made by Sharper Image Founder Richard Thalheimer) make for an easy-to-use, no-nonsense backup battery?...Yes! This thing is great. It's that good." — **CrunchGear**

"Do you often find yourself in the middle of the day with your iPhone battery in the red? If so, I might have the perfect product for you...I found out how amazing this product was." — **iPhone24x7**

"With its simple, easy-to-use design, the Backup Battery will zap your Apple iPhone and iPod partway back to life when you're running out of juice." — **CNET**

"This is a must have iPhone/iPod accessory. When I say 'must have', I mean get online and buy it, NOW!" **Editor's Choice Award** — **BuyMeAniPhone.com**

Risk-free ordering, free shipping.

Your satisfaction is guaranteed, with a 30-day return privilege, 90-day warranty, and free shipping. That's my promise, and you can depend on it.

Order #DX001 **\$49.95** Order two, and save 15%



RichardSolo®

Online ordering and blog reviews
www.RichardSolo.com
 email: support@RichardSolo.com



Quick Looks

Visit pcmag.com for the full reviews of these and scores of other software products.

RED indicates Editor's Choice.	PROS	CONS	BOTTOM LINE
PERSONAL DATABASE SERVICE			
BlisT (beta) Free beta; subscription version planned Not rated	<ul style="list-style-type: none"> • Graphics-rich online database application • Can create databases from column headers of hundreds of already-posted databases 	<ul style="list-style-type: none"> • Imperfect imports from existing spreadsheets • Privacy settings default to making all your work available to the public 	This database for MySpace and Facebook addicts might also be useful for small businesses and others with data-sharing needs—might, that is, if the developers can fix the bugs that plague the beta.
ANTI-MALWARE			
BufferZone Pro 3.0 \$39.95 direct ●●●○○	<ul style="list-style-type: none"> • Virtualizes your PC so downloaded programs can't make permanent changes • Emptying the buffer wipes out all virtualized items 	<ul style="list-style-type: none"> • Can interfere with installation or function of legitimate programs • Disables Windows' ZIP handling • Permanent installation of buffered program requires full uninstall/reinstall 	BufferZone Pro 3.0 is little different from its predecessor, and the competition has gotten tougher. Its virtualization prevents downloaded malware (and valid software) from making permanent changes to the system but may interfere with installation. This is an effective product, but it needs to get smarter; too many apps fail to install in the protected zone.
NovaShield AntiMalware \$19.95 per year ●○○○○	<ul style="list-style-type: none"> • Installs quickly 	<ul style="list-style-type: none"> • Failed to prevent malware installation • Failed to remove installed malware samples • Disabled two test systems • Detected legitimate programs as "high risk" threats 	NovaShield AntiMalware aims to block malware by detecting malicious behaviors. In testing it was a near-total flop, though it detected several valid utilities as "high risk" threats. And it rendered two test systems unusable. There's no reason to buy this when you can get ThreatFire free.
NUTRITION-TRACKING WEB SITES			
The Daily Plate Free basic membership; Gold membership, \$29.99 per year ●●●●○	<ul style="list-style-type: none"> • Easy to track what you've eaten • Customized calorie goals based on your metabolism, how fast you want to lose weight • Comprehensive food, meal database • Lively, helpful community 	<ul style="list-style-type: none"> • Doesn't offer diet tips • Pay version offers few extras • Doesn't factor body fat into calorie calculations • A lot of work for experimental chefs who create multi-ingredient meals 	The Daily Plate is a valuable resource for those who want to track their daily nutritional intake to meet their fitness goals.
SOCIAL-NETWORKING WEB SITES			
Facebook Free ●●●●○	<ul style="list-style-type: none"> • Almost everyone you know is on it • Improved navigation • Less-obnoxious ads 	<ul style="list-style-type: none"> • Limited personalization, skinning options • In IE, can't move content where you want • Applications more hidden than before 	The insider's social network gets a much-needed if mild redesign that boosts clarity, though it still offers little in the way of interface personalization.
ONLINE VIRTUAL ENVIRONMENTS			
Google Lively (beta) Free ●●●●○	<ul style="list-style-type: none"> • Simple to get started • Clear interface • Lets you customize your 3D space with music, pictures, YouTube videos 	<ul style="list-style-type: none"> • Unsophisticated graphics • Not yet a rich-enough experience to become addictive 	Google's foray into the 3D chat arena shows the company's typical ease of use but lacks the depth and graphics quality you'll find in heavy hitters like Second Life.
PARENTAL CONTROLS			
Hoopah Kidview Computer Explorer 6 \$39.95 direct ●●●○○	<ul style="list-style-type: none"> • Browser replacement limits 2-to-10-year-olds to age-appropriate sites • Can give older kids more freedom • Kid-safe e-mail allows only pre-approved contacts • Kids can't break out 	<ul style="list-style-type: none"> • Web filtering occasionally blocked preapproved sites • Kids can send only e-cards, not real e-mails • E-mail reply function didn't work in testing 	Kids at the high end of its age range will chafe at Hoopah's restrictions and cartoonish appearance. Its kid-safe e-mail isn't practical for anything but very short messages. Still, it will keep the toddlers out of your files and limit them to age-appropriate surfing.
MUSIC MANAGEMENT/PLAYER SOFTWARE			
iTunes 7.7 Free ●●●●○	<ul style="list-style-type: none"> • Media store now offers games and movie rentals • Easy media library backup • Parental controls • Automatic album-art retrieval • Network sharing 	<ul style="list-style-type: none"> • Still no music-subscription option • Movies priced on the high side • Not many current releases yet • Cover Flow feature is impractical for large media libraries 	Although it has a polished interface, excellent usability and features, and the long-awaited movie rentals, iTunes is still one key step away from greatness.
FILE-AND-FOLDER BACKUP			
NovaBackup 10 Professional \$49.95 direct ●●●○○	<ul style="list-style-type: none"> • Flexible file-copy and backup operations • Can back up to Exchange servers or to Amazon S3 service 	<ul style="list-style-type: none"> • Clumsy interface with no option for storing backup "destinations." ZIP format used for backups can't be accessed with standard ZIP software 	This long-established backup software is worth considering for business use, but it's just not as smooth as the best of the competition.



JOHN C. DVORAK

Is Vista Fashionable?

Despite all my complaining, I have no regrets about my recent move to Windows Vista. Vista feels and looks modern, and I now wonder—because of the Mac and the iPhone—if the success of any product is going to depend on its looking good.

An emphasis on things looking good has been a hallmark of Western civilization since at least the Renaissance. There's a never-ending need to decorate and paint and make one's environment contemporary. Thus operating systems, cell phones, user interfaces, and Web sites have to be up

have and you always will. Take any two items of equal functionality, each priced the same with the exact same distribution and availability. One looks stupid and the other looks glamorous. Which do you choose to own?

Of course, some people protest fashion statements to such an extreme that they will choose horrid-looking products just to be different. That, too, is a fashion statement, but one that leads to eventual ridicule. Even if a large contingent of virtual protesters choose the junky-looking item,

which seems to be part of a deep-seated human need. Pure functionality is acceptable to people only during the introductory period of a new and fascinating invention. For example, the Wright brothers' aircraft that flew at Kitty Hawk was a clunker, but full-size reproductions of it are absolutely glamorous.

Design has overriding priority within the human psyche, and its influence is everywhere. So why should computers be any different? Can someone tell me exactly why it has taken an eternity for someone like Steve Jobs to come around and make it clear that design is an important element of marketing? I mean, these big computer companies have marketing and advertising people who know this, right?

I blame the engineers. The engineering subclass has evolved into a distinctly different milieu with its own aesthetic that they prefer to the mainstream artsy aesthetic. As far as an engineer is concerned, a beige box works fine and looks great. "Look at the lines on that cube!"

The Windows PC has always opposed the artsy-fartsy Macintosh and all the other pretty-pretty designs out of Apple. The Windows camp is biased toward engineering, plain and simple. So when Vista, the most artsy-fartsy version of Windows ever, was released, there was bound to be protest.

Anyone who uses a Mac knows that it's not just a matter of form over function. You can have both, and that is what is missing from Windows thinking. The fact is we have to change our attitudes. The command line is dead, and so are inartistic interfaces.

Bite the bullet. Quit complaining. Switch to Vista. Get a better-looking car, too. On to the next generation of gear!

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

Apple put everyone in the computer industry on the trendy and fashionable treadmill, but trendiness goes back 500 years to Florence, Italy, and 1,500 years more to Athens, Greece.

to snuff. They must look modern as well as implement the latest ideas.

It may be the case that nothing tops the efficiency of a command-line interface controlled by a geek who types like a banshee, but that's beside the point. Design is more important than anything else. History seems to indicate this as a fact. It's all about fashion.

Apple put everyone in the computer industry on the trendy and fashionable treadmill, but trendiness goes back 500 years to Florence, Italy, and 1,500 years more to Athens, Greece. You could also go farther back and blame the Egyptians, who were also into fashion.

It's amusing to rise above the fashion trends penetrating each square inch of our existence, from clothing to TV shows to the GUI du jour. Yes, you can say you are above it all and condemn the whole fashion notion. But just look in the mirror! All things being equal, you will choose the coolest, trendiest products. You always

overall societal pressure pushes people to the more attractive (fashionable) item.

Curiously, today's fashionable item can become the homely artifact of tomorrow, while that horrid-looking product motioned above could become the newest trend. How did society develop these odd traits? It must be a function of an innate human exclusionary mechanism that tells us friend from foe. Since this behavior dates back thousands of years, one must assume that it serves some useful purpose other than to fill the coffers of fashion houses such as Armani. The fashion industry and Steve Jobs simply exploit the mechanism. Ack.

Thus Microsoft is hounded into taking Windows onto the fashion on-ramp, beginning with Windows 95 and continuing to this day with Vista and more experimental GUIs for the Xbox 360. There's no reason for Vista to have stunning icons with shading and transparency and other pretty attributes other than aesthetics,

Dvorak's InsideTrack

Swamped with New Acronyms Dept.: The Apple iPhone is the root cause of a sudden panic, with techno-geeks scurrying around trying to jump on the next bandwagon. The iPhone is seen as a **new platform**, although I think it's just the latest iteration of the pocket computer that has come and gone from the likes of Palm, Casio, Zoomer, and half a dozen other companies. Each generation gets progressively **more powerful**. Adding Steve Jobs's design sensibility to the mix certainly helps a lot.

But it's the mania that is kind of weird. It caught me off guard until I realized that most people looking over the tech scene today have little experience with how **tech uptake** actually works.

In the meantime we have to deal with **new terms**. Here are a few you should know. First, there is the **MID** or mobile internet device. An iPhone would be one of these. Then there is the **PCD**, meaning portable computing device. Uh, the iPhone would also be one of these. Then we have the **MCD** or mobile computing device, which is anything bigger than an iPhone, such as the ASUS eeePC, which is also referred to as a **UMPC** for ultramobile PC. None of this should be confused with a **PND** or personal navigation device, which is an iPhone with GPS, I think. Many of these devices also play the role of a **PMD** or personal media device, also known as an iPod or, in my time, an MP3 player also known as a **PMP** or portable media player. All these new terms, to me, represent computer-related ancillary platforms, or **CRAP** for short. (Hold your applause, please.)

Atom News. In chip news, I see Intel is getting more and more jacked up over its Atom chip and hopes to make versions that will compete with the ubiquitous ARM chip. Intel intends to revisit the once-promising **system-on-a-chip (SoC)** business. At some point, Intel can't make chips any smaller, so it adds more components to them to make them large enough to at least find if you drop one on the floor.

Just When You Thought You Had It Figured Out Dept.: Get ready for a completely new connector for PCs once again. To be honest, I'm getting sick of this. Anyway, it looks as if a new interface and connector called DisplayPort will supplant the VGA and perhaps the DVI connectors on the back of most PCs in the next couple of years. The VGA port found on laptops will be a goner, too. It should replace the moribund UDI that Intel once promoted. Whether the DisplayPort interface kills HDMI on home electronics gear remains to be seen.

Are Silicon Hard Drives All They Are Cracked Up to Be? Dept.: The buzz from the vendors is that these drives are blazingly fast and require less juice in a laptop, thus preserving battery life. Some people are grumbling that perhaps the per-

formance improvement is only 5 to 10 percent. The same goes for the battery life. Part of the problem, seems to me, is that these drives are composed of flash modules, which are not as fast as DRAM. And flash memory also has to be managed to keep from **overusing the same cells**, as they have a limited number of cycles within which they can work. Depending on whom you talk to, the NAND flash of the type used in silicon drives has a 100,000 read/write cycle. The good news is that Sun Microsystems has a 500,000 R/W cycle chip design that it claims can be used in servers. Nobody has ever adequately explained to me why the memory craps out after a while. What's going on?

Anyway, the best use for these drives is in a laptop—not for the increased speed or improved battery life but for the robustness. I have **dropped a laptop** and had to listen to a **hard drive grinding** away as the machine could not boot. Silicon drives should be much more durable and worth the extra expense.

And talking about hard drives, Seagate (under its Maxtor brand) has finally rolled out a 1-to-2-terabyte NAS drive that's as small as its plain-vanilla USB external drive. You can **FTP to this drive remotely** through a managed proxy system. It also has a nice security feature, since many NAS drives with FTP capability are vulnerable to hackers. Expect to pay around \$350 for a terabyte.

Now that you have a **terabyte** drive, you need to back up. Sigh.

Break-Even Point Report. The current holy grail in the tech scene is the making of an LED that is cheaper, brighter, and better as a general lighting source than a fluorescent bulb. Well, researchers are now approaching this break-even point with not just LEDs but also the **cheaper OLEDs**. New technologies will achieve 120 lumens per watt. Fluorescents get 90 lumens per watt and incandescents get a mere 15. Many of these designs will produce light for decades. This sort of lighting will **revolutionize the world** in ways we cannot even imagine. And that's something I do not often say.

Genuinely Interesting Hardware Dept.: People should consider their computer mouse kind of like they do their pillow. It should be of the highest quality because it is used so much. I have never used a mouse as perfect as the Logitech MX Revolution. Costing around \$90, it is worth every penny. It's cordless, smooth, accurate, fast, and feels good in the hand. I have one on a Mac and one on a PC, and I couldn't be happier. You should note that I've been using it for over a year now with no complaints. It looks great, too. Highly recommended.

WANT MORE DVORAK? John writes a weekly column for our Web site, too. Log on to go.pcmag.com/dvorak. Or you can e-mail him at pcmag@dvorak.org.





SASCHA SEGAN

Product Reviews: The Problem

My iPhone 3G review was wrong. Mine wasn't the only one that was wrong. And I don't think anyone really knows how wrong they were. Not yet, anyway.

When a product is great, my reviews are on point. When it sucks, I'm honest about that. But what if the review model of a product I receive from a vendor is great, but the one you get at the store sucks? Then we have a problem. It's a quality control problem, it's endemic in the electronics industry, and nobody has a very good grip on it.

The iPhone 3G is a perfect example. An unknown number of iPhones seem to have freaky-deaky reception problems on

worked fine. There may be problems with some of units out there, but we haven't been able to duplicate those problems here.

I've seen this happen before. Certain Motorola phones, most notably Verizon's old V3c, are famous for being a basket of cherries with a few lemons thrown in. I once received an electric shock from an E-Ten PDA that had gotten perfectly good reviews elsewhere on the Internet. And then there's the case of the desktop PC that actually caught on fire—through its FireWire port!

Once products have been on the market for a while, things get even murkier. Verizon's LG VX8100 phone went through four

one. Fewer than all of them. I'm in the process of working out how many units are affected, and why.

I'm not going to go near problems such as the longevity and durability of products, or the crisis in tech support and service. Needless to say, reviews written after someone has played with a device for two weeks or less aren't going to tell you whether a product will break in three months.

Our latest Service and Reliability (go pcmag.com/sr) story tries to get to the bottom of the situation. This reader survey has its flaws as well: It differentiates only between manufacturers, not between individual models. So if one desktop model is 100 percent reliable and another from the same manufacturer is like Russian roulette, this won't show up in the rankings. Nonetheless, this survey is still probably the best, easy-to-read way to find out how reliable a given device is.

Reading user feedback on consumer sites is a good way to sample a whole bunch of different experiences, but they can be misleading because the people writing them aren't experts. And even "tech support" can be misleading: According to one reader, a Verizon employee told him that T-Mobile uses "satellites" to connect their phones. (That's wrong.) Anyway, it's not your job to know the intricacies of every technology. That's my job.

This leaves us all sifting through buckets of limes in the dark, hoping we don't pick up a lemon instead. In the end, I can only fall back on old, time-tested advice. Never buy a product in the first few weeks after it comes out. Wait a month. By then, there will be enough products out on the street, enough conflicting reviews, and enough news reports about potential problems for you to be able to tell whether something is really worth a buy. Early adopters all too often get burned.

The reviews of the iPhone 3G were wrong, and nobody really knows how wrong. It's a quality control problem, and it's endemic in the electronics industry.

3G networks. We actually went through two iPhones while testing the iPhone 3G. The first one had the problem; the second one didn't. Apple said the first unit was activated in a nonstandard manner, and we accepted that explanation—until other reports started cropping up from at least ten different countries.

Is the problem a batch of bad hardware? Varying firmware? A software bug that involves restoring from an old backup file? Apple's support line told me there's no problem at all, but that belies many people's experiences. At last count, Apple's own support board had more than 600 messages on the topic.

The YMax magicJack, a plug-in Internet phone gadget, is another painful example. We tested it, and it worked fine. Then we started hearing reports of software incompatibilities, nonworking units, and hideous tech support. We requested a new unit and did all of our tests over again, and it still

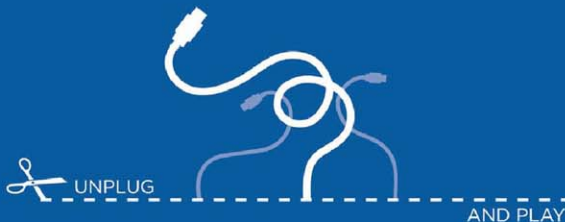
firmware revisions, none of which were marked on the box. Depending on when you bought it, you could have a quartet of different experiences.

Complicating things, very few of us reviewers ever actually buy the retail products we review in the store. Instead, we get loaners from the manufacturers, which we test, photograph, and send back. We hate this, but it's out of necessity; we don't have the budget to buy 100 desktop PCs a year, or to sign up for and then cancel 100 two-year phone contracts. But we may end up testing products that don't have the exact same software builds as the ones on the shelves.

If you see conflicting reviews of devices on the Web, you've probably stumbled upon a quality control problem. (And I don't mean the quality of the reviewers.) The reviewers may simply have gotten different batches of gadgets.

So how many iPhones have reception problems? We have no idea. More than

GET MORE SASCHA For more of his views, visit go.pcmag.com/segan.



Wireless is more freedom,
more flexibility, more work space,
more of what you want with the ease of USB.

WIRELESS IS MORE

With Wireless USB you get all the functionality of USB, without the wires.

Wireless USB is a high-speed wireless technology that connects multimedia consumer electronics, peripherals and mobile devices to your computer. You get a high data rate, short range, point-to-point connection with the simplicity of no wires.

Visit www.usb.org





DAN COSTA

The Micro Threat to Facebook

This past summer, I covered the Media Bistro Circus, a media and technology conference for online, print, and video professionals. I expected to hear a lot of whining about today's difficult business climate. The economy is in recession, ad spending is down, and print publications look more and more like yesterday's news every day.

Turns out, however, that there are a bunch of people in the media industry who are not only creating quality content but also making money doing it. During the conference, I picked the brains of media honchos, including Six Apart's vice president Anil Dash, *Wired* editor-in-chief

to rate the submissions of others. Normally, it would take a large staff to sort through those images and stories to pick the most compelling ones, but these sites let their audience do the heavy lifting. Parent company 8020 Publishing has launched print versions of *JPG* and *Everywhere*.

THE BIG SWITCH. In the past, tiny Web-only companies never had the resources to compete with giant, real-world properties like magazines and newspapers. Even if you created a worthy, interesting blog, you couldn't really serve it up with the same sophistication as a well-established media outlet's site. That's no longer the case,

Social-networking tools are appealing and certainly addictive to some, but true communities have a purpose, a passion. As history has shown, a new network will always come along and supersede an existing one: Friendster begets MySpace begets Facebook begets whatever comes next. "We don't need another giant social-network site," Anderson says. "The world needs an infinite number of micro social networks about specific issues."

And it sounds as if he wants to build them. Anderson said he'd planned to talk about the new social-network community he's creating in his keynote, but claimed that lawyers for Condé Nast (*Wired's* parent) wouldn't let him. "You'll get the same speech you were going to get anyway, but you won't know what it's about," he explained. I suspect that *Wired* is going to relaunch its blogs as micro social networks using the Ning platform.

In fact, Anderson has already started. He runs a blog called DIY Drones that's dedicated to amateur unmanned aerial vehicles. It's a small but passionate community of readers who do all the writing. Anderson acts as curator, earning about \$400 a month. That may seem like small change compared with the multibillion-dollar values of some social-networking heavyweights. But if Facebook crashes and burns, I bet a thousand sites like DIY Drones will be the ones to shoot it down.

Micro networking makes a ton of sense to me. I use LinkedIn instead of Facebook, because it has a purpose: to develop professional connections. But this model isn't exactly new. In the 1980s Bill Ziff turned Ziff Davis into a publishing giant by finding niche audiences for everything from computer gaming to yachting, and serving those communities better than anyone else. But with today's technologies, you have to let the users serve themselves.

TALK BACK TO DAN E-mail your thoughts to dan_costa@ziffdavis.com.

Social-networking tools are appealing and certainly addictive to some, but true communities have a purpose, a passion.

Chris Anderson, *New York Times* digital-news editor Jim Roberts, and former *PC Magazine* editor-in-chief Jim Louderback. Here are the big trends I spotted:


LOTS OF USER-GENERATED CONTENT (UGC). The Web is a great publishing platform, and it's even better for users than it is for traditional media companies, since it empowers individuals to become publishers. Every speaker at the conference touched on user-generated content in one form or another. Editorial resources are limited, and the most successful media companies today are those that allow their readers to provide the content.

CAREFUL CONTENT CURATION. Although he says he personally dislikes the term UGC, Paul Cloutier has built his entire business around it. He runs the successful imaging and travel sites *JPG Magazine* and *Everywhere* magazine, sites built entirely from user-generated content. Thousands of users submit images and stories to *JPG Magazine* every day, and they stick around

thanks in large part to the outsourcing of IT and computing power. The last speaker at the conference, Nicholas Carr, the author of *The Big Switch*, examined the consequences of this type of on-tap computing.

JPG Magazine, for example, has to store and serve millions of images every day. That seems like something that would require a lot of technology, but by using Amazon's S3 Web storage service, 8020 pays only about \$200 a month. At prices that low, practically anyone can get in the game. The only thing publishers need to do is build a passionate community, which, of course, is easier said than done.

MICRO SOCIAL NETWORKS. In fact, there could be tough times ahead for large, established social-networking sites. Chris Anderson stated this predicament simply in his keynote: "The problem with the social-networking destinations like Facebook and MySpace is that they're not about anything—they're about Facebook and MySpace," he said.



**Need a better way to get to your PC
when you're away from the office?**

Take your office PC with you, wherever you go.

GoToMyPC is the award-winning service that lets you use your office PC from any other computer with an Internet connection – as if you were sitting at your desk! Just log on to GoToMyPC.com and work with all your programs. Access all your files. Use your email. It's fast, easy, and secure. **Try GoToMyPC FREE for 30 days.**

Visit GoToMyPC.com and use promo "Mag".

GoToMyPC®
Access Your PC from Anywhere

Wireless N

Great Coverage for Your Entire Home or Office

- Wireless N speed up to 300Mbps
- Whole-Home Coverage
- Excellent performance and product interoperability



The Reliable Choice from TP-LINK

TP-LINK is an award-winning global provider of SOHO networking products. Committed to provide reliable networking products in Wireless, ADSL, Routers, Switches, Media Converters and Network Adapters for Global end-users, TP-LINK is now growing to become one of the most competitive providers of networking products.

www.tp-link.com



Advanced Wireless N Router

Where to buy

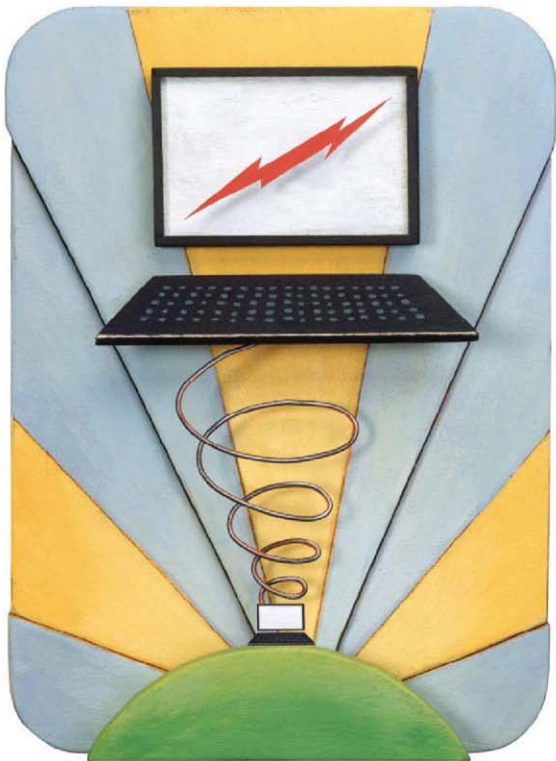


TigerDirect.com

amazon.com

Technical Support

Toll Free (888) 696-3962



PC Magazine's Essential Upgrade Guide

We walk you through ten easy ways to stay ahead of the tech curve both at home and at work.

By Dan Evans & Jeremy Kaplan

Let's face it: Most computers could use an upgrade. Unless you purchased your PC within the last three months, chances are good that something is out of date. Frankly, if your PC is more than two years old, you're in danger of being left behind as technology marches forward. The good news is that you can keep up with today's tech without having to start over completely. In this year's Upgrade Guide, you'll find expert advice on everything from replacing your hard drive (at 17 cents a gig, why not?) to updating your business network.

Upgrade Your Home PC

Upgrading a home PC can be daunting for the novice user. At work, an upgrade is just a phone call to IT. At home, odds are that you're on your own. Thing is, upgrading your PC is only as complicated as you make it. For instance, on one occasion we upgraded so many components at once that Windows assumed we had installed it on a new machine and said a new license was required. The good news is that many upgrades are simply a matter of a few minutes and a few keystrokes. For example:

Update Your Software

The best things in life are free, and so are some software upgrades. Most of the software on a typical home PC is already out of date, so let's start your upgrade with a series of downloads. If you're working on a Windows PC, download the latest Service Pack and all of the subsequent updates. Next, move on to all of the programs that you use

every day (you know, the ones that keep reminding you to download the latest version). This list includes your OS, browser, iTunes/QuickTime, Flash, Java, and antivirus protection. This should be a no-brainer, but most of us click on that "Remind Me Later" option for weeks (heck, *months*) before doing anything about it.

Optimize Your Hard Drive

Now that your software is up to date, let's clean up your hard drive. If you're running out of room, it's time to pick up another drive, especially since storage prices are at an all-time low. You can now get gigabytes of storage for less than the morning paper, but more on that later. First, let's deal with the drive you have. Go to Windows Explorer, right-click on your drive, and choose *Properties*. Click the *Disk Cleanup* button and wait for the report. This scans the drive to see what could be gained by

compressing older files, a process that can take a while. When it's done, you'll get a report on the various types of files that can be deleted as well as the space to be gained by compressing old files. After this initial cleanup, run a full disk defragmentation to complete the job.

Add Storage

As we mentioned earlier, storage prices are at an all-time low. Now would be a great time to buy a bigger main drive or add a backup. The easiest way to replace your master drive is with **Norton Ghost 14.0** (\$69.99 list). This program allows you to create a "ghost image" of your hard drive and then transfer everything to the new drive in one fell swoop. You should save your original hard drive as a backup just in case. If you want to be belt-and-suspenders safe, you might want to think about setting up a RAID array (go.pcimag.com/raidsetup). If you're upgrading to a new Vista PC, the Vista OS has its own hard drive data-transfer utilities that you can use.

By the way, we are really serious about getting storage right now. A quick Web search turned up a 1 terabyte Samsung drive for about \$175. That's 17.5 cents per gigabyte!

Install Firefox

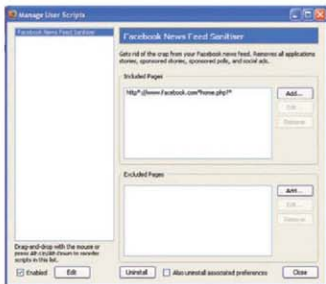
Let's move on to your browser selection. **Firefox** is our Editors' Choice. If you don't have it, download it now (www.mozilla.com). The browser itself is great, but to get all you can out of it, you need to download some extensions. No worries: The browser and extensions are free. All this will cost you is time. Firefox extensions let you customize the browser in myriad ways. These are the seven that we think you should begin with:

- **MR Tech Local Install** (www.mrtech.com/extensions/) This should be the first extension you install. It saves extensions and themes to your hard drive so that you can find them without a Web search. It enables dozens of tweaks to Firefox's menus and tabs and lets you install officially unsupported extensions.

- **Adblock Plus** (adblockplus.org) This extension blocks even the most persistent advertising from any Web page, and



EYE-OPENER For just \$299, this 22-inch Dell monitor has a mic and camera.



FIREFOX EXTRA
Greasemonkey runs thousands of user-written scripts automatically when you visit popular Web sites.

DISK TRANSFER
Norton Ghost 14.0 lets you transfer all your data to a new drive in one fell swoop.



a toolbar icon lets you fine-tune pages if it blocks something you want to see.

• **Bookmarks Synchronizer** (extensions.geckozone.org) Try this to upload and download your bookmarks to any FTP server or WebDAV site you can access, including sites protected by Secure FTP. Keep your home and office bookmarks synchronized, or synchronize your home machine with bookmarks added on the road.

• **FlashBlock** (flashblock.mozdev.org) Replacing Flash animations with a tiny arrow icon, FlashBlock removes those distractions so you can enjoy fast, unmoled browsing. If you find a Flash animation that you want to see, click on the icon or use options to whitelist animations on sites where you want them.

• **Forecastfox** (forecastfox.mozdev.org) This weather station for your Firefox status bar shows anything from the temperature to a multipanel display of current and predicted weather. A click takes you to Accuweather.com, and an option lets you create profiles for multiple cities and for displaying tooltips, labels, and alerts.

• **Greasemonkey** (www.greasemonkey.net) With Greasemonkey loaded, thousands of user-written scripts work automatically when you visit popular sites. One script logs you into eBay; another displays only negative feedback for an eBay member; another adds icons below a member photo on MySpace for e-mailing, deleting from favorites, and so on.

• **RSS Editor** (rsseditor.mozdev.org) This lightweight editor creates and modifies RSS feeds, though it's not powerful enough for podcasting. It's faster, simpler, and easier than most standalone RSS editors, and it's neatly integrated into Firefox.

Time for a New Monitor?

If you, like many of our readers, were an

early adopter of LCDs, you've probably had that monitor for quite a few years now. If that's the case, you should definitely upgrade. Today's monitors are almost uniformly widescreen and are a bit more than just displays. Our Editors' Choice, the **Dell SP2208WFP**, is a 22-inch monitor that offers great performance and some convenient extras. It comes with a 2-megapixel camera and a dual microphone array built right into the bezel. The best part is that it costs only \$299.

If you just bought a new monitor, or you're attached to your old one, you really should calibrate it for maximum results. **DisplayMate** (www.displaymate.com) is the testing and calibration suite that all the pros use, including PC Magazine Labs. It is not a free download, but the company guarantees that it will make your monitor perform better. DisplayMate also works on LCD HD televisions.

A "Key" Upgrade

Unless you have a high-end gaming rig or were drawn in by all the special offers on

the Dell site, you probably have a standard QWERTY keyboard. Believe it or not, you're not stuck with it. There's a whole universe of keyboards to choose from. If you like an ergonomic keyboard, try the **Microsoft Natural Ergonomic Desktop 7000**. Power users will appreciate how easy it is on the wrists. A serious gamer should have a serious gaming keyboard, like the **Logitech G15** with its 18 programmable hot keys. Want more choices? Check out "Find Your Perfect Keyboard" (go.pcmag.com/perfectkeyboard).

What About Laptops?

Laptops are traditionally more expensive than desktops, so people tend to keep them a lot longer. They, too, age and break down. You can upgrade an old laptop's RAM and hard drive just as you could those of a desktop. You can even replace an older screen (go.pcmag.com/laptopscreen). In addition, if you're traveling and you're not sure you'll be able to find an Internet hot spot, you might want to try an EV-DO card, such as the **Kyocera KPC680**.

EASY WRITER The Microsoft Natural Ergonomic Desktop 7000 is gentle on the wrists.



Upgrade Your Office PC

Does the following scenario sound familiar? You've got a small business, with somewhere between 10 and 50 employees using a mixture of desktop and laptop computers. You've probably got a few phone lines, a printer or two, an e-mail server, and a slew of filing cabinets. Maybe you've even got a simple wireless network—802.11b, we're guessing.

This is the generic office from 1995, à la the infamous Dunder Mifflin paper company. You want to upgrade your company's network hardware and software, allowing your employees to become more productive, but you're not IT manager. You're a business person, and you don't have the time to learn any of that gunk about RADIUS authentication or remote management via SSL.

What if we told you that you (yes, you!) can completely revitalize your small business for just \$1,000? New equipment will improve business practices as well as morale, and creating a modern, ultra-efficient work environment is surprisingly easy and inexpensive—if you choose the right stuff. Let's walk you through the process.

Upgrade Your Network

To bring this business into the 21st century, start with the core of your infrastructure, the network. We can virtually guarantee that your company's network is outdated. You're primarily running Ethernet, right? Everyone is, and that's fine. But if your company has a wireless network, it's an older

one. Buy a new dual-band router that can run wireless-n traffic in either the 2.4- or 5-GHz bands. Check out the **Netgear ProSafe 802.11n Dual Band Wireless Access Point WNDAP330** (\$475 list) or the similar **Linksys Dual-Band Wireless-N Gigabit Router with Storage Link WRT600N** (\$180 street). By running any new wireless-n clients, you add in the 5-GHz band. You can segregate any existing wireless-g PCs in the 2.4-GHz band. This lets the older stuff stay where it belongs, and new "n" clients can achieve optimal throughput and range on the much-less-crowded 5-GHz band.

What sort of throughput, you may ask? Even the draft versions of 802.11n that we've been mired in for years now run at a theoretical maximum of 248 megabits per second (Mbps). 802.11b was just 11 Mbps, and even the newer "g" technology tops out at 54 Mbps. The 5-GHz 802.11n signals also provide dramatically more coverage than "g" networks—as much as ten times the coverage, according to Netgear. Oh, and those tremendous speeds? Many people think "n" networks will someday carry video signals wirelessly around your house. You're going to do something similar at work: videoconferencing (think remote employees and your worldwide list of clients).

So, what do you do? First, upgrade the clients in your office to 802.11n. You can pick up USB-stick wireless-n adapters for as little as \$80 bucks each. Then you'll want some webcams for your clients—and perhaps one or two on reserve that employ-



STORAGE BARGAIN The Iomega StorCenter 150d offers 2TB capacity.

ees can check out prior to a business trip. Install **Microsoft Live Meeting 2007** (\$4.58 per user per month), or send around the link to the 16MB client most people will end up using. Instant messaging is handy, and the quick video chat features in most clients is a bonus, but a meeting app like this one offers substantially more, such as a shared presentation window, basic annotation tools, and even VoIP. For any of the advanced features, including support for multiple webcams and VoIP; however, you'll need the full client.

Not sold on videoconferencing? Think security. We've already moved your desktop clients onto the wireless-n network, in part to really take advantage of the dual-band functionality. You've opened up a bunch of space in the 2.4-GHz area, so utilize that newly free bandwidth and boost security at the same time: Add a wireless security camera to your network—one you can access from anywhere on the Internet. We're fans of the **Linksys WVC2300** (\$399.99 list). Triggered by motion in its field of view, this 802.11g camera takes 640-by-480 MPEG-4 videos. It will automatically grab an IP address from your DHCP server, so simply log into the server from IE, change the username and password, and configure to your heart's content.

Need for Storage

Getting storage—the right storage, that is—isn't as easy as buying a \$200 external drive. Opt for the 2TB version of the **Iomega StorCenter 150d** (\$899.99 direct). Sure, it costs almost a thousand dollars, but it's really an incredible bargain, providing many of the features of much-higher-end devices at a fraction of the price. Instead of running on Windows Storage Server



ZT recommends Windows Vista® Home Premium.

ZT Affinity

The Latest Technology...
For Less!

Select the Powerful Notebook or
Desktop That's Right For You



ZT Affinity Desktops featuring Intel® Core™2 Quad Processors

ZT Affinity 7207XI Desktop

- Intel® Core™2 Quad Processor Q6600
- Genuine Microsoft® Windows Vista® Home Premium Edition (64-bit) SP1
- 4GB DDR2 SDRAM Memory
- 500GB SATA Hard Drive
- 20x DVD+/-R/RW Dual Layer Burner
- Front Panel 15-in-1 Digital Media Drive

As low as: **\$599^{99*}**

QUAD-CORE
PERFORMANCE

Model #: ZT-72070-35

Step up to the

ZT Affinity 7225XI Desktop

- ATI HD 3450 512MB Graphics with HDMI / DVI output for advanced digital entertainment

As low as: **\$699^{99*}**

Model #: ZT-72250-35



Shown with display sold separately.

ZT Affinity Notebooks featuring Intel® Centrino® 2 processor Technology

ZT Affinity N4003I Notebook

- 15.4 inch WXGA Display (1280x800)
- Intel® Core™2 Duo Processor P7350
- Genuine Microsoft® Windows Vista® Home Premium Edition (64-bit) SP1
- 4GB DDR2 Memory 250GB Hard Drive
- 20x DVD+/-R/RW Dual Layer Burner
- Integrated 1.3mp Webcam
- Dedicated Numeric Keypad

As low as: **\$899^{99*}**

LATEST MOBILE
TECHNOLOGY

Model #: ZT-N4003I-37

Step up to the

ZT Affinity N4004I Notebook

- 320GB SATA Hard Drive
- 2GB Intel® Turbo Memory w/ Dashboard
- Intel 5300 Wireless Card & Bluetooth

As low as: **\$999^{99*}**

Model #: ZT-N4004I-37



Get yours today at these online retailers:



www.circuitcity.com



www.costco.com

www.target.com

FREE



Get a new Maxtor® 80GB OneTouch™ 4 Mini HD, FREE!

Buy a new ZT Affinity PC with Windows Vista Premium operating system and get a BONUS PACK of hardware accessories after mail-in rebate including a new Maxtor OneTouch 4 Mini 80GB External USB Drive. Find out how at:

ZTsystems.com/bonuspack

*May reflect limited-time instant savings offers. Pricing and model availability varies by retailer. Additional shipping and handling charges may apply.

† Offer good in U.S. only. Select items only. Limited-time offer. While supplies last. Other restrictions apply. Limit one \$100 rebate per software purchase. Offer may be substituted or discontinued without notice. Retailer's policies and taxes responsible for offers and participating retailers.

www.ztsystems.com/pcmag

866-984-7687

zt
Systems

Desktop photos only include some equipment and accessories, which are not standard features. Not responsible for errors in typography and/or photography. All rights reserved. All brands and product names, trademarks or registered trademarks are property of their respective companies. Intel, the Intel logo, Centrino, Centrino Inside, Intel Core, Core Inside and Centrino Inside are trademarks of Intel Corporation in the U.S. and other countries.

UPGRADE IT OR NUKE IT?

Are you torn between upgrading and buying a new PC? We asked ExtremeTech Editor Loyd Case how to make the decision.

Figuring out whether to upgrade your current PC or buy a new one isn't easy. If you've got an older system with an AGP slot, is it worth upgrading the graphics card? Or should you, as Sigourney Weaver said in *Aliens*, just "nuke it from orbit" and start over? The best way to approach the upgrade-versus-buy decision is with a classic cost-benefit analysis. No, you don't need a spreadsheet. A few rules of thumb will suffice.

RULE #1: ASK YOURSELF WHAT YOU PLAN TO DO WITH THE SYSTEM.

If the system is a gaming box, then upgrading an older AGP-based system to a new graphics card will not help, since many modern games make heavy use of the CPU. On the other hand, if that old box is something you plan on handing off to someone in your family to run Web apps, you might be able to get away with leaving the current graphics card, just adding a little inexpensive memory to make the PC a bit more responsive.

RULE #2: ALWAYS CONSIDER THE HIDDEN COSTS WITHIN AN UPGRADE.

At first, you may think you need to upgrade only one component. With a gaming box, for example, you might consider a new video card. So you add that—but then you dis-

cover that you really need to upgrade the memory from 512MB to 1GB or more. Oh, and some games take up more than 10 gigabytes of drive space. So let's add some more drive space. By the time you're done, you've sunk hundreds of dollars into a dead-end system. If price is the main factor in your decision to upgrade and not replace your system, do the math and see if the total amount of the upgrades costs more than a whole new PC. A new motherboard, memory, midrange processor, and decent GPU will cost you about \$600—and probably less. Toss in another \$100 for a big hard drive, and you're set for several years.

RULE #3: NEVER, EVER BUY OLD COMPONENTS THAT COST MORE THAN NEW ONES.

When old components start to cost more than the equivalent new ones, it's a sign that the availability of those particular components is getting tight. At this point, it will more than likely be cheaper to buy a new system. Take RDRAM, for example. There are actually still quite a few systems that use RDRAM. A 512MB RDRAM module will cost you more than \$150. You can get 2GB DDR2 memory kits for under \$100. Heck, even DDR3 is cheaper.

2003, the box uses a proprietary OS that's based on embedded Linux. This saves on licensing fees and also allows the 150d to run on a Freescale 400-MHz CPU with only 256MB of RAM. It comes with 2TB of hot-swappable storage in the form of four 500GB SATA II drives. And Iomega did a good job of making the management console software's interface straightforward. What's not to love?

Plug the NAS into your network and install the included software on any networked PC. Then use the Iomega discovery tool to find your 150d on the network; it will let you manage and configure the device over an HTTP session. First, set up a few shared folders for your employees, things like Widgetco Documents and Widgetco Archives. Then you can start mapping these folders as shared drives on your employees' computers—but map them the smart way, without resorting to drive letters. Don't know how? It's actually pretty simple. Open your computer, right-click in the Explorer window, and choose Add a Network Location from the shortcut menu. You want the option for choosing a custom network location.

You've paid good money for the 150d, so get the most out of it: Use it for backup as well, which your company just hasn't been doing. Don't deny it—it's true. A great way to get started comes built in: Iomega ships a five-user license for EMC's Retrospect with the 150d. Retrospect is an excellent product and works fine on both Windows and Mac OS X clients. Set it up on a few key computers to test out the functionality. If you're happy with it, buy a larger license pack and install it across your company. If you're not satisfied, test a different package, such as Genie Backup Manager Pro

8.0 or ShadowProtect Desktop 3.1. Just start backing up!

Add a New Printer

Over the years, the cost of laser printers has dropped dramatically, to the point where inexpensive monochrome models are a fairly common alternative to inkjets even for the home. Take advantage by adding a laser printer such as the **Brother MFC-7840W** (\$300 street) to your new network. (See review on page 28.) It can connect via 802.11b or g, and it can print, fax, and scan over the network. It can send e-mail via a PC, adding the scanned document as an attachment. It also works as a standalone copier and fax machine; and it includes a 35-page automatic document feeder (ADF), an essential touch for any office that scans, faxes, or copies multipage documents.

The added speed and quality of a new printer should improve office morale, but if you don't use all of its features, you're just wasting your money. Take the power built into that thing seriously! Modern networked printers are all about speeding workflow, letting you store commonly used forms on the printer, send and receive faxes, and even scan and route documents via e-mail. These features are perfect for your small business, where efficiency translates directly into dollars, right? □

LOW-COST LASER: The \$300 Brother MFC-7840W is an office workhorse.





Access Everywhere

There are thousands upon thousands of hot spots out there, but how do you find one? Here are the best ways to get Wi-Fi when you're not at home. *By Eric Griffith*

As wireless networks have grown in popularity, so has the number of hot spots around the globe. In fact, the leading hot-spot directory, **JiWire** (www.jiwire.com), lists over 200,000 locations. With that many venues, it should be easy to find Internet access, right? It is, if you know where to look. In this story, we give you great tips on finding locations as well as making your own mobile hot spots.

There are several directories online with hot-spot listings—consult one for where you're going so that you can print out a list to take with you. JiWire is the best

hot-spot directory, as it's one of the few that actually spent money building a list, and it has full-time employees keeping it current. JiWire powers the listings used by several companies, including iPass and Boingo. It covers 134 countries, and 67,875 of the hot spots it lists are in the U.S. Also, JiWire has discontinued its Hotspot Helper, which provided extra security and privacy at hot spots. A good replacement option is WiTopia.net's **personalVPN** (www.witopia.net/personalmore.html), which secures wireless connections for \$39.99 per year. It also offers access via Skype and iPhone.

AnchorFree's directory of free hot spots (www.anchorfree.com/hotspotfinder) includes ads and is updated mostly by users. It has 20,000 listings worldwide. And you could try **Hotspotr** (www.hotspotr.com/wifi) and **WiFinder** (www.wifinder.com), both of which also depend on users' sending in hot spots they've found.

Ultimately, you want access wherever you are at the moment, and you can always simply boot up the laptop and see if a network pops up. But the fastest way to make that check is with a Wi-Fi signal finder, a handheld unit that can tell you if



May 24, 2005
RoboForm Pro 6.3



Is This Your Password System? Ours is Better!

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 Magazine Readers
Download RoboForm
for FREE!**



www.RoboForm.com/PCM

PC Magazine Editors' Choice Award Logo is a registered trademark of Ziff Davis Publishing Holdings Inc. Used under license.

Wi-Fi at the Ballpark

Many major sports venues offer Wi-Fi in the expensive seats, but Minute Maid Park in Houston has Wi-Fi throughout the stadium, priced at \$3.95 for 4 hours' use during a game. Naturally, AT&T operates the Wi-Fi at AT&T Park, home of the San Francisco Giants. Access to the Internet, as well as to the Giants Digital Dug-out software for extra stats and replays, is free. Wi-Fi is also reportedly going to be available in Lucas Oil Stadium in Indianapolis. So before you head out for the game, check the Web site for the stadium you're visiting.

McDonald's, powered by **Wayport**, costs \$2.95 for 2 hours, and you pay at the counter when you buy your fries. You also have the option of paying \$29.95 a month (with a one-year agreement; the cost is \$49.95 if you want to go month-to-month) direct to Wayport to get access to all its hot spots and wired connections in hotels. A few select devices (the Sony Mylo COM 2 and the Zipit Wireless Messenger Z2) get free access at the company's hot spots. The better way to go is to subscribe with a Wayport partner—which is just about everyone, from AT&T to Boingo to iPass.

The Aggregator Advantage

If you're constantly in need of affordable yet reliable Wi-Fi, you should go with a hot-spot aggregator. There are two in the U.S.; both make it easy to access hot spots run by partners.

Boingo Wireless (www.boingo.com) costs \$21.95 a month for unlimited access to 20,000 hot spots across North America. Pay \$39 a month and get access at 100,000 hot spots globally. Boingo also offers a pay-as-you-go account for \$7.95 a day in the U.S., or \$9.95 a day overseas. It's cheaper for those

who need access just for phones or PDAs to use Wi-Fi with Boingo Mobile, at \$7.95 per month. Boingo even has new deals with hotel-network providers such as Wayport and iBahn to provide access over Ethernet. Subscribers can also roam onto the thousands of Fon community hot spots.

iPassConnect Mobility Service (www.ipassconnect.com) is more expensive than Boingo but has more hot spots (24,000). The cost goes up by \$20 to use overseas hot spots with iPass. The aggregators have most of the same partners—both include Starbucks and McDonald's, for example—through partnerships with AT&T and Wayport.

Unique Locations

Lest you still believe Wi-Fi is only for coffee drinkers and hotel guests, consider all the other areas where you can find a hot spot.

AIRPORTS Both American and United have begun to offer Wi-Fi to their frequent fliers as a free amenity. Wireless has also expanded into entire concourses, with service at almost every gate in select airports. **TravelPost.com** (www.travelpost.com) keeps a nice Airport Wireless Inter-

net Access Guide on its site, but you'll also want to keep your signal finder handy. Almost all airport locations are available at no extra cost if you've got an account with Boingo or iPass.

The five biggest U.S. airports with free Wi-Fi are Denver, Las Vegas, Orlando, Phoenix-Sky Harbor, and Philadelphia. The sites **OpenWiFispots** (www.openwifispots.com/guide_free_wireless_airports.aspx) and **Wi-Fi FreeSpot** (www.wififreespot.com/airport.html) list just about every airport in the U.S. with free Wi-Fi.

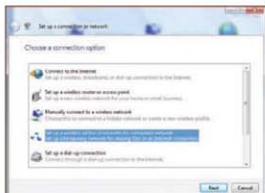
Anyone with an iPhone or iPod touch can get free access to any of the 28 airport hot spots operated by **Concourse Communications** (www.concoursecommunications.com/pv_hotspots.asp) for 15 minutes after watching a 15-second video advertisement. If you watch another ad every 15 minutes, you can continue at no charge for an hour.

COMMUTING Wireless on trains has had its ups and downs in the U.S. The reason: It's hard to find a good way to provide effective *backhaul*—the connection back to the Internet—on a rapidly moving vehicle. At least on a highway, with a 3G card, you're usually near cellular towers. One recently announced solution uses Sprint's EV-DO network as backhaul for a Wi-Fi access point on the MBTA commuter line from Worcester to Framingham in Massachusetts. The free trial launched on one train in January and may expand to all 13 commuter lines in the state.

Turn Your Laptop into a Hot Spot

If several people with laptops find themselves in a place with a single Ethernet connection for Internet access, one of them can turn his or her laptop into the hub of a wireless ad hoc network. The computer in question must run both Ethernet and Wi-Fi at the same time. In Vista, connect to the Internet using an Ethernet cable, then go into the Network and Sharing Center. Set up a new connection called a *wireless ad hoc network*. Give it a name, set up your security options, deselect *Save this network*, and then click *Turn on Internet connection sharing*. If you don't set up a password, anyone can connect to your laptop's Wi-Fi.

In Windows XP, make sure your Ethernet is providing Internet access. In the Network Connections control panel, right-click on your wireless connection and select *Properties*. On the *Wireless Networks* tab, check *Use Windows to config-*



LAPTOP HUB In Vista and XP, it's easy to set up a wireless ad hoc network.

ure my wireless network setting. Under Preferred networks, click *Add*, then name your network, select *Shared*, and provide a password. Click the *Advanced* button and select *Computer-to-Computer (ad hoc) networks only*. Back in the Network Connections control panel, open the *Properties* dialog for your wired Internet connection. Go to the *Advanced* menu and check the box next to *Allow other network users to connect through this computer's Internet connection*.

If you're wondering whether hackers might try to get you at hot spots, ad hoc

Protect

what you value most

Today



**Wireless Day/Night Pan/Tilt Internet
Camera Server with 2-Way Audio**
TV-IP422W



**SecurView™ Management
Software Included**

- Motion detection
- Email alerts
- Program recordings
- Manage 16 cameras

**Win a 300Mbps Dual Band Wireless N Router
at www.trendnet.com/giveaway**

Use promotional code MP09PC08 to double your prizes

Easy to Setup and Use

Monitor multiple locations with complimentary SecurView™ software featuring email alerts, motion detection and 3x digital zoom

Remote Pan & Tilt

Monitor a larger area with remarkable 330° pan and 105° tilt, remote camera control

Night Vision Protection

See, hear and talk to people day or night from any internet connection with two-way audio and infrared night vision

Visit www.trendnet.com or call 1.888.326.6061 for more information

No purchase necessary to win. Void where prohibited by law. Sweepstakes is open to legal residents of the United States who are at least 18 years of age. Entries must be received from September 16, 2008 to December 15, 2008. One entry per person. For a complete set of rules, visit www.trendnet.com/giveaway.

amazon.com

Buy.com

BJR

MICRO CENTER

newegg

TigerDirect.com



TRENDnet®



BUILD YOUR OWN MOBILE HOT SPOT

Create a hot spot in a car or train with a 3G router such as the Junction Box (left) or the Yocera KR1 Mobile Router for EVDO (above).

There's still a chance that access could come to the California Capitol Corridor train between San Jose and Sacramento. The Bay Area Rapid Transit (BART) may work with a company called WiFi Rail to provide on-train Wi-Fi to thousands of Bay Area commuters. The service uses "leaky coax" for the backhaul, which involves a coaxial cable along the rails that works like an antenna.

Finding a signal at the train station is a little easier. T-Mobile offers hot-spot service at Amtrak stations along the Eastern Seaboard. And Washington State Ferries in the Seattle area—which accounts for 50 percent of all the ferry trips in the U.S.—has been trying Wi-Fi on boats for a while now. Because the Wi-Fi provider, Parsons, has a roaming agreement with Boingo and iPass, subscribers of either aggregator can get access to the network during their commute. And the MBTA in Boston recently announced comprehensive Wi-Fi access on all 11 ferries in the harbor.

MUNICIPALITIES Many city Wi-Fi projects, once widely anticipated, are now a bust. For now, if you travel from city to city with a single laptop, count on the known hot spots or invest in a 3G card from Verizon or Sprint. 3G technologies like EV-DO and HSDPA are readily available, and WiMAX may soon be in many more places.

Hardware Solutions

3G/CELLULAR ROUTERS It's no secret that you can get Internet access just about anywhere—even in the car—if you've got 3G service. When you plug a PC Card modem into your laptop you can expect reasonably good speed as long as you're in range of a tower with the latest technology, such as EV-DO Rev A. These services typically cost \$60 to \$80 a month.

That's not much help if you have multiple laptops that need access. The solution: a router that uses the 3G card for backhaul. This could work even in a car or train to make your own truly mobile hot spot. You just need to provide power to the router.

The **Junction Box** was one of the first and biggest names in 3G routers. Plug in a supported 3G card from Alltel, AT&T, Sprint, or Verizon to get backhaul, then use the built-in 802.11g Wi-Fi or Ethernet to connect the computers. But it's not cheap, at \$699 list. For a hundred bucks less, Junction offers a version with Ethernet only.

The **Top Global 3G Phoebe MB6000 EVDO Router** (\$210 street) supports just about every cellular provider in the U.S. **D-Link** offers a couple of devices as well, such as the EV-DO-only **DIR-450** (\$209.99)



ON-THE-GO WI-FI SHARING

At around \$200, the Top Global 3G Phoebe router is hard to beat.

direct), but it's limited to specific EV-DO CardBus cards. For sharing, however, it's hard to beat it. D-Link also makes the DIR-451, which supports the UMTS/HSDPA-based 3G network offered by AT&T.

Yocera sells the **KR1 Mobile Router for EV-DO** for \$169.99, available through Amazon. **Linksys** also makes 3G routers, like the **WRT54G3G** line for mobile broadband.

MOBILE PHONES Newly released software promises to turn smartphones with Wi-Fi into hot spots for getting several laptops online. They're still nascent, so don't make this your go-to solution just yet. **WMWiFiRouter** from **Morose Media** is still in trials, and there's a free version anyone can try. You'll need a phone with Windows Mobile 5 or 6, both Wi-Fi and a cellular data connection, Internet Sharing installed, and 15MB of free memory. Morose has a list of compatible phones at support.wmwifirouter.com/devices.

TapRoot Systems' WalkingHotSpot does the same thing for Windows Mobile and Symbian-based phones. And it can limit the number of connections made via Wi-Fi, so your phone provider won't plotz at your excessive network use. (Sprint is the only provider of 3G Internet connections that allows its devices to be used as hot spots.) A free trial of Walking HotSpot is available at walkinghotspot.com. Get it while you can; TapRoot eventually will offer the software only through carrier partnerships. □

MORE ON THE WEB For many more tips on finding and using Wi-Fi access, check out go.pcmag.com/wifiguide.

Moncaso Series

THE MOST ENTERTAINING HTPC CASE



The ideal Home Theater PC is one that collaborates, not clashes, with your living room aesthetic. MonCaso HTPC Cases come in an elegant full-aluminum chassis, with standard ATX mother board accommodations, a range of control options, and full compatibility with all Windows Operating Systems. With a MonCaso HTPC case, presentation is a guaranteed wow-factor.

For technical specifications, gallery, and prices, please visit our website at www.moneual.com or call 1-877-450-0105

Moneual™
LAB

Q: If a Picture is Worth
a Thousand words ...

What Would **HIGH DEFINITION**
AT 60 FRAMES PER SECOND be Worth?



Available at
WAL*MART
www.walmart.com

4 Mode Selections
Full Mode: 1080p (1440x1080) at 30 fps
Action Mode: 720p (1280x720) at 60 fps
2 Internet Modes: DVD for YouTube (720x480)
and Web for email (320x240)

Just under \$200, the Action HD offers Full High Definition 1080p at up to 30 fps. At 720p HD, it doubles the frame rate to an amazing 60fps! Featuring a 3x optical zoom and Auto Focus, you'll capture every detail. Play back your video clips and photos on an HDTV, TV, PC, MAC or upload them to YouTube.

Under \$200!
ACTION HD
1080p





PC **COMPACT**
Canon PowerShot
SD790 IS
\$299.99 list
●●●●●

PC **D-SLR**
Nikon D300
\$1,799.95 list
(body only)
●●●●●

Snap Decisions

Whether you want a simple point-and-shoot, a midrange superzoom, or a high-end digital SLR, here's how to zoom in on your ideal digital camera. *By Molly K. McLaughlin*

As far as gadgetry goes, digital cameras are among the top must-haves for almost everyone. Who doesn't want one? In the first half of 2008, U.S. consumers spent \$1.7 billion on digital still cameras, with 6.9 million units sold, a 6 percent increase over the same time last year, according to The NPD Group's retail tracking service. And that's not all: In 2007, 54 percent of buyers were on their second or subsequent camera, and with all the newbies buying their first cams, that number will only continue to multiply.

Much of this growth can be attributed to falling prices, but it could also be due to the fact that in the grand scheme of all things digital, a camera comes with a lot less baggage than other devices. There are no contracts, as with mobile phones, to worry about, and none of the file format

or software compatibility issues that MP3 players face.

That said, buying the right camera isn't easy, because there are so many models. To narrow down your choices, start by being realistic about where you plan to use your camera—at fast-action sporting events, large family gatherings, sightseeing vacations? If you think you'll be shooting lots of sweeping landscapes or large group portraits, for example, a wide-angle lens is important for getting the entire shot. If you're into extreme close-ups, like butterflies on flower petals, a superzoom with macro mode is indispensable. If it's fast-moving action you want to capture, your camera will need a speedy response time and an effective burst mode. If you tend to take shots in low light, at dusk or in dimly lit places, you should check the camera's

ISO settings: The higher they go, the more light you'll be able to get into your shots—but beware, because high ISOs often result in noisy images. Nighttime shots require a strong flash that won't overexpose your images—and you'll probably want some red-eye control as well.

How serious a photographer are you? Knowing the answer will help you determine which of the three camera categories you should consider: compact point-and-shoots, superzooms, or D-SLRs.

Compact Point-and-Shoots

For newbies and casual shooters, compacts make the most sense. They fit easily into your pocket and are loaded with automatic features. And the ones we've highlighted here all have at least 8 megapixels, which

SUPERZOOM
Fuji FinePix s8100fd
\$399.99 list
●●●●○



COMPACT
Sony Cyber-shot
DSC-W300
\$349.99 direct
●●●●○

is more than enough for producing high-quality online images and decent-size prints. (The **Sony Cyber-shot DSC-W300** has a whopping 13.6MP—the highest resolution we've seen in a compact camera.)

If you're shopping for a compact, you can spend as little as \$150 or as much as \$400. The lower end of the price range includes the **Canon PowerShot A590 IS** and the **Fuji FinePix J10** (both well below \$200). Toward the top of the range are the **Canon PowerShot SD790 IS** and the **Panasonic Lumix DMC-FS20** and **DMC-FX55**, priced from \$250 to \$350. Compact cameras typically sport 3X or 4X optical zoom lenses, although the **Pentax Optio M50** and the high-end touch-screen **Sony Cyber-shot DSC-T300** are a couple we've recently seen hit the 5X mark, which is long enough to get you reasonably close to the action. While you'll see digital zoom mentioned in the specs, it's best to disable this feature altogether. The fact is, it's not really zoom; all it does is interpolate pixels to simulate zooming in, and it frequently results in a degraded image.

The aforementioned Canon PowerShot A590 IS, our favorite budget compact camera, offers a number of advanced features such as face detection, image stabilization, and some manual exposure settings, for a very sweet \$180.

We also like the inexpensive 12MP **Fuji FinePix F50fd** (\$225 street), which offers a number of advanced automatic features, a high-quality LCD, and comfortable controls. If you're willing to spend more, the slim and slickly styled **Sony Cyber-shot DSC-T2** (\$299.99 direct) adds touch-

screen controls along with in-camera editing options so that you can, for example, remove red-eye from your shots before you even take the images off the camera. It also features 4GB of onboard storage, eliminating the need for memory cards.

If you tend to take a lot of people pictures, you'll want a camera with face-detection technology, which detects and focuses on faces in the frame and improves the image's overall composition and quality by optimizing the color and white balance. The good news is that most point-and-shooters you'll find these days incorporate this feature. The Canon PowerShot SD790 IS, **SD870 IS**, **SD890 IS**, and **SD1100 IS** all excelled in face detection on our tests. The "IS" in the names of these models stands for image stabilization, the feature that helps counteract the motion blur that comes with shaky hands or movement in the frame. For the best blur-free shots, you'll want image stabilization, and fortunately, you'll find it on most compact cams.

The SD1100 IS also has an optical viewfinder—handy when you find it difficult to frame shots in direct sunlight on the camera's LCD. For LCD lovers, the SD790 IS is a good choice, as it forgoes the viewfinder in favor of a large 3-inch display. The Sony Cyber-shot DSC T300's LCD is a 16:9 widescreen that offers convenient touch-screen controls. And the 3-inch display on the Panasonic Lumix DMC-FS20 adjusts screen brightness based on ambient lighting, for those too-sunny situations. The **Nikon Coolpix P60** has an interesting feature: Its electronic viewfinder provides access to the entire menu system and lets

you review images as well. While an electronic viewfinder looks just like an optical viewfinder, the image you see is actually projected onto a tiny screen.

While most point-and-shoot cameras have some type of auto mode, many simply use default settings and result in less-than-perfect shots. If you don't like to fiddle with settings too much, you'll want a camera that can automatically adjust to the lighting situation and the type of shot you're taking. One of the best implementations of auto modes we've seen is Panasonic's Intelligent Auto (IA) mode. This mode makes automatic adjustments to five different settings to help you get the best shot possible for the environment you're in. And with 22 scene modes to choose from, IA gets it right most of the time. Kodak's newest compacts, the **EasyShare M1033** and **V1073**, implement "smart capture mode" to analyze the scene and optimize settings using what the company calls Intelligent Scene Detection, Intelligent Capture Control, and Intelligent Image Processing. Other cameras have more basic, yet still effective, auto modes that let you specify aperture or shutter-speed priority.

While they won't replace dedicated camcorders, the video capabilities in point-and-shoot cameras are a lot more robust than they used to be. The Kodak EasyShare M1033 offers the ability to record HD-quality video at a resolution of 1,280-by-720 at 30 frames per second. And video quality in our tests was good, with little pixelation and smooth playback. Some models, like the **Casio Exilim EX-Z9** and **EX-Z80**, are

integrated with YouTube, so you can easily upload and title your videos without even visiting the site. The **EX-S880** can capture movies in MPEG-4 H.264, which means they'll take up less space on your memory card. Most cameras let you record video up to the capacity of the card, but some older models allow only 30-second clips, so be sure to check the specs before you buy—otherwise you'll have to stitch together those short clips after the fact. A very few cameras, including the **Kodak EasyShare V1073** and the Editors' Choice **Canon PowerShot SD790 IS**, let you zoom in or out while shooting video.

Superzooms

A good bridge between basic point-and-shoots and more complicated D-SLRs, superzooms offer some manual settings and long optical zoom lenses and are still relatively easy to use. They are an ideal choice for capturing detailed close-ups that you simply can't get with a 3X or 4X optical zoom. Though superzooms, unlike compacts, don't fit into a pocket, they are typically a more manageable size than bulky D-SLRs.

While most superzooms offer 15X to 18X lenses, the \$500 10MP **Olympus**

SP-570 UZ has a 20X optical zoom. The camera's best feature, however, is the Perfect Shot Preview, which shows you how a given setting will affect your shot. Say you want to see how various color effects will change your photo; the LCD will serve up four separate previews, so you can choose the white balance setting that looks best. The menu provides options for pre-viewing exposure settings and metering effects. It's one of the most useful features we've seen.

With an 18X zoom and a wide-angle lens, the reasonably priced **Fuji FinePix s8100fd** retains the smallish 2.5-inch LCD

DIGITAL CAMERA FEATURES AT A GLANCE

	RATING	PRICE	RESOLUTION (IN MEGA-PIXELS)	LENS (35MM EQUIVALENT)	OPTICAL ZOOM	LCD SIZE (INCHES)	VIEWFINDER
COMPACT							
Casio Exilim EX-S880	●●●○	\$249.99 direct	8.1	38mm to 114mm	3X	2.8	none
Casio Exilim EX-Z9	●●●○	\$150 street	8.1	37.5mm to 12.5mm	3X	2.6	none
Casio Exilim EX-Z80	●●●○	\$180 street	8.1	38mm to 114mm	3X	2.6	none
Canon PowerShot A590 IS	●●●○	\$179.99 list	8	35mm to 140mm	4X	2.5	optical
Canon PowerShot SD790 IS	●●●●	\$299.99 list	10	35mm to 105mm	3X	3	none
Canon PowerShot SD870 IS	●●●○	\$279.99 list	8	28mm to 105mm	3.8X	3	none
Canon PowerShot SD890 IS	●●●○	\$349.99 list	10	37mm to 185mm	5X	2.5	optical
Canon PowerShot SD1100 IS	●●●○	\$249.99 list	8	35mm to 105mm	3X	2.5	optical
Fuji FinePix F50fd	●●●○	\$225 street	12	35mm to 105mm	3X	2.7	none
Fuji FinePix J10	●●●○	\$129.95 list	8.2	38mm to 113mm	3X	2.5	none
Kodak EasyShare M1033	●●●○	\$199.95 direct	10	35mm to 105mm	3X	3	none
Kodak EasyShare V1073	●●●○	\$229.95 direct	10	37mm to 111mm	3X	3	none
Nikon Coolpix P60	●●●○	\$229.95 list	8.1	36mm to 180mm	5X	2.5	electronic
Panasonic Lumix DMC-FS20	●●●○	\$249.95 list	10	30mm to 120mm	4X	3	none
Panasonic Lumix DMC-FX55	●●●○	\$349.95 list	8.1	28mm to 100mm	3.6X	3	none
Pentax Optio M50	●●●○	\$179.95 list	8	36mm to 180mm	5X	2.5	none
Sony Cyber-shot DSC-T2	●●●○	\$299.99 direct	8.1	38mm to 114mm	3X	3	none
Sony Cyber-shot DSC-T300	●●●○	\$399.99 direct	10	33mm to 165mm	5X	3.5	none
Sony Cyber-shot DSC-W300	●●●○	\$349.99 direct	13.6	35mm to 105mm	3X	2.7	optical
SUPERZOOM							
Fuji FinePix s8100fd	●●●○	\$399.99 list	10	27mm to 466mm	18X	2.5	electronic
Olympus SP-570 UZ	●●●○	\$499.99 list	10	26mm to 520mm	20X	2.7	electronic
Panasonic Lumix DMC-FZ18	●●●○	\$349.95 list	8.3	28mm to 504mm	18X	2.5	electronic
Sony Cyber-shot DSC-H10	●●●○	\$299.99 direct	8.1	38mm to 380 mm	10X	3	none
D-SLR							
Canon EOS Digital Rebel XTi	●●●●	\$599 list (body only)	10.2	*28mm-to-135mm; 44.8mm-to-216mm	4.8X	2.5	optical
Nikon D300	●●●●	\$1,799.95 list (body only)	12.3	*27mm to 300mm	11X	3	optical
Nikon D60	●●●○	\$749.95 list (w/lens)	10.2	*27mm to 82.5mm	3X	2.5	optical
Olympus E-3	●●●○	\$1,699 list (body only)	10.1	*24mm-120mm	5X	2.5	optical
Sony Alpha DSLR-A350	●●●○	\$699.99 direct (body only)	10.2	*27mm to 105mm; 82.5mm to 300mm	3.8X; 3.6X	2.7	optical

RED denotes Editors' Choice. *D-SLR lenses listed are those used in testing. Multiple lens kits are available for each model.



SUPERZOOM
Olympus SP-570 UZ
\$499.99 list
●●●●○



SUPERZOOM
Panasonic Lumix DMC-FZ18
\$349.95 list
●●●●○



of its predecessor (the s8000fd) and has the same 4.7mm to 84.2mm lens (35mm equivalent: 27mm-to-486mm). But it adds a super macro mode that lets you get as close to your subject as 0.4 inch. Our current Editors' Choice, the **Panasonic Lumix DMC-FZ18**, offers a 28mm wide-angle lens and Intelligent Auto Mode, which includes face detection, automatic scene selection, intelligent ISO, and continuous autofocus. Its high-angle LCD mode optimizes the display and increases the viewing angle so that you can still see the image on the display when you're holding the camera above your head to take a shot.

Finally, the \$300 **Sony Cyber-shot DSC-H10** lets you preview ISO settings on its large 3-inch screen. Its zoom tops out at 10X, but it offers many features, including an effective sports-shooting scene mode for capturing clear, fast-action shots.

flashes, and much more. All of these elements give you ultimate flexibility in shooting, but also make finding the right combo of camera, lens, and so on even more complicated. Some models, such as the **Nikon D60**, integrate a pop-up flash, but most have just a hot shoe so that you can install your own flash. (The D60 includes a hot shoe as well as the integrated flash.) Be sure to do thorough research before making a commitment to a D-SLR—these cams will run you around \$800 on the low end and into the thousands at the top of the price spectrum, and that doesn't always include lenses or other accessories.

Check out the camera's manual settings, which include white balance, aperture, and shutter speed. See what type of image stabilization the camera has, and whether the lens has a built-in dust reduction system. If

you want the utmost in image-editing flexibility, make sure your camera can shoot in RAW mode. When you edit a RAW file, you're working with an uncompressed, unprocessed image, so you can fully customize settings, including white balance, sharpening, and tone, during editing. RAW mode is most useful when you're shooting in tricky lighting situations or when you plan to create poster-size prints.

Our current Editors' Choice D-SLR, the **Nikon D300**, delivers outstanding image quality, along with a 51-point autofocus system and two live-view modes, allowing you to preview shots on its 3-inch LCD. The display has a wide 170-degree viewing angle, which makes it easy to capture difficult shots. Like all Nikon cameras, the D300 has an excellent, easy-to-understand menu system, as well as a number of in-

D-SLRs

If you're looking for lightning-fast performance and total control over your shots, you need a D-SLR. These professional-level shooters give you full manual control and the option to interchange lenses. What you don't always get is the ability to capture video or a live-view LCD. The latter offers the ability to set up and preview shots on the camera's display in addition to the viewfinder and is becoming more common in D-SLRs. All but one of the models highlighted below integrate this feature.

The first thing you should know is that a D-SLR camera, unlike a compact or a superzoom, is part of a system, which includes interchangeable lenses, external



D-SLR
Canon EOS Digital Rebel XTi
\$599 list (body only)
●●●●○

Do you really want Fred to come by and "fix" your computer?

We didn't think so either.

Free Trial

Optimize & Speed Up your PC with NetDuster in just Minutes!

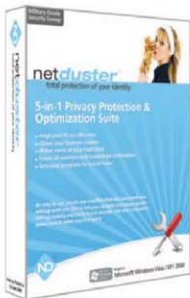
Is your PC crawling nowadays? With NetDuster, it's like having a live-in geek dedicated to helping you achieve a faster, efficient and more robust PC experience. NetDuster's simple one-click solutions, are all set to automatically, scan, clean and optimize PC performance in just Minutes! From system settings, internet usage, and disk clutter, let NetDuster keep your system running at optimal performance.

Clean Your System and Boost Performance

Boost system performance by cleaning out all missing, unwanted, obsolete and corrupt registry entries automatically with our Registry Cleaner.

Repair Your PC and Keep It Tuned

Dramatically improve your desktop experience by repairing all registry problems and minimizing application seizures and crashes.



Works with



Come visit us and try out the demo version at trynetduster.com

camera editing options. There's also an effective dust-reduction system, which keeps the lens clean and shots flawless.

The **Canon EOS Digital Rebel XTi** is an older Editors' Choice winner that's still widely available and is nicely priced. It's a 10MPD-SLR that delivers excellent images and boasts plenty of options—such as the ability to shoot in complete auto mode, scene modes, or full manual modes. And there's room to grow, because the Rebel XTi offers a huge arsenal of accessories. Canon's latest Rebel is the 12.2MP **XSi**, which has a large 3-inch LCD, and several new advanced features, including a range of external flash settings and a higher-magnification viewfinder. (We were still testing the XSi at the time of this writing.)

The **Olympus E-3** sets itself apart with an articulating LCD, which lets you preview and capture shots from every angle. It also has two in-camera image-stabilization

settings and excels at low-light shooting. With exceptional image quality in nearly every environment, it's a good alternative to the Nikon D300, for \$100 less.

The least expensive of the bunch, the **Sony Alpha DSLR-A350**, is also the least advanced, though it does offer a number of excellent features in addition to top-notch image quality. You get a tilting LCD, in-camera mechanical image stabilization, and a fast autofocus. It also has an innovative live-view system, something the Nikon D60 lacks. But the D60 has a number of innovative features, including a Stop Motion Movie mode that creates video out of a series of JPEGs. Also, nearly all of the settings, including aperture and shutter speed, can be previewed before you hit the shutter button. Using a graphic representation, the camera's LCD shows, for example, the lens opening and closing as you increase or decrease the f-stop. If the shot

you wish to take is too dark, the camera will tell you. Like the D300, the D60 has a number of built-in editing options.

Whether you're shopping for a compact, a superzoom, or a D-SLR, remember to do your research first, and then try out as many models in the store as you can. Browse the menus and settings and practice using the buttons and dials. Check for on-board help guides and tips if you're a novice, and manual controls (shutter speed, aperture, and so on) if you're a more experienced photographer. Also, bring your own memory card to the store so you can snap some shots, even some video, and check out the files later at home. There's no substitute for your own hands-on testing. □

MORE ON THE WEB For full reviews of these digital cameras and more, visit go.pcmag.com/digitalcameras.

Eight Cool Accessories to Pump Up Your Photo-Taking



Gorillapod

Original, \$24.95 direct; SLR, \$44.95; SLR-Zooms, \$54.95
www.jobycam.com

What if you're at the Grand Canyon and you want a picture of you, your honey, and the big hole, but there's no one around to take the shot? The Gorillapod, a lightweight and versatile tripod, connects to your tripod mount and can clamp onto tree branches, perch on all manner of uneven surfaces, or stand up like a regular old tripod, freeing your hands so you can hop into the shot. More than 24 flexible leg joints bend and rotate a full 360 degrees. And it's available in three sizes for compacts, SLRs, and SLRs with large zoom lenses.

Always-On Wrap-Up Camera Case

\$19.95, \$24.95 direct

www.go-alwayson.com

Carry your camera in style, and keep it protected too. Available in two sizes to fit most compact cameras, the slim case screws into the tripod mount so it's always securely attached, and it opens easily when you need to take a shot.

D-SLR Lens Filters

Prices vary

www.cameralenses.com

Protect your D-SLR's lens, improve contrast, enhance colors, or create cool effects such as sepia tones in your shots. Relatively inexpensive, these filters will give your shots some flair and even shield your lens from the elements.

Merax Photo Finder GPS

\$149.99 list

www.merax.com

So you've just returned home from vacation and have uploaded hundreds of photos to your PC, but after visiting so many places you find they all start to look the same, and you don't know exactly where many of the shots were taken. This geotagging gizmo tracks your location using GPS to match each picture with a place.

Polaroid PoGo Instant Mobile Printer

\$150 street

www.polaroid.com

Bring Polaroid's innovative instant-print technology to your digital camera with the company's Mobile Printer. The pocketable gadget uses no ink but prints 2-by-3-inch sticky-back photos from PictBridge-equipped cameras and over Bluetooth connections.

Sony DPF-V900 9-inch Digital Photo Frame

\$250 list

www.sonystyle.com

This slick-looking, simple-to-use digital photo frame is one of the best we've seen. Slots on the back accept most memory card formats, and there's support for Bluetooth and HDMI, too. Image quality, simplicity, and aesthetics are top-notch.



Eye-Fi Share

\$99.99 list

www.eyefi.com

This 2GB SD card gives your digital camera wireless capability. The card will automatically upload your photos (in full resolution) from your camera to your PC or Mac and/or to a number of popular photo sharing sites whenever you're in range of a home Wi-Fi network.

Kingston MobileLite 9-in-1 Reader

\$10 street

www.kingston.com

Never worry about memory card compatibility again with this tiny reader that accepts virtually every type of card and makes it a snap to transfer photos to your PC or mobile device, no matter what type of media it's stored on. —MKM

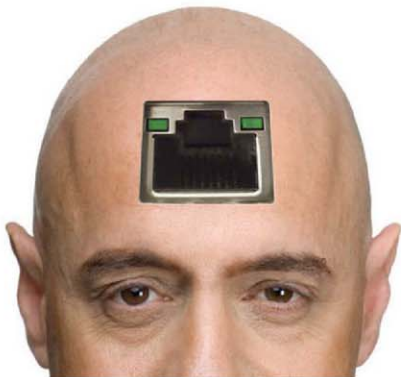


Their computer.
Your brain.

GoToAssist Express lets you view and control your customer's computer online, so you can use your expertise to fix the problem yourself. Resolve the issue, keep your customer satisfied and move on to the next task. Support smarter with GoToAssist Express.

Try it free for 30 days at gotoassist.com/pc.

GoToAssist®
EXPRESS



Solutions

PROBLEMS SOLVED THIS ISSUE

105 Ask The Experts

- Identify hard drive type
- Install an old printer in Vista
- Create a checksum in Excel
- Maximize Windows Explorer
- Enter dates in Excel

108 Office

- Shrink Word documents to fit
- Calculate in Word tables
- Use mail merging for e-mail
- Compare two Word documents
- Inspect Word documents
- Use Word to translate text
- Create fancy equations in Word
- Use Word's Math AutoCorrect

110 Security

- Protect your PC from bots

112 Tech Tips

- Scroll two places in one Word doc
- Use only fresh printer ink
- Get the most out of AutoText
- Blend colors in Excel 2003 and 2007
- Restart Windows Update
- Silence your ringtone quickly

Sending E-Mail in a Spam-Hysterical World

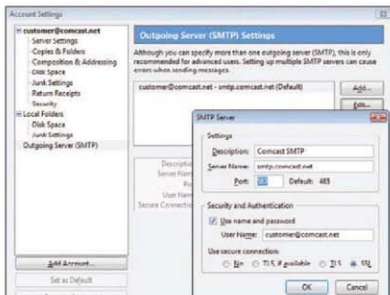
The classic spam stream of porn and Nigerian scams has grown into a torrent of nonsensical missives laced with malware. Here's why this spells trouble for your outgoing messages. *By David A. Karp*

You're not the only one who gets cranky just thinking about spam. It turns out your Internet provider does, too. Spam costs ISPs money and clogs their servers, and the problem is just getting worse.

What was once a manageable stream of pornographic come-ons, baldness cures, and laughable stock tips has evolved into a barrage of nonsensical detritus laced with spyware and malware. Odds are your ISP isn't taking it lying down, and that can spell trouble for your outgoing mail.

For example, in early 2008, AT&T impetuously started blocking all e-mail from any IP address identified as a source of even a single spam message. Never mind that the supposed spam in question could have been a rejected message that originated from AT&T's network in the first place. As a result, thousands of legitimate messages were returned to their senders (or simply thrown out), and the intended recipients were none the wiser.

But the antispam offensive was not confined to outsiders. In March and May 2008, respectively, many Comcast Cable



IN MOZILLA THUNDERBIRD To configure your SMTP settings, open the *Tools* menu and select *Account Settings*. Select *Outgoing Server (SMTP)* from the list and click *Edit*. For help getting the right settings for your ISP, see kb.mozillazine.org/Creating_accounts_in_Thunderbird_for_popular_email_providers.

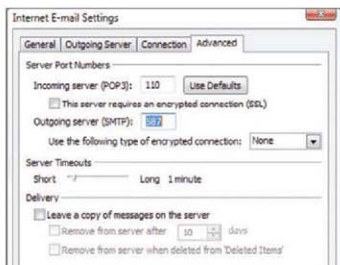
and AT&T DSL customers mysteriously lost the ability to send e-mail. The cause? Both companies took steps to eliminate unauthorized e-mail sent from within their borders, causing confusion and frustration among their own customers.

As the Internet's gatekeepers continue their efforts to block spam, sending legiti-

mate e-mail gets more difficult. How do you keep up with the changes and ensure that your messages still get through?

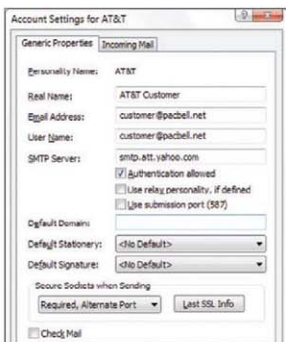
Authentication Vacation

Every Internet provider offers an *SMTP (Simple Mail Transfer Protocol)* service, responsible for taking outgoing e-mail



IN MICROSOFT OUTLOOK OR WINDOWS MAIL

Open the **Tools** menu and select **Accounts**. Highlight your e-mail account in the list, click **Properties**, and then choose the **Advanced** tab to configure your SMTP authentication options.



IN EUDORA Open the **Tools** menu and select **Personalities**. Right-click in an empty area of the **Personalities** window, select **New**, and then choose the **Skip** directly to **advanced account setup** option. Then on the **Account Settings** page (shown here), enter the settings required by your ISP and click **OK**. Finally, go to **Tools | Options**, choose the **Sending Mail** category, and then, from the SMTP Relay Personality list, choose the SMTP personality you just created.

from your outbox and starting it on its journey to your mother in Hackensack. But more than likely your ISP imposes restrictions to prevent noncustomers from using its service to send mail, and a strengthening of those restrictions was what caused the aforementioned problems at Comcast in March.

Being connected to a Comcast Internet connection, for example, used to be sufficient proof that you were a Comcast customer. But now most ISPs (including Comcast) require **authentication**, which means that every outgoing message must be accompanied by your username and password. If you get a **530 Authentication Required** or a **553 Relaying Denied** error whenever you try to send mail, it means your ISP isn't convinced you're one of its customers.

If you're a Comcast customer, you need to change your e-mail client's SMTP settings to send mail. (No change is necessary if you use Web-based e-mail.) First, set the SMTP server to **smtp.comcast.net** and the SMTP port to **587**, which permits authentication over **SSL** (*Secure Sockets Layer*). Next, type your Comcast e-mail address into the username field, and your Comcast password into the password field. The settings for other ISPs will be similar; visit the support pages of yours for specifics.

AT&T, on the other hand, decided to get out of the e-mail business and disconnect its SMTP server altogether. If you're in need of SMTP, you must now turn to Yahoo! and complete a convoluted sequence of steps to register your e-mail addresses with Yahoo! Mail. (Visit

annoyances.org/exec/show/eudora for the complete procedure, even if you don't use Eudora.) Next, when setting up your e-mail client, set the SMTP server to **smtp.att.yahoo.com** and the SMTP port to **465**. Your username is your AT&T e-mail address (not your Yahoo! address), and your password is the one that works (and can be reset) at <https://usercentral.att.com/rwp/myhome/profilemanagement>.

Authentication can be a hassle to get working, but the good news is that once it's set up, you can send e-mail through your ISP's SMTP server whether you're home or on the road.

The Unruly Spam Filter

In 2007, Google paid \$625 million for Postini, a spam-filtering service for ISPs. But a year later, Google's Gmail service still needs a **Report Spam** button. If nothing else, this should teach us that spam filters are a mixed bag: Bad mail still gets through, and good mail still gets thrown out.

Spam filters focus primarily on two aspects of e-mails to flag suspected spam: content and originating IP address. Obviously, you control the content of your messages (or at least you should), but if your message is sent from an SMTP server on a **DNSBL** (*DNS Block List*), it might still end up in the trash regardless of its contents.

There are many DNSBLs, some of which are well maintained and effective, and some of which are recklessly built and do more harm than good. The aforementioned AT&T debacle was a result of the latter. But it's clear that some ISPs and even some individual users are comfort-

able losing a few good messages if they also get less junk, which usually means employing as many block lists as possible. If you don't want your own messages to fall victim to this virtual clear-cutting, you need to be aware of your SMTP server's standing on a variety of lists, such as spamhaus.org, cbl.abuseat.org, spamcop.net, njabl.org, and apews.org. (These are particularly important resources if your e-mail address is associated with your own, private domain name—and thus often a private server—as opposed to attglobal.net or comcast.net.)

If you receive a mailer-daemon message indicating that your message was rejected because of a DNSBL, follow the included link for help in removing your server from the block list, as well as learning what steps you (or your administrator) can take to keep it from reappearing.

If you find that your messages are being blocked, and you don't want to wait for your server to be removed from a DNSBL (a process that can take days, if it happens at all), you can try sending your message from a different account (and thus a different server). For instance, if messages sent through Microsoft Outlook aren't getting through, set up a free Gmail or Yahoo! Mail account and try sending your message from there. And eBay users take note: The My Messages page is the best way to contact your buyers and sellers, even if their spam filters have run amok.

Of course, given that the e-mail system has gone largely unchanged since 1965, perhaps we should be grateful that it works at all. □

Ask the Experts

Identifying Hard Drive Type

Q My old (circa 1999) Dell laptop finally died. I have pulled out the hard drive and would like to get all of the files off it. I know there are many different connectors that can help me do this; I don't know which one I need to buy. And how do I figure out what type of hard drive this is—SATA, IDE, something else?

—Bill Driscoll

A Actually, there are only two types of connectors prevalent in laptop hard drives: the older parallel ATA (PATA) and the more recent serial ATA (SATA). Your old Dell almost certainly uses a PATA connection, which is also commonly referred to

as IDE. However, the laptop's connectors are more compact than those used in PATA desktop drives.

Regardless of your drive type, the easiest way to get the data from the drive is with an IDE/SATA-to-USB adapter, which allows you to attach any type of drive—desktop IDE, mobile IDE or SATA—to a USB port. All you need to do is connect the drive to your new PC's USB port and copy the data.—Loyd Case

Install an Ancient Printer in Vista

Q I have a much-loved NEC SuperScript 1450 printer that worked perfectly well under Windows 2000 Professional. Recently, I built a modified "Bang for the Buck" box,

with Vista Home Premium as the OS. When I tried to install my printer, I received a message that Vista had found driver software, but that the PCL6 driver was not compatible with a policy enabled on my computer that blocks NT 4.0 drivers. I've been all over my Vista settings in vain looking for the place to change that setting. Can you help me?—Craig McKay

A Okay, since a policy is giving you trouble, let's just change the policy. Click Start | Run and enter gpedit.msc to launch the Group Policy Object Editor. Under Computer Configuration, double-click Administrative Templates and select Printers. In the right-hand pane, find the policy named Disallow installation of

Futura Laptop Desk - Changing the Way You Use Your Notebook for Work, Home, and Travel



Improves Ergonomics



Completely Spans the Lap



Portable and Lightweight



Typing Stand

- Reduces notebook heat cooling your lap
- Dual purpose lapdesk and desktop stand
- Lightweight and compact size
- Folds up for easy storage
- Rubberized surface keeps notebook from sliding

Order today!

Begin Receiving the Ergonomic Benefit

LAPWORKS

Visit us at www.lapworks4pcmag.com or call 877-527-9675

number	A	B	C	D	E	F	G	H	I	J	K
	CHECKSUM	Customer	Jan	Feb	Mar	Apr	May	June	TOTAL		
1	181020	085	\$2,415.00	\$7,335.00	\$9,530.00	\$2,302.00	\$8,604.00	\$4,799.00	\$34,985.00		
2		Bea Beta	\$7,462.00	\$3,399.00	\$5,231.00	\$3,049.00	\$4,137.00	\$4,163.00	\$27,441.00		
3		George Gamow	\$6,154.00	\$7,663.00	\$6,418.00	\$6,172.00	\$1,920.00	\$2,185.00	\$29,512.00		
4		Deb Delta	\$6,037.00	\$6,300.00	\$4,591.00	\$1,300.00	\$295.00	\$4,300.00	\$25,060.00		
5		Ed Epsilon	\$3,680.00	\$5,452.00	\$5,423.00	\$4,403.00	\$2,940.00	\$5,813.00	\$27,711.00		
6		Zeb Zeta	\$3,575.00	\$8,931.00	\$1,792.00	\$5,920.00	\$8,041.00	\$6,252.00	\$34,511.00		
7		TOTAL	\$32,123.00	\$39,148.00	\$32,965.00	\$22,234.00	\$25,938.00	\$27,592.00			
8											
9											
10		State Tax		8.50%							
11		Minimum bid	\$1,000								
12											
13											
14											
15											
16											

COMPARE SPREADSHEET VERSIONS By creating a checksum, you can quickly see whether the printout you have is exactly the same as your most recent digital version.

printers using kernel-mode drivers and double-click it. Set its status to Disabled. By disabling the disallow policy, you enable the use of kernel-mode drivers—twisted! Click OK, close Group Policy Editor, and reboot. The downside of this setting is that a badly written kernel-mode driver can crash your system; that's what the policy was meant to prevent.—Neil J. Rubenking

Vista Folders Always Start at 800-by-600

Q I always appreciate your tips. I'm hoping perhaps you can help me with an especially vexing problem I've been experiencing. In Vista, the default size of the Explorer windows is a measly 800-by-600. My monitor is 1,900-by-1,200! In Windows XP you could change the size of Explorer by resizing, then holding down Ctrl or Shift while you closed the window; the setting would stick and apply to all Explorer windows. In Vista, that trick works for one given folder opened from a specific location, but only for that folder. In other words, I can apply the setting to the Music folder, but it affects the Music folder only—no other folders. And if I access the Music folder via a method other than via the Start menu, the whole thing gets reset. Needless to say, this is really irritating. I just want every window to be the same size, and I want that size to be larger than the default. I've searched but haven't come up with any solutions. Is there any Registry tweak, script, or application I can use to achieve the effect I'm looking for?—Sam Ruedinger

A To get an answer for this one I had to go straight to the source: Microsoft. The good news is, they responded quickly. The

bad news? There is no way to change the default. Once you have opened a folder and sized Windows Explorer the way you want, it will remember the size specifically for that folder. But the first time you open a given folder it will always be 800-by-600.

You can't change the default size, then. But perhaps you'd be satisfied to have Windows Explorer launch maximized. Right-click an ordinary shortcut to Windows Explorer or to a specific folder and choose *Properties*. There's a drop-down item labeled *Run* whose default value is *Normal Window*. Change this to *Maximized* and click OK. Not every program responds to this shortcut change, but Windows Explorer pays attention. Launch the shortcut and it will open maximized.

That technique breaks down if the shortcut is a special one like *Computer*, *Network*, or *Documents*. But never fear; you can still prevail. Drag the shortcut in question onto the desktop (even if it's already on the desktop) using the right-

hand mouse button. When you release the button, choose *Create Shortcuts Here*. You now have an ordinary shortcut that opens the same location, and you can set this shortcut to open maximized.—NJR

Checksum for a Spreadsheet

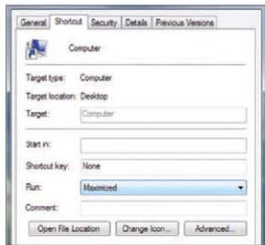
Q I would like to create a cell in Excel that does the equivalent of a "hash" or sum of the entire active workbook. My goal is to be able to quickly check whether a printout of the spreadsheet I've made is the same version as the most current electronic one. If anything in the workbook changes, a change in the "hash" would reveal it. Can this be done?—David H. Allingham

A This isn't a function that's built into Excel, but you could work up a checksum for all numbers without much trouble.

Press Ctrl+G for the *Go To* dialog. Click the *Special* button, then check the box for *Constants*. Uncheck the boxes for *Text*, *Logicals*, and *Errors*, leaving only *Numbers* checked, then click OK. Click the current cell indicator at the left of the formula bar. Type *numbers* and press Enter.

You have now created a named range called "numbers" that consists specifically of all cells containing numeric constants. A cell with the formula =SUM(numbers) will serve as a checksum to compare the electronic worksheet with a printed version. If the electronic worksheet has been changed, chances are good that the checksum won't match anymore. (It isn't perfect: If one figure went up \$100 and another went down \$100, the checksum would still match.)

There's no easy way to do something similar for text-based data. You could,



MAXIMIZE WINDOWS EXPLORER You can't change the 800-by-600 default for all Vista folders, but you can set Windows Explorer to launch in a maximized window.

however, create a kind of checksum for a single rectangular block of text-filled cells using an array formula. Enter something like this: `=SUM(LEN(B2:B70))+SUM(CODE(B2:B70))`. Instead of pressing the Enter key, press Ctrl-Shift-Enter. This tells Excel to apply the LEN function to every cell in the range and sum up the results, and also to take the ANSI code of the first letter in each cell in the range and sum those.

The resulting checksum will change if the text in any of the "protected" cells changes length or if any of the first letters changes.—NJR

Can't Enter Dates in Excel

Q I have several spreadsheets that were originally developed years ago in earlier versions of Excel. Some may even be originally from Lotus 1-2-3. I'm now using Office 2007, and that upgrade has not improved upon my ability to get one of the older date functions to resolve properly. The problem is that no matter what date I insert, or how I try to format it using canned or custom for-

matting, the date "appears" as 1/01/1900 (even though that's not what is actually in the cell). Furthermore, subtracting one such date from another yields only zero instead of the number of days between the two dates.

I work around the problem (which does not happen in a new "virgin" worksheet) by using the Date function (for example, =DATE(2008, 5, 13)), but this is cumbersome compared with just entering the date. Any suggestions, short of reinventing each such spreadsheet on a new, uncontaminated worksheet?—Bob Brown

A Okay, by observation the problem is that Excel is treating an expression like 5/13/2008 as a division calculation, one that could also be expressed as $= (5/13)/2008$. The resulting value is minuscule, roughly 0.000191542. Excel dates are stored as the number of days since the arbitrary starting date 1/01/1900. Since this value is very close to zero, when formatted as a date it displays as 1/01/1900. Another vis-

ible problem is that when you type a date like 5/13/2008, Excel inserts an equal sign before it, thereby converting it into that division problem.

Clearly, Excel is actively changing the data you've entered into something you don't want. It took me a while to trace the clues, but in the end I discovered the source of your problem. Click the Office Orb at top left, click **Excel Options**, click **Advanced**, and scroll all the way to the bottom. The **Transition formula evaluation** and **Transition formula entry options**, designed to help users migrating from Lotus 1-2-3, are enabled for your problem worksheets. Uncheck those two options and click OK. You can now enter dates without having them morph into division problems.—NJR

NEED ANSWERS? PC Magazine software expert Neil J. Rubenking and ExtremeTech.com editor Loyd Case tackle readers' questions in each issue. Send your toughest to askneil@ziffdavis.com or askloyd@ziffdavis.com.

Times are tough Money is tight
Can you afford to replace your notebook computer?
Make the one you've got last longer
Fact: Heat is your notebook's worst enemy

Cool it with a notebook desk or stand from LapWorks
Products proven to
reduce heat build-up by 15% to 20%

Fact: Like an automobile engine
the cooler your notebook runs the longer it lasts

To see our full line of notebook cooling (and ergonomic) desks and stands
Visit us at www.lapworks4pcmag.com or call us toll free at 877-527-9675

8 Word Tools You May Not Know About

Save time and energy by using these easy features in your Word documents. *By Neil J. Rubenking*

Microsoft Word is full of tools that can help you work faster and smarter—but only if you know about them. Here's a list to remind you of just what Word can do for you. You're probably familiar with some of these. And your neighbor probably knows a few, too, but not the same few. Time to learn something new!

SHRINK DOCUMENT BY ONE PAGE. A document whose last page is mostly blank is a waste of printer paper, especially if you have to make a lot of copies. Your letters and mailings will also look more professional if they fill the pages nicely. If *Print Preview* reveals a skimpy last page, click the *Shrink to Fit* (Word 2003) or *Shrink One Page* button (Word 2007). Word will tweak the fonts in the document to make it a page smaller. Don't like the results? Just press Ctrl-Z to Undo.

CALCULATE IN TABLES. Sure, you can embed an Excel worksheet in a Word document, but if you just need a few simple calculations, you can use Word's own math skills to do the job. Select a cell at the bottom of a column and click *Formula* on the *Table Tools Layout* ribbon (Word 2007), or select *Formula* from the *Table* menu (Word 2003). Word will suggest =SUM(ABOVE), but you can select among over a dozen functions. Besides choosing ABOVE, BELOW, LEFT, or RIGHT to work with all cells in the specified direction, you can reference individual cells and ranges as you do in Excel—for example, =AVERAGE(A1:C3).

MERGE TO E-MAIL. Mail-merging to letters and envelopes is too-too 1990s, but you may still need to send a common message to a group of correspondents. That's no problem, since the familiar mail-merge feature in Word can also send e-mail messages. In Word 2007, complete your letter, click *Finish & Merge* in the ribbon and choose *Send E-mail Messages* from the menu. In Word 2003 select *E-mail messages* at the very first step of the *Mail Merge* wizard. Either way you'll be prompted for a subject (the same for every message) and for a data field that holds e-mail addresses of the recipients.

COMPARE TWO DOCUMENTS. Your newest client just returned a revised ver-



CLEAN UP YOUR FILE

Before sending your file to others, inspect it to make sure all of your tracked changes and hidden text are deleted.

sion of a contract document file but didn't mark his revisions. Is he trying to hoodwink you with sneaky changes? Rather than ruin your eyes poring over the old and new documents, have Word find the differences. In Word 2003 open the old document, choose *Compare and Merge Documents* from the *Tools* menu, and select the new document. In Word 2007 choose *Compare* | *Compare* from the *Review* ribbon and select both the old and the new document.

DOCUMENT INSPECTOR. Your Word 2007 documents may contain a lot more information than you realize—tracked changes, comments, hidden text, private properties, and more. Distributing a document with this kind of data present can be embarrassing. To make sure you're not revealing too much in a Word 2007 document, click the *Office* button at the top left, point to *Prepare*, and click *Inspect Document* in the resulting menu. Word 2003 has no precise equivalent, but you can get some benefit using the *Security* tab of the *Options* dialog. Check the boxes "Remove personal information from file properties on save" and "Warn before printing, saving, or sending a file that contains tracked changes or comments."

BUILT-IN TRANSLATOR. The *Research* panel in both Word 2007 and Word 2003 includes an option to translate the selected text or the entire document between

various languages. It's more useful when you're trying to puzzle out what a foreign-language document means than when you want to communicate your own thoughts with those who don't speak English. To see why, translate a few sentences from English to another language and then back to English.

CREATE FANCY EQUATIONS. Sure, you can write "the electric field equals one over the electrical conductivity times the electric current density," but $E = \frac{1}{\sigma} J$ is a lot more compact. To insert an equation into Word 2007 choose *Equation* | *Insert New Equation* from the *Insert* ribbon and use the tools on the *Equation Design* toolbar that appears. In Word 2003, it's a bit more awkward. Select *Insert* | *Object* from the menu, choose *Microsoft Equation 3.0* and click *OK*, then use the *Equation* toolbar that appears.

USE MATH AUTOCORRECT. (Word 2007 only.) All of those fancy math symbols can be available even outside the *Equation Design* toolbar. Just click the *Office* button at the top left, click the *Word Options* button, select *Proofing*, click *AutoCorrect Options*, and check the box "Use Math AutoCorrect rules outside of math regions." Now you can type \int for an integral sign (f) or even type /quadratic to insert the entire quadratic equation $x = (-b \pm \sqrt{b^2 - 4ac}) / 2a$.

systor



Duplication Solutions Made Easy

We bring the best product reliability with the latest duplication technology to the demands of our consumers.



Disc
Publisher



Tower CD DVD Duplicator
for •Blu-Ray
•CD+DVD
•CD+G Karaoke
•LightScribe
Burn "on the fly".
Up to 300
copies in minutes.
No PC required.



Disc Printer
Direct print to
CD or DVD.
No more
stickers.
No more
labels.



CD DVD Auto Duplicator
Up to 1000 disc
capacity.
Mass production
at your finger
tips.



CD DVD Wrapper
No heatgun.
No melting
plastic.
Just a
professional
CD/DVD
wrap.



USB Drive Duplicator
Copy up to
11 copies
synchronously.
Perfect for
mass
marketing
promotions.



SD Duplicator
Copy up to
11 copies
synchronously.
Mass duplicate
images and
pictures.



Multimedia Duplicator
Back up
memory
for
•MS •CF •SD
•MMC
to CD or DVD



Hard Drive Duplicator
Available in
EIDE and SATA.
Clone multiple
hard drives with
reliability and
speed.



Systor Systems, Inc.

Toll Free 866-582-9560

www.esystor.com/pcmag

**Resellers
Welcome!**

There's a Bot in Your PC

Aiding, and aided by, the rise of blended threats around the world, botnets are digging in—and using your network as a base of operations. *By Matthew D. Sarrel*

As we discussed in our September issue, blended threats are attacks that use a combination of methods—through e-mail or links from legitimate Web sites—to entice you to unknowingly download malware onto your machine.

Once you've taken the bait, chances are you could have a bot in your PC and are now contributing to the problem of spreading malware. Actually, not all bots are bad; a bot is simply a program that runs automated tasks on the Internet. But obviously, the ones we are concerned with are the nasty kind—those planted on computers to do a whole bunch of dirty deeds, such as performing click fraud, sending spam, harvesting usernames and passwords, launching distributed denial-of-service (DDoS) attacks, and spreading other viruses and worms. *Botnets*, collections of bots under a single manager (or *herder*), have become a serious threat to Internet security.

Eleven percent of the world's computers are part of at least a single botnet, and 23 percent of home computers that are already running anti-malware software are infected, according to recent research by Panda Security. How powerful can botnets be? The top ones (Srizbi, Storm, Bobax, and Ozdo/Mega-D) are capable of sending more than 100 billion spam e-mails per day, according to estimates by SecureWorks.



The way bots most commonly work is to rely on IRC for a command-and-control infrastructure (also known as a C&C). The bot running on an infected computer will use a specific channel on a public IRC server to send commands and receive information, such as usernames and passwords for banking sites, from the bot running on an infected computer. Very often, a bot will have some worm functionality: It will infect a PC and then begin scanning the local area network for other vulnerable computers. Bots can be very difficult to find and shut down because they don't always have to be active; they can lie dormant until commanded by the botnet herder to execute commands.

Typically, the herder rents time on his botnet, charges customers a set amount for a quantity of spam, or sells the usernames and passwords the bot harvested.

As with so many other security risks, prevention is the best medicine. If you keep your system and anti-malware (engine and signatures) updated, run a software firewall, know which processes are running locally, and understand how those processes are accessing the network, then you can establish a baseline of normal activity. When things start to get screwy in mysterious ways, you can compare the baseline to what the system is currently doing and dig in to uncover any changes. □

BOT PLOT? Legitimate, highly trafficked sites such as Sony's U.S. PlayStation 3 site are often hacked with malicious code that lures users—through fake antivirus messages—to download bots and other malware onto their PCs.

THINK YOU HAVE A BOT? RUN THROUGH THIS CHECKLIST

- 1. Use anti-malware.** If you aren't running it, get it, now. Two free options: Download and run the personal version (free-antivirus.eyeye.com) of eEye Blink, or try Trend Micro's online scan service (housecall.trendmicro.com).
- 2. Download HijackThis from Trend Micro** (www.trendsecure.com). Run it, save a log, and post the log at one of the many sites that support HijackThis, such as spywarewarrior.com, bleepingcomputer.com, and temer.com. Within a day, a volunteer expert will give you one-on-one advice on cleaning up any infections.
- 3. Check your system firewall's logs** to see whether any applications have recently been approved to send or receive network traffic. Clear all your firewall rules and re-create them. This will inconvenience you for a while, but for a very good cause: It will tell you every application that tries to access the network.
- 4. Check your HOSTS file, found in C:\Windows\System32\Drivers\etc.** Many bots rewrite this file to trick your PC into connecting to an incorrect and unauthorized IP address for a server. Typically the only line in this file will be 127.0.0.1 local host, although there may be some additional, inactive lines; these will be preceded by a #, indicating that they're to be ignored by the system. If you find other lines, make a backup copy of the HOSTS file (just in case), then delete the suspect lines and save the file.
- 5. Look at all processes running locally** using Windows Task Manager or SysInternal's Process Explorer (www.microsoft.com/technet/sysinternals/Utilities/ProcessExplorer.mspx). Sort by resources used. If any of the top ten consumers is unfamiliar, it could be a bot. Or a legit Windows software component. Bit9's FileAdvisor (www.bit9.com/products/fileadvisor.php) will help you figure it out.—MDS

With Spector 360, it might as well be stamped on their forehead!

I pass company secrets via the web

I surf x-rated sites from behind my cubicle walls

I shop online all afternoon from work

You Suspect It's Happening. Now Here's the Proof!

Spector 360 is the world's first monitoring solution that makes it easy to detect inappropriate employee behavior. At the touch of a button, you will see ALL PC & Internet activity for your entire company and find out which employees are working, playing, doing their job efficiently or putting your business at risk by engaging in illicit or illegal behavior.

Spector 360 Records ALL Your Employees'

- Web Sites Visited
- Chats & Instant Messages
- Keystrokes Typed
- Network Traffic
- Google Searches
- Files Saved to Removable Media

... and much more!

PLUS:

Our Powerful Screen Snapshot Recorder (a video surveillance-like recording tool with easy-to-use VCR-style playback) shows you in exact visual detail what an employee does every step of the way.



More than 50 charts and reports allow you to quickly and easily identify your top achievers, productivity wasters, and anyone engaging in inappropriate or potentially damaging conduct.

TOP 5 THINGS YOU WILL DISCOVER

- 1 Which employees spend the most time working and which spend the most time goofing off.
- 2 Which employees spend the most time surfing web sites and see EXACTLY what they do on them.
- 3 What employees search for on Google, MSN, Yahoo and more.
- 4 Which employees are posting resumes on Monster.
- 5 Who is leaking company confidential information via chat, web mail or removable media.



**PC Magazine
Editors' Choice**

"Spector 360 is the most mature surveillance offering for business use."

June 17, 2008
Spector 360

Stamp Out Internet Abuse Today!

Visit **Spector360.com** or call **(888) 598-2788**

Spector 360

Company-Wide Employee Monitoring Software

TechTips

Useful tidbits from *PC Magazine* editorial staff, Labs analysts, and readers

MICROSOFT WORD

Be in Two Places at Once

Ever get frustrated moving from one section of a document to another, then back to compare, then back again to tweak the wording? Try this: With the file open, press Ctrl-Alt-S, or, in Word 2007, click on the small horizontal line above the Ruler toggle (see the screenshot). A line will appear, bisecting the screen. Above and below, you'll see the active document; you can scroll in each section independently to edit in different areas while viewing others. You can even change the view—for example, from Print Layout to Draft.

The dividing line can be moved up and down on the screen, and you can get rid of it by clicking the same button you used to activate it, by pressing Ctrl-Alt-S again, or by grabbing it with your mouse and moving it all the way to either the top or bottom of the window. —Sarah Pike

PRINTERS

How Is Printer Ink Like Milk?

The expiration dates on ink cartridges are not a scam. Cartridges have a shelf life. Leave them sitting around too long and all sorts of things can go wrong—the colorants can come out of suspension, leading to clogged nozzles; the adhesive that holds the case together can dissolve into the ink, destroying the ink quality; and in cartridges that include the nozzles in the cartridge, the nozzles can get irretrievably clogged. As with milk, the dates are purposely conservative, so cartridges are usually good for far longer than the expiration dates indicate. That's why some people have erroneously come to the conclusion that it's a scam.

—M. David Stone

MICROSOFT OFFICE

Share Your AutoText Entries

If you use AutoText to save time retyping the same phrases or even entire messages in Microsoft Word or Outlook, you may be interested in saving even more time by transferring your AutoText settings between the programs—or to other PCs. You can't force two programs to share, but



CREATE TWO SCROLLBARS You can jump from one section to another in a file easily by bisecting the screen. You can then scroll in each section independently.

you can copy the AutoText entries from one app to the other.

With both Outlook and Word closed, simply locate your Normal.dotm and NormalEmail.dotm templates—they should be in C:\Documents and Settings\yourusername\Application Data\Microsoft\Templates. If your AutoText entries are stored in Word's template, make a copy of your NormalEmail template and rename the copy NormalEmailOld. Now copy Normal.dotm and rename it NormalEmail.dotm. If your AutoText entries reside in Outlook's template, perform the same process, reversing the files. You can also perform a variation on this task to share your AutoText entries with another user—just warn that person that your useful AutoText entries come with any other revisions you've made to your templates, such as to the default font. —SP

MICROSOFT EXCEL

Those Colors Clash

Excel 2007 handles colors differently from Excel 2003. If you have Excel 2003 worksheets with more colors than you can duplicate in an Excel 2007 theme, and you need to extend those worksheets, use the Format Painter tool or the Copy command as a workaround. The format painter lets you click on a cell that already has the color you want, then click on the cell you want to copy the color to. You can get the same result by choosing Copy in the cell you want to copy from, then moving to the cell to copy to, and choosing Paste | Paste

Special, Formats, and OK. Both approaches copy all cell-level formatting, including, for example, font color and font size. —MDS

WINDOWS XP

Can't Update?

A repair/reinstall of Windows XP can be the last resort when you've got a really persistent problem. How awful, then, if this solution causes yet another problem—a breakdown in getting updates. But it happens, because the latest Windows Update relies on a file that's not found on the XP CD, and the reinstall wipes out that file's references in the Registry.

There are two ways to fix this problem. First, you can kick-start the file by registering it with the system. Launch a Command Prompt and enter these commands:

```
net stop wuauclt
regsvr32 %windir%\system32\wuapi2.dll
net start wuauclt
```

That stops the Windows update service, registers the file with Windows, and restarts the service. Second, you can download and install a small utility called the Windows Update Agent.

Depending on how long this problem has been going on, you may have a flood of new updates to install once you've fixed it. Go to www.windowsupdate.com, click *Custom Install*, and accept all of the critical and security updates. —Neil J. Rubenking

MOBILE

That Ringtone Sucks!

Be sure you know how to silence your phone quickly, in case you forget to set it on vibrate or silence before you go into your meeting, class, restaurant, or another shared space. Usually it's as simple as hitting an exterior button, like power or volume down. Check the manual. —Joel Santo Domingo

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

The Prosumers' Choice

The highest throughput LightScribe disc publishing system.



ERP
\$2,299
PART NO. 260178

1:15 DVD/CD Tower Publisher SLS™ Independent. Intuitive. Invaluable.

The 1:15 DVD/CD Tower Publisher SLS produces throughput rates never before possible. Watch it generate 3-4 GB DVD copies or LightScribe labels printed in title mode, both at a speed of 180 discs per hour, making the 1:15 DVD/CD Tower Publisher SLS the highest capacity LightScribe disc publisher around. Standalone, requiring no computer for production, only Aleratec provides a USB fast key for direct USB access to quickly load disc publishing files to a generous 250GB HDD.



APRIL amazon.com BH CDW CITY DELL HP MICRO CENTER OFFICE DEPOT PC CONNECTION PC MALL RITE CAMERA STAPLES WAL-MART

For more information about our products, visit www.aleratec.com or call 1-866-252-5372.

ERP is Estimated Retail Price, pricing at resellers will vary. © 2005 Aleratec, Inc. All Rights Reserved. Aleratec and 1:15 DVD/CD Tower Publisher SLS are trademarks of Aleratec, Inc. All other product names are trademarks or registered trademarks of their respective companies.

Aleratec™
www.aleratec.com



HOW MUCH STORAGE DO YOU NEED?



- Aberdeen Stirling Storage Servers deliver vast and flexible expansion capabilities in a single storage server without additional controllers
- Expand up to 328TB with Aberdeen DAS and JBOD units without any performance degradation
- SAS and SATA support concurrently in same server (separate arrays)
- Four Gigabit Ethernet Ports allow network teaming
- Dual Quad-Core Intel® Xeon® Processors with up to 1600 MHz Front Side Bus
- iSCSI support with Windows® Unified Data Storage Server 2003
- Multiple available expansion slots

The Aberdeen line of expandable storage servers provide a full spectrum of scalable, maximum capacity storage solutions for data backup, media sharing storage, content creation, streaming media, nearline storage, and post-production needs. These servers feature high performance Quad-Core Intel Xeon processors and enterprise-level SATA drives providing over 800MB/s internal transfer rates, while being robust enough to provide up to 328TB of scalable storage without added controllers.

STORAGE SERVER



Expandable Storage Solution

- Dual Quad-Core Intel® Xeon® processors with up to 1600MHz FSB
- Up to 64GB 800 ECC FBDDIMM Memory
- Supports both SAS & SATA Storage Drives
- Internal OS Hard Drives Included
- RAID 0, 1, 5, 6, 10 Capable
- Redundant Power Supply
- SAS & iSCSI Expansion Ports
- Windows & Linux NAS Available
- 5-Year Warranty

3U 12TB Starting at	\$7,995
4U 16TB Starting at	\$9,995
5U 24TB Starting at	\$12,995
6U 32TB Starting at	\$17,995
8U 40TB Starting at	\$20,995

JBOD STORAGE



Add up to 128TB

- Daisy-Chain JBOD Boxes
- Storage Server RAID Array
- Redundant Power Supply
- SATA & SAS Drive Support
- 5-Year Warranty

16TB JBOD **\$7,995**

XDAS STORAGE



Add up to 160TB

- Daisy-Chain DAS Unit + JBOD Expansion Boxes
- 2U, 3U, 4U Units Available
- RAID 0, 1, 5, 6, 10 Capable
- Redundant Power Supply
- SATA & SAS Drive Support
- 5-Year Warranty

16TB DAS **\$12,995**
16TB JBOD **\$9,495**

**EXPAND
= UP TO
328TB**



Intel, Intel Logo, Intel Inside, Intel Inside Logo, Pentium, Xeon, and Xeon Inside are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. For terms and conditions, please see www.aberdeeninc.com/abpol/abterms.htm. pc057

888-453-0707
www.aberdeeninc.com/pc057



A Brave New PDF World

We created **Bluebeam PDF Revu** to be simple - easy to use, easy to learn, and easy to manage. We designed it to help you do what you do, better and faster, saving time and money. We developed innovative new features, taking usability, performance, and quality further than the rest. And, we made it customizable. From the desktop profiles to the annotations in your Tool Chest, we eliminate the need to do the same thing twice. **As you evolve, Revu evolves**, adapting to the way you work, as you work. It doesn't get any better than this. So, welcome to Bluebeam and welcome to a brave new PDF world.

- Richard Lee, President & CEO

www.bluebeamrevolution.com
or give us a call at 866.496.2140

Bluebeam PDF Revu®

A professional PDF editor for the people.



bluebeam®

© 2008 Bluebeam Software, Inc.

NEVER Pay a Monthly Phone Bill Again...

Just 19.95 a Year:

FREE Local and Long Distance (to US and Canada)

FREE Phone Number

FREE Voice Mail

FREE Caller ID

FREE Three Way Calling

FREE Directory Assistance

FREE Call Waiting & Forwarding



January 17, 2008
magicJack

*"magicJack's call quality is amazing ...
everybody should try it!"*

PC Magazine January 17th, 2008 Editors' Choice.

www.magicJack.com

Migrating to SAS Hard Drives?

OmniSAS™

Clone SATA, SCSI, IDE or SAS hard drives* with the new five-target OmniSAS Hard Drive Duplicator!



*Built-in support for SAS and SATA, IDE and SCSI drive cloning requires option

The OmniSAS is a production-grade solution that allows you to clone up to five target drives at one time. The OmniSAS allows users to clone from SAS, SATA, SCSI* or IDE drives to either SAS, SATA or IDE* drives. It's the perfect choice for migration tasks and mixed drive environments.

This high-speed device achieves cloning speeds exceeding 5GB/min, saving time and resources for all your duplicating tasks. Five to ten times faster than software-based network cloning, the OmniSAS is simple to use and is less expensive for large volume duplicating.

Logicube's focus on leading-edge duplication technology delivers future-focused, reliable solutions that meet the challenges IT departments face today and tomorrow.

To learn more, call 1-888-494-8832
or visit us at www.logicube.com

Logicube®

World's first Core 2 Quad All-in-One PC in a Keyboard.

001001011001101001101001010011010011010101010010101101010011110110010010110011010011010010



ZPC-GX31

To order your space saving ZPC-GX31™ Risk Free, call us at 888.834.4577.

SPECIFICATIONS: Intel® Core™ 2 Quad CPU | Up to 4GB DDR2/667MHz | Up to 750GB SATA HDD | 1Gb LAN
Internal Wireless LAN | For a complete list of specifications, please visit our web site at www.cybernetman.com.



© 2008 Cybernet Manufacturing, Inc. All rights reserved. The Cybernet logo is a trademark of Cybernet Manufacturing, Inc. Intel and Intel Core 2 Quad are trademarks of Intel Corporation, or its subsidiaries in the United States and other countries. Windows Vista is a trademark of Microsoft Corporation. All other registered trademarks are property of their respective owners.



You just bought a flat screen TV... now protect it with APC.



How many paychecks have gone into your state-of-the-art AV setup? Two? Three? Don't want to think about it? You've spent time and money, and you need to protect your investment.

The truth is, power fluctuations are a leading cause of AV equipment malfunction.

Unfortunately, the demands on the antiquated power grid increase daily and the threat of damage from bad power is just getting worse. Here's your solution: APC AV Power Solutions. By filtering out noise and regulating voltage, APC AV Power Solutions takes out bad power as a source of AV signal degradation. Some advanced models even offer battery backup power so you can stay in the game, regardless of grid malfunctions. Turbo-charge your home theater experience with our unbeatable engineering expertise while protecting it from the dangers of bad power.

More than 30 million customers already trust us to protect their PCs from power problems. You can trust us to protect your home theater. Go to www.apc.com for more information.

APC AV products are available at:



Available exclusively online:



*"I cannot recommend APC enough...
...they live up to their promises."*

Robert Archer, CE Pro magazine

Engineered for high-performance AV systems by APC power experts, APC AV Power Solutions will:

- Protect your equipment and presets from harmful power fluctuations
- Eliminate bad power as a source of signal degradation or equipment failure
- Prevent missed DVR recordings and corrupted multimedia server data
- Allow equipment to perform to maximum capabilities
- Prevent damage to costly projector and display lightbulbs

APC AV products are available in black or silver.

\$750,000

PROTECTION GUARANTEE

In the event the APC AV equipment fails to protect your AV equipment, we will reimburse you up to \$750,000 worth of equipment. (See website for details.)



APC AV Power Solutions for every level of protection

**AV Power Conditioners
with Battery Backup
(1000VA - 1500VA)**

Premium surge protection, isolated noise filtering, automatic voltage regulation, and battery backup for high performance home theater systems.



J Type

**AV Power Conditioners
(1000VA - 1500VA)**

Premium surge protection, isolated noise filtering, and automatic voltage regulation for high performance home theater systems.



H Type

**AV Power Filters
(2, 10, or 12 outlets with
or without a COAX splitter)**

Premium surge protection and isolated noise filtering for high performance home theater systems.



C Type



Enter to **WIN** a C2 Power Conditioner — valued at \$99.99 ERP.
Call 888-289-APCC x8037 Visit www.apc.com/promo Enter Key Code d698w

APC
Legendary Reliability™

©2008 American Power Conversion Corporation. All trademarks are owned by Schneider Electric Industries S.A.S., American Power Conversion Corporation or their affiliated companies.
e-mail: esupport@apc.com • 132 Fairgrounds Road, West Kingston, RI 02892 USA 408-6841

World's first Core 2 Quad All-in-One PC.



iOne-GX31

To order your space saving iOne-GX31™ LCD PC Risk Free, call us at 888.834.4577.

SPECIFICATIONS: 17" or 19" display | Intel® Core™ 2 Quad CPU | Up to 4GB DDR2/667MHz | Up to 750GB SATA HDD | 2x1Gb LAN | Internal Wireless LAN | Optional Touch Screen | Optional built-in Webcam | For a complete list of specifications, please visit our web site at www.cybernetman.com.



© 2008 Cybernet Manufacturing, Inc. All rights reserved. The Cybernet logo is a trademark of Cybernet Manufacturing, Inc. Intel and Intel Core 2 Quad are trademarks of Intel Corporation, or its subsidiaries in the United States and other countries. Windows Vista is a trademark of Microsoft Corporation. All other registered trademarks are property of their respective owners.



Rackmounts



Mini PCs



Rugged Keyboards

Industrial
Touchscreen

Quietly Creating Specialized Computers & Peripherals for the World

STEALTH
www.stealth.com

Toll Free# 1-800-498-1777 - Local: 905-264-9000
Stealth is an ISO 9001 manufacturer with almost two decades of service.

FAST. RELIABLE. SECURE.

Data recovery from all hard drives, all platforms...

- DOD-Level Security
- Superior, 24/7 Service
- Confidentiality Guaranteed
- Affordable, Up-front Pricing
(no hidden charges)
- High Recovery Success
- Class-100 Clean Room Lab Standards
- Patent-Pending Recovery Technology
- Complete Computer Forensic Services



ESS DATA RECOVERY LABS

www.datarecovery.com • 800.237.4200

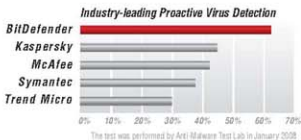
110 N. Research Drive, Edwardsville, Illinois | 1241 Quarry Lane, Pleasanton, California | 6043 Hudson Road, Woodbury, Minnesota

Jim Curtis just stopped a vicious malware attack... **between bites.**



Imagine securing your IT infrastructure, managing your security... worldwide, and still having time for lunch. Sound impossible? Not anymore! Introducing BitDefender's Security Suite for Business.

BitDefender's **Proactive Management** is both intelligent and automated—jumping into action based upon common threat scenarios customized for your company's needs. BitDefender's **Proactive Security** leads the industry in stopping zero-day threats, in their tracks.



www.bitdefender.com | 800.388.8062 Ext. 244

Are Your Most Important Assets Secure?

CyberLock[®]

Complete Access Control in Every Lock Cylinder



- Keys work during days and times you specify
- Keys cannot be duplicated
- Each opening is recorded
- Locks cannot be picked

Install
CyberLock cylinders
— without wiring —
in doors, padlocks,
and cabinets!



www.videx.com/lock51

541-758-0521 • sales@videx.com



Make your MARK with an Epilog Laser!

Systems Starting at \$7,995!

If you want to personalize it, we can help!

From creating unique projects to engraving on high-tech gadgets like cell phones and laptop cases, our laser systems provide a wide variety of capabilities.

- 25-watt laser - 16"x12" engraving area
- Works like a printer - USB or Ethernet connection
- Engrave on almost any surface
- Easily cut wood, acrylic, plastic and much more
- User-friendly controls
- Just import an image and print it to the laser



The All New
Zing Laser

Visit www.epiloglaser.com/pcmag.htm for more information!

1.888.437.4564 • sales@epiloglaser.com



Online Coupon: 25PC MAG
Valid Until: Nov 30th 2008



Executive Collection:
Color Shown:
Black & Warm Red



Sport Collection:
Color Shown:
Warm Red & Cream

Either in Business or Leisure Fortte has the Solution.

PERSONALIZE your case with color or EMBOSsing and receive **25% OFF.**

Distributor Info: (312) 548-3718 • Toll-Free: 1-866-306-8239 • sales@fortte.com / www.fortte.com

Share your data
USB=1→15 or 15→1



Copy data from one USB drive to up to 15 targets at once
Collect data from up to 15 USB drives on to one drive simultaneously

No drive size limits • Stand-alone system, no computer necessary • Use any combination of USB 2.0 compatible data devices - Flash drives, SD/CF cards (with adapters), USB 2.0 hard drives, MP3 and MP4 players (source and target drives sold separately) • Daisy chain an additional unit for up to 30 targets total

Order from

**NATIONAL
AV SUPPLY**

Toll Free: 800.222.0109

Fax: 800.628.1329

MSRP \$899
Your cost \$799

www.nationalavsupply.com

CASH REGISTER EXPRESS™

More Profit! • More Sales! • More Customers!

Save Time, Reduce Theft, Speed Checkout, Increase Accuracy,
Reduce Costs, Make Better Business Decisions by Computerizing your Retail Store

The World's Fastest Cash Register

- **RATED #1**
- Single or Multi-User
- One Store or Multiple Store
- Credit Card Authorization in 2-3 Seconds
- Gift Cards & Loyalty Cards
- Track Your Inventory and Customers
- Detailed Sales Reports
- FAST and EASY Checkout
- Convenience Stores & Grocery Stores
- Gift Shops
- Apparel / Clothing
- Liquor & Tobacco Stores
- Cellular & Electronics
- Restaurants, Delis
- Any Store Requiring a Cash Register



Cash Drawers \$180
MMF, Indiana, APG, Logic Controls



Pole Displays \$280
Logic Controls



Touch Screen Monitors \$400
ELO Flat Panel, CRT



Cash Register Express software for Windows \$495

Replace your Cash Register with Cash Register Express in any type of retail store. With over 1,000 of the most desired point of sale features, Cash Register Express will help you compete in a difficult retail environment by controlling your costs, reducing errors, increasing efficiency, increasing your profits and increasing your sales.

Specializing in Point of Sale since 1985



Bar Code Scanners \$296
Metrologic, Symbol, HHP, PSC



Receipt Printers \$299
Epson, Star, Ithaca, Citizen



**Portable Invoicing,
Inventory/Asset Tracking &
Data collection - \$499**
Symbol, HP Palm



Bar Code Printers \$400
Cognitive Solutions, Fixed & Portable



Credit & Debit Card Processing \$340

PC Charge

Credit Card Readers, Pin Pads, Signature Pads \$170

Unitech, MagTek, Verifone, Topaz, HHP

**SYSTEMS
START AT
\$495**

DEALERS WANTED!

Join our dealer program. It's FREE.
It's the fastest way to make
money. AND we make it EASY.

For More Info Call Toll Free!
1-800-722-6374

FREE DEMO!!

1-800-PC-AMERICA
WWW.PCAMERICA.COM



CALL TOLL FREE: 1-800-722-6374 • PH: 845-920-0800 • FX: 845-920-0880
PC AMERICA, 1 Blue Hill Plaza, Second Floor, Box 1546, Pearl River, NY 10905

the easiest way to shop this fall

Exclusive Academic Discounts:

Adobe Photoshop Lightroom	Save 51%
Corel Painter X	\$98
FinalDraft FinalDraft 7	\$144
Microsoft Office Pro 2007	\$174
Native Instruments Komplete 5	\$689
Nik Software Viveza	\$144
Nuance Dragon Naturally Speaking 10	\$159
Timbuk2 Black Hacker Backpack	\$99
Total Training Photoshop CS3 Ext. Training	\$79
Write Brothers Movie Magic Screenwriter 6	\$124

New Version!
Design Premium 3.3

SAVE 67%!

Cyber-Shot
ONLY \$199!

New Version!
QuarkXPress 8

ONLY \$196!

FileMaker
ONLY \$179!

New Version!
EndNote X2 Student

ONLY \$109!

New Version!
Finale 2008

ONLY \$239!

Students, parents, faculty, & schools can
save up to 85% off the retail price!

Shop over
20,000
products
online!

ACADEMIC SUPERSTORE

PW.AcademicSuperstore.com

Call or visit us today! **1-800-580-9237**

Use source code
when you order! **A157**

The #1 academic reseller for Adobe, Wacom, Total Training, Sony Creative Software, Native Instruments, M-Audio, Sibelius, Mindjet and more!

Fastest SATA RAID - Backup - Hot Swap Systems

Emergency Drive Copy

- Plugs into any USB Port
- Optional Power Supply & Carry Pouch

The tool every computer user must have. Copy, Backup, Duplicate, Recover, Repair, Restore, Archive, and Test any SATA or IDE 2.5" or 3.5" Hard Drive. Makes it easy to upgrade an internal hard drive or make a duplicate copy of critical data without having to open up the computer.

Emergency Copy... USB to SATA/IDE Cable... \$24.95

Fast SATA RAID System

4 Terabytes of RAID or Backup Storage using the fastest SATA technology providing over 300 MB/s data transfer rates. Combined with Hot-Swap convenience and support these RAID systems are the affordable way to store large amounts of data. Direct connect SATA II means less to go wrong, reliable operation, and low cost. **NO PORT MULTIPLIER!**

SATA II 4 Bay Hot-Swap from... \$578

SATA RACK RAID 8 TB

A serious SATA II storage system that fits into any rack and provides up to 8 Terabytes of RAID or Backup Storage. Unlimited capacity Hot-Swap. **NO PORT MULTIPLIER!**

SATA II RACK RAID 5... \$5799

• granitedigital.com •

Drive Shields

Granite Drive Shields protect any 2.5" or 3.5" hard drive mechanism.

Simply slide the drive into the Silicon Rubber Shield and protect the drive from static electricity, short circuits, and impacts.

Kit includes both 2.5" & 3.5" shields.

Drive Shields... 2.5" & 3.5" Protection... \$9.95

Aluminum SATA Hot-Swap

Hot-Swap any SATA Drive quickly and affordably. Remove the drive and replace it while the computer is running. Make backups, duplicates, and copies of critical data. Internal models also available.

Aluminum Hot-Swap... SATA System... \$69.95

Backup 2 Drive Hot-Swap

2 Drive SATA System provides the fastest way to make backups, copies, or duplicates of data. Unlimited storage capabilities by simply adding additional drive trays. Extra Trays \$19.95

Backup 2 Drive Hot-Swap SATA... \$159.95

• 888-819-2190 •



Dr. Winnifred Cutler Creator of 10X

INCREASE YOUR SEX-APPEAL SCIENTIFICALLY



ATHENA PHORMONE 10X[®]

unscented cologne/ aftershave additive

♥ **Ralph (MI)** 10X reorder "Both my brother and I have actually tried this product. Overnight the difference—For both of us—it was amazing. The whole personality of women we encountered was really different. Really surprising how much of a difference the Athena Phormone 10X made.

We were in a club and I actually had a girl walk up to me and ask if she could kiss me in a bar! Now that never happens normally. I mean you know we don't usually have 1, 2, 3, girls come up to us and initiate conversation. I mean they were initiating! It was great.

My brother looked over at me and gave me a big grin. But he was surrounded by women too. ...Thank you so much."

—Received July 10, 2008

♥ **Pete (MA)** "Stuff works...I'm exhausted"
—note on reorder form

Created by Winnifred Cutler, Ph.D. in biology from U. of Penn, post-doc at Stanford.
Co-discovered human pheromones in 1986 (Time 12/1/86; and Newsweek 1/12/87).

athena.institute.com

Athena 10X is designed to enhance your sex-appeal. Vial of 1/8 oz. added to 2-3 oz. of your cologne or aftershave lasts 4 to 6 months, or use straight. Contains synthesized human sex-attractant pheromones. Effective for 74% in 8 week published scientific study. Not guaranteed to work for all: body chemistries differ, will work for most. Cosmetics not aphrodisiacs.

Call 610-827-2200 • Order online • Not sold in stores
Or mail to: Athena Institute, Dept PC10,

1211 Braefield Rd. Chester Springs, PA 19425

Please send me _____ vials of 10X for men @ \$99.50
_____ vials Athena 10:13 for Women @ \$98.50

and _____ empty blue bottle (2oz screw cap) @ \$9.50
for a "total" _____ by: ☐ money order, ☐ check

☐ Visa, ☐ M/C, ☐ DS
exp. _____ signature _____

to: Name _____

Address _____

City/State _____ zip _____

Tel: _____ email _____ PCfo

*PA add 6% tax. Canada add US\$7.50 per vial. Foreign call

We Buy Cell Phones

800-503-8026
www.cellforcash.com/pcmagazine

Canon[®] Compatible
No. 8 Cartridges

Remanufactured
DELL™ M4640
Ink Cartridges

AS LOW AS **\$4.69**
*Requires Chip

AS LOW AS **\$21.59**

1-800-INKFARM
inkfarm.com
the ink & toner supersite™

Small PC.com
A div. of ICI Controls, Inc.

- Marine
- Transportation
- Public Security
- Industrial Automation
- Medical
- Mobil PC Solutions
- Suited to Extreme Environments

NEW!
Core 2 Duo & Pentium M
Model SC240M
15" x 15" x 1.5"

17" Enclosed Touch-Screen LCD
with Integrated Computer
Model SDG170

1.877.505.5022
salesinfo@smallpc.com
www.smallpc.com

FREE SHIPPING ON ALL ORDERS UP TO \$200.00!

Lowest Price In The Nation
Guaranteed!

Choose From Any Of Our
Products

Guaranteed To Match
Your Software

Hassle-Free Service

Use **Promo Code PC908**
When Ordering.



ePrinting
CHECKS FOR LESS

100% Remittance Instant Payment
Available. No More Waiting.
1-800-222-2272



MarketLink

**Generate More Sales.
Put Your Ad Here.**

Call Now 1-877-267-2315

THE WORLD'S BEST LOGO DESIGN

- ✓ Unlimited Logo Concepts & Revisions
- ✓ 5 Designers Assigned to Every Project
- ✓ 1-3 Day Turnaround
- ✓ Satisfaction Guaranteed

MARKETING DRIVEN WEB DESIGN

- ✓ We Develop Websites That Sizzle & Sell
- ✓ 2-3 Designers Assigned to Every Project
- ✓ Unlimited Designs Till Perfect
- ✓ Lightning Fast Turnaround
- ✓ Satisfaction Guaranteed



877.918.9188 | www.LogoCare.com/pcm

MALE ENLARGEMENT! Easy To Take Liquid Formula!

**FOUR TO FIVE INCHES!
IN FOUR TO FIVE WEEKS!**

100% Money Back Guarantee!
Doctor Approved! Free 30 Day Supply!

**TAKE SUPER LQ LIQUID INSTEAD OF
A PILL FOR PENIS ENLARGEMENT!**

PILLS ARE ONLY 20% ABSORBED BY THE BODY. LIQUIDS
ABSORB 98%. Liquid absorbs immediately. Pills are solid and take
time to digest. SUPER LQ LIQUID is for the man who wants the
quickest method for successful Penis Enlargement.

**SUPER LQ FORMULA WORKS QUICK TO GIVE YOU
MAXIMUM ENLARGEMENT!**

SUPER LQ is a concentrated potent liquid formula that
gives you immediate results. For many men there is the
difficulty of swallowing or ingesting a pill. A liquid is easier
to take and digests instantly. You no longer have to take
pills and wait 3 to 4 months. SUPER LQ works in only
a couple of weeks and you will see that you are longer
and wider. Our exclusive blend of ingredients can give
you maximum penis enlargement up to 5 inches and
increase with 50% in just 4 to 5 weeks.

**SUPER LQ WILL INCREASE YOUR STAMINA,
SEXUAL HEALTH AND PERFORMANCE!**

SUPER LQ maintains your sexual virility so that
you can increase the amount of times a night you
can perform. You will see your sexual performance
improve substantially. The SUPER LQ FORMULA will
increase your size and you will also feel firmer, stronger and more
powerful than ever before.

WHICH FORMULA IS BEST FOR YOU?

SUPER LQ EXTRA STRENGTH FORMULA

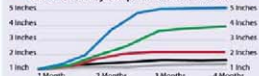
New exclusive extra strength formula for men with a form of
ESP/SPADIAS or small penis since they were young. Size now is
less than 6 inches and need a guarantee of accelerated enlargement
to reach a much larger size. Can also be used by men larger than
6 inches and need guaranteed maximum enlargement.

SUPER LQ ORIGINAL FORMULA

This formula is for men who are now 6 inches or more and want to be
guaranteed maximum enlargement.

SUPER LQ OUTPERFORMS ALL ENLARGEMENT PILLS

Customer Survey Comparative Growth Results



CREDIT CARD ORDERS TOLL FREE ANYTIME

1-866-476-7867 FAX 1-818-345-4543

ONLINE www.bondedlabs.com

www.superlq.com

SEND ORDER FORM AND PAYMENT TO:

BONDED LABS dept. 810P2H

Box 7020 Tarzana, CA 91357

CREDIT CARD ORDERS ONLY Toll Free Anytime

1-866-476-7867 or FAX 1-818-345-4543

Phone & Credit Card orders specify products and dept. (shown above, next
to company name)

- ☐ Check ☐ Money Order ☐ Cash ☐ Visa ☐ MasterCard
☐ American Express ☐ Discover

CREDIT CARD NO.

EXPIRES: Month/Year

CVS CODE 3-digit Security Code found on back
of card or 4-digits on front of American Express

SUPER LQ EXTRA STRENGTH FORMULA

☐ 1 Bottle (1 Month Supply) \$120.00 \$
☐ 2 Bottles (2 Months Supply) \$240.00 \$
☐ Extra Bottles \$40.00 Each \$

☐ I have ordered 3 or more bottles. SEND FREE 1 bottle

SUPER LQ ORIGINAL FORMULA

☐ 1 Bottle (1 Month Supply) \$180.00 \$
☐ 2 Bottles (2 Months Supply) \$360.00 \$
☐ Extra Bottles \$60.00 Each \$

☐ I have ordered 3 or more bottles. SEND FREE 1 bottle

TOTAL PURCHASE: \$

CA Residents: add 8.25% sales tax: \$

Shipping, Rush Service and Insurance \$17.95 VALUE IS INCLUDED FREE!

TOTAL ENCLOSED OR CHARGED: \$

Orders discreetly shipped with UPS or Priority Mail.

Foreign Orders - Money Order in U.S. Funds Only. Add \$10.00 S&H.

SIGNATURE: (I am over 18 years old)

NAME (print)

ADDRESS

CITY/STATE/ZIP

COPYRIGHT ©1995 SUPER LQ is a trademark of BONDED LABS

Email Responder

**Intelligent Email Management Software
for Customer Support and Marketing Teams**



How much of your time do you spend answering customer email? Email Responder can cut that time by 80% or more! Predefined templates let you reply in seconds, with accurate, personalized, useful answers. The software analyzes email as it arrives and automatically fills in your product or service information.

Save money while making your customers happier!

- ☒ Replying to a message takes only a few clicks, and often **no typing at all**
- ☒ Create rules to assign messages to the correct person
- ☒ Automatically personalize replies using Smart Fields
- ☒ Track the complete correspondence history
- ☒ Powerful reporting engine helps you analyze your business process

Our other products



My Screen Recorder Pro



Security Monitor Pro



My Idea Communicator

Download Free Trial

www.deskshare.com/er

DeskShare®

Software to help you excel!

Phone: 1-516-620-3152

Your solution for limited space



RTA-3802



RTA-B001N



STAPLES®

that was easy:

You can purchase these and other styles at
www.staples.com

Keyword Search "Techni Mobili" or use item code.



RTA-Q328



RTA-3806



RTA-4965

**TECHNI
MOBILI®**

Our products are constructed
with premium MDF Panels,
Powder Coated Steel Frames,
Laminated PVC Surfaces and
backed with a five year warranty.

RTA®
PRODUCTS • LLC

3900 Executive Way
Miramar, FL 33025
Toll Free: 866.782.8262
Fax: 954.499.2269
E-mail: info@rtaproducts.com
www.rtaproducts.com

Shock and Vibration Dampening Unmatched Quality State of the Art Form and Function

RAM Vehicle Mounting Systems

From \$175⁰⁰

General Dynamics
GoBook XR-1



Motion Computing

Samsung

Asus

Sony

Panasonic

WITH MORE DOCKS, PLUS YOUR CHOICE OF OVER 80 NO-DRILL VEHICLE BASES, RAM IS YOUR BEST CONNECTION FOR MOUNTING ELECTRONICS IN VEHICLES. MOST ANY BRAND OF LAPTOP OR TABLET COMPUTER MAY BE AFFORDABLY SECURED AND POWERED IN YOUR VEHICLE FOR LESS MONEY THAN YOU'RE ACCUSTOMED TO PAYING. RAM IS SETTING A NEW STANDARD FOR THE WAY THESE NEW DEVICES ARE BEING USED IN YOUR MOBILE ENVIRONMENT. CONTACT US OR ONE OF OUR RAM RE-SELLERS FOR MORE INFO.



Fujitsu

OQO

MobileDemand



JUST RAM IT!

Sold Only Through Dealers, Re-Seller Programs Available

1-800-497-7479

WWW.RAM-MOUNT.COM

The Best Stuff



Editors' Choices In Key Categories

For the complete reviews of these products and more Editors' Choices go to go.pcmag.com/editorschoice

DESKTOPS

MAINSTREAM
NEW Velocity Micro Vector Campus Edition (2008)
\$999 direct

GAMING/MULTIMEDIA
Alienware Area-51 ALX (QX9770) \$6,829 direct

ALL-IN-ONE
Apple iMac 24-inch (Penryn)
\$1,799 direct

BUSINESS
Dell OptiPlex 755 \$1,183 direct

LAPTOPS & NOTEBOOKS

MAINSTREAM
Apple MacBook Pro 15-inch (Penryn)
\$2,899 direct
Dell Studio 15 \$1,199 direct

GAMING
NEW Alienware Area-51 m15x \$4,499 direct

MULTIMEDIA
NEW Acer Aspire 6920G-6071 \$980 street

ULTRAMOBILE
NEW MSI Wind \$480 street

BUDGET
HP Pavilion dv8000
Tablet \$1,049 direct

TABLET PC
Lenovo ThinkPad X61 Tablet \$1,934 direct

STORAGE

MAC OS
Western Digital My Passport Studio (320GB)
\$220 list

PORTABLE
NEW Maxtor OneTouch 4 Mini \$129.99 direct

DESKTOP
SimpleDrive 500GB Portable Hard Drive \$169.99 list

NETWORK-ATTACHED STORAGE
HP StorageWorks AIO400t
\$3,799 list

GRAPHICS CARDS

nVidia GeForce GTX 260
\$400 list

LCD MONITORS

Lenovo ThinkVision L200x
\$499.99 list

PROJECTORS

HIGH-END XGA
Canon Realis X700 \$2,500 list

CONSUMER/BUSINESS XGA
NEC VT800 \$1,000 street

ULTRA-SHORT-THROW
Hitachi CP-A100 \$2,495 list

PRINTERS

ALL-IN-ONE (MONOCHROME LASER)
Brother MFC-7840W
\$300 street

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

STANDARD INK JET
Canon Pixma iP4300
\$99.99 direct

ALL-IN-ONE INKJET
HP Officejet J6480
All-in-One \$199 direct

PHOTO PRINTERS

COMPACT
NEW HP Photosmart A636 Compact Photo Printer
\$149.99 direct

BUDGET PROSUMER
HP Photosmart Pro B8850 Photo Printer
\$549.99 direct

HDTVs

PLASMA
Pioneer Elite KURO PRO-150FD \$7,500 list

LCD
Samsung LN52A750
\$3,999.99 list

HDTV ACCESSORIES

UNIVERSAL REMOTE
Logitech Harmony One
\$249.99 direct

BLU-RAY PLAYER
Panasonic DMP-BD30
\$499.95 direct

DIGITAL CAMERAS

HIGH-END COMPACT
Canon PowerShot SD790 IS
\$349.99 list

D-SLR
Nikon D300
\$1,800 street (body only)

SUPERZOOM
Panasonic Lumix DMC-FZ18
\$399.95 list

DIGITAL PHOTO & VIDEO

Adobe Creative Suite 3
\$999 direct

VIDEO-EDITING SOFTWARE
CyberLink PowerDirector 7 Ultra \$119.95 direct



SONOS BUNDLE 150
The pricey-yet-exquisite Sonos is a streaming-music dream.



LG DARE VX9700
This slick touchscreen phone is a great alternative to the iPhone for Verizon users.

MP3 PLAYERS

HARD DISK
Microsoft Zune 80GB \$250 list

FLASH
Apple iPod touch \$299 direct
BUDGET FLASH
Samsung YP-U3 (2GB) \$90 list

SPEAKERS/DOCKS

Chestnut Hill Sound George
\$549 direct
NEW Hercules XPS 2.1 Lounge speakers \$60 street

PC/GAMING
Razer Mako \$399 list

MEDIA EXTENDERS

NEW Sonos Bundle 150
\$999 direct
Slingbox SOLO \$180 list

GPS DEVICES

Garmin nüvi 880 \$999.99 list
V7 NAV740 \$299.99 list

NEW Garmin Oregon 400t
\$599.99 list

FEATURE PHONES

AT&T
Motorola MOTO Z9
\$199.99 with contract

SPRINT
Motorola RAZR2 V9m
\$299.99 with contract

T-MOBILE
Motorola RAZR2 V8
From \$199.99 with contract

VERIZON WIRELESS
NEW LG Dare VX9700
From \$199.99 with contract

SMARTPHONES

ALLTEL
RIM BlackBerry
Edge 8330
From \$229.99 with contract

AT&T
Apple iPhone 3G
From \$199.99 with contract

SPRINT
RIM BlackBerry Curve 8330 \$179.99 with contract

VERIZON
RIM BlackBerry Curve 8320
\$299.99 with contract

VERIZON WIRELESS
RIM BlackBerry Curve 8330 \$169.99 with contract

UNLOCKED
Nokia N82 \$629 direct

CELLULAR CARDS

AT&T
Sierra Wireless USBConnect 881
From \$100 list

SPRINT
Novatel Ovation U727
From \$99.99 with contract

VERIZON
Sierra Wireless AirCard 595
\$179.99 list

HEADSETS

BLUETOOTH
Aliph New Jawbone
\$129.99 list

STEREO HEADSET (WIRED)
Etymotic hf2 \$179 list

HEADPHONES

Ultimate Ears UE 11 Pro
\$150 list

OFFICE & PRODUCTIVITY

Microsoft Office 2007
\$149 direct
Microsoft Student 2008
\$375.00 direct

SPEECH RECOGNITION
NEW Dragon Naturally Speaking 10 \$99.99 direct

SECURITY

ANTISPYWARE
Cloudmark Desktop 5.3.3 for Microsoft Outlook
\$35.95 per year

EMPLOYEE MONITORING
Spectator 360
\$75 per client license

SUITE
Norton Internet Security 2008
\$69.99 yearly

BACKUP

SOS Online Backup (beta)
\$19.95 direct

FINANCIAL

FreshBooks
Free, or \$14-\$149 monthly

WEB SERVICES

Yahoo! Small Business
From \$11.95/month

MUSIC

NEW Rhapsody
From \$12.99/month
ONLINE TECH SUPPORT

NEW HiWire
\$89 direct

CARPÉ WI-FI.



INTRODUCING BOINGO. THE WORLD'S LARGEST WI-FI NETWORK.

Seize your Wi-Fi. One Boingo account gives you access to up to 100,000 hotspots worldwide, including hundreds of airports, hotels and cafes.

Choose the Boingo plan that's right for you: **Boingo Unlimited** for your laptop or **Boingo Mobile** for your smartphone. Sign up for Boingo Unlimited for just \$9.95 per month for the first three months at boingo.com/boingowifi. For a FREE 30-day trial of Boingo Mobile, visit mobile.boingo.com/pcmag.

Satisfaction guaranteed or your frustration back.



Toshiba recommends
Windows Vista® Business

innovation is thin with an optical drive.



The laptop expert cut down on size, not features.

Sure, there are companies out there yelling "thin this" and "portable that." But what good is a lightweight laptop if it doesn't do what you want? That's why the featherlight Portégé® R500 is the world's first laptop with a 7mm DVD SuperMulti drive. So you can still watch movies, play music and prepare for presentations. Plus its transreflective screen uses natural light to help you see better outdoors.

Discover all of the innovative world's firsts inside the Portégé R500 at Explore.Toshiba.com/PCMag.

Portégé is a registered trademark of Toshiba America Information Systems, Inc., and/or Toshiba Corporation. Windows Vista is a registered trademark of Microsoft Corporation in the United States and/or other countries. While Toshiba has made every effort at the time of publication to ensure the accuracy of the information provided therein, product specifications, configurations, prices, system/component/options availability are all subject to change without notice. For the most up-to-date product information about your computer, or to stay current with the various computer software or hardware options, visit Toshiba's Web site at pcsupport.toshiba.com. ©2008 Toshiba America Information Systems, Inc. All rights reserved.

TOSHIBA
Leading Innovation >>>