

Why Wait for **WINDOWS VISTA**? Get Its Features Now

TOP
CELL PHONES
17 Smart New Models

PCWORLD

**BEST PLACES TO
BUY TECH GEAR**

22 STORES & SITES RATED



POWER PORTABLES

7 Fast, Full-Featured Laptops

New Threats to Your **PRIVACY**



JUNE 2006 ♦ TECHNOLOGY ADVICE YOU CAN TRUST® ♦ WWW.PCWORLD.COM

NEVER CALL TECH SUPPORT AGAIN!



HOW TO SOLVE PC PROBLEMS YOURSELF

FIXES for Constant Crashes,
System Slowdowns,
Network Failures,
Spyware Invasions





Print what you want. How you want. As much as you want. (What more could you want?)

No matter what size your business, there's more work, tighter timelines and smaller budgets than ever before. New printers, with more features and better reliability, can help. CDW has a full line of top-name printers. And with access to the industry's largest inventories, we'll get you the right one for your needs. So call today and start working better and saving more.



With color
access control

HP Color LaserJet 4700n Printer

- Network-ready, workgroup color laser printer
- Print speed: up to 31 ppm black and color
- Resolution: 600 x 600 dpi with HP ImageREt 3600
- Duty cycle: 85,000 pages per month
- Parallel, USB 2.0 and Ethernet ports

\$1999⁹⁹

PRINTER
CDW 846228

\$200

MAIL-IN REBATE
AVAILABLE 5/1/06



\$3449⁹⁹

MFP
CDW 699859

\$300

MAIL-IN REBATE
AVAILABLE 5/1/06



HP LaserJet 4345x mfp Multifunction Printer

- Monochrome printer, copier, fax and color scan to e-mail
- Print and copy speed: up to 45 ppm
- Print resolution: 1200 x 1200 dpi with HP FastRes 1200
- Duty cycle: 200,000 pages per month
- Parallel and Ethernet ports



Call your CDW account manager about available \$200 mail-in manufacturer rebate; offer valid 5/1/06 to 7/31/06. HP color access control helps you manage color printing usage. With it, you can enable or disable color printing by individual users or groups, or you can disable it entirely. Call your CDW account manager about available \$300 mail-in manufacturer rebate; offer valid 5/1/06 to 7/31/06. Offer subject to CDW's standard terms and conditions of sale, available at CDW.com. © 2006 CDW Corporation



Lexmark C522n Color Laser Printer

- Network-ready, color laser printer
- Print speed: up to 20 ppm black and color
- Resolution: 1200 x 1200 dpi, 4800 Color Quality
- Duty cycle: 45,000 pages per month
- USB and Ethernet ports

\$499⁹⁹

CDW 840615

LEXMARK

\$2499⁹⁹

CDW 933972

LEXMARK

Lexmark X644e MFP Multifunction Printer

- Monochrome laser printer, copier, fax, scanner and scan to e-mail
- Print speed: up to 50 ppm
- Resolution: 1200 x 1200 dpi
- Duty cycle: 225,000 pages per month
- USB and Ethernet ports



Brother MFC-8460N Multifunction Printer

- Network-ready, monochrome laser printer, copier, fax, PC fax and scanner
- Print and copy speed: up to 30 ppm
- Print resolution: 1200 x 1200 dpi
- Parallel, USB 2.0 and Ethernet ports

\$399⁹⁹

CDW 919860

brother At your side.

\$799⁹⁹

CDW 847682

brother At your side.

Brother MFC-9420CN Color Multifunction Printer

- Network-ready, color laser printer, copier, fax and scanner
- Print and copy speed: up to 31 ppm black, 8 ppm color
- Print resolution: 2400 x 600 dpi
- Scan resolution: 9600 x 9600 dpi interpolated
- Duty cycle: 30,000 pages per month
- Parallel, USB 2.0 and Ethernet ports



The Printing Solutions You Need When You Need Them.



The Right Technology. Right Away.™

CDW.com • 800.399.4CDW

In Canada, call 888.898.CDWC • CDW.ca

Your potential. Our passion.
Microsoft

A Global Hotel Company Analyzing 1.4 Million Records a Day.
Running On Microsoft SQL Server 2005.



How does Hilton forecast demand for its 370,000 rooms and its catering services? They import data from six systems into one data warehouse requiring 7 million rows, and running on SQL Server™ 2005 with 99.98% uptime.* See how at microsoft.com/bigdata

Microsoft
SQL Server 2005



*Results not typical and are based on use with Windows Server™ 2003 Enterprise Edition. Availability is dependent on many factors, including hardware and software technologies, mission-critical operational processes, and professional services. © 2006 Microsoft Corporation. All rights reserved. Microsoft, Windows Server, and "Your potential. Our passion." are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. The names of actual companies and products mentioned herein may be the trademarks of their respective owners.

Toshiba recommends Windows® XP Professional.

Satellite®

Smart notebooks for every budget.
Starting at **\$699.00**



Tecra®

The reliability business demands.
Starting at **\$1,199.00**



Portégé®

Thin, light and powerful.
Starting at **\$1,599.00**



Qosmio™

4-in-1 personal entertainment center.
Starting at **\$2,399.99**



Portégé® R200 Notebook PC

Style and performance come together
in an elegant ultraportable.



Intel® Pentium® M Processor Ultra Low Voltage 773
for faster execution of instructions at lower power

Genuine Microsoft® Windows® XP Professional

Toshiba EasyGuard™ enhancements¹ for increased
mobile security, system integrity, network connectivity
and overall ease of use

Starting at **\$1,999.00**



ToshibaByDesign.com/R200
1.800.TOSHIBA

1. Toshiba EasyGuard technology comprises a number of features some of which may or may not be available on a particular Toshiba notebook depending on the model selected. See www.easycuard.toshiba.com for detailed information. 2. Weight may vary. See Weight Legal Footnote at www.info.toshiba.com. 3. Battery life may vary. See Battery Life Legal Footnote at www.info.toshiba.com. 4. Hard drive capacity may vary. 1 Gigabyte (GB) means 10⁹ = 1,000,000,000 bytes using powers of 10. See Hard Disk Drive Capacity Legal Footnote at www.info.toshiba.com. 5. Toshiba's shock absorption technology provides higher impact protection for your system as compared to Toshiba systems without similar shock protection features based on Toshiba's drop tests. Toshiba's standard limited warranty terms and limitations apply. Visit www.warranty.toshiba.com for details. Portégé, Satellite and Tecra are registered trademarks and EasyGuard and Qosmio are trademarks of Toshiba America Information Systems.



Magnesium Alloy Chassis

Exterior casework material used in aerospace manufacturing maximizes durability without adding unnecessary weight.

80GB Hard Drive⁴

Toshiba micro-engineering fits 80GB of data in a tiny 1.8-inch drive.

Thin. Light. Goes for hours.

Toshiba is always striving to make notebooks smaller, thinner, lighter — without compromising functionality. The Portégé[®] R200 is the latest result of that philosophy. Its sleek chassis is built from materials similar to those used in fighter jets. And starting at 2.68 lbs.² and just over half an inch thin, it still has enough battery life to last up to five hours.³ Portability plus performance. Size plus stamina. That's 360° innovation. That's Toshiba.

Where can innovation take you?
ToshibaByDesign.com/R200

Hard Drive Protection⁶

3D accelerometer detects free falls and quickly prepares the hard drive for impact to help protect your data.

Fingerprint Reader

Embedded biometric sensor helps prevent unauthorized access for better security.

Up to Five Hours of Battery Life³

Proprietary battery design and low-voltage processor optimize battery efficiency.

TOSHIBA

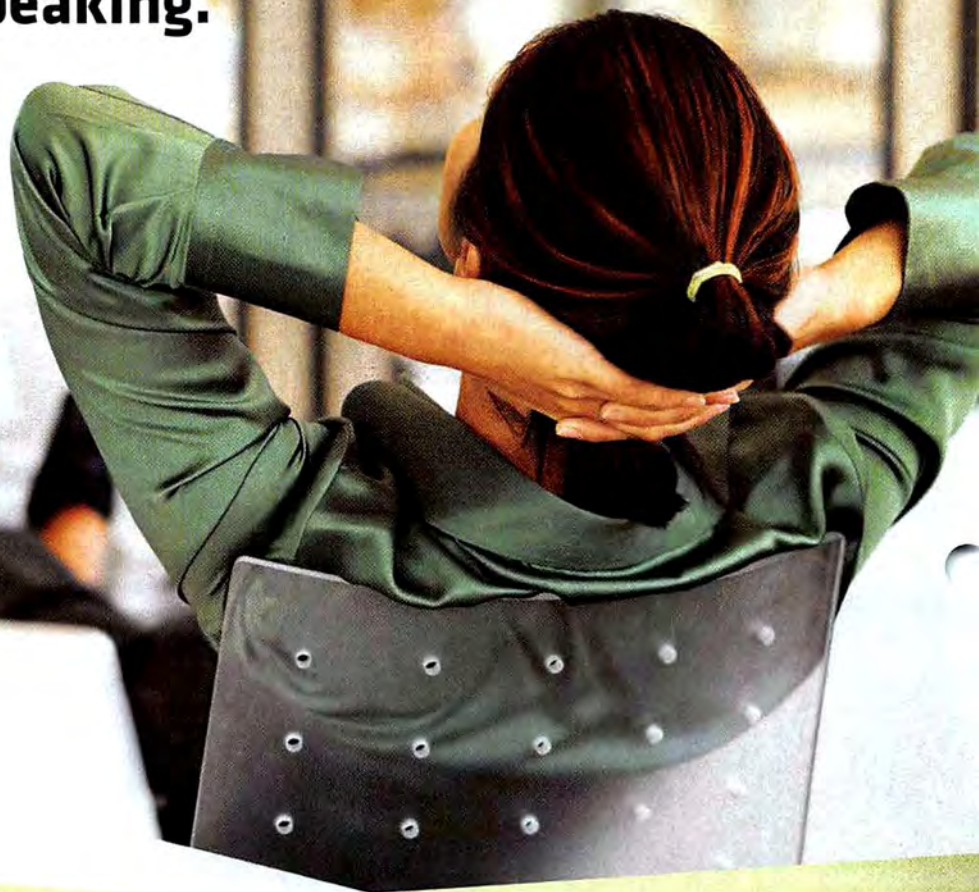
Innovation **by design.**

Inc. and/or Toshiba Corporation. Celeron, Celeron Inside, Centrino, Centrino logo, Core Inside, Intel, Intel logo, Intel Core, Intel Inside, Intel Inside logo, Intel ViiV, Pentium, Pentium Inside are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Microsoft and Windows are registered trademarks of Microsoft Corporation in the United States and/or other countries. All other trademarks are the property of their respective owners. While Toshiba has made every effort at the time of publication to ensure the accuracy of the information provided herein, product specifications, configurations, prices, system/component/options availability are all subject to change without notice. Toshiba is not liable for pricing, typographical or photography errors. Prices listed are based on products listed at ToshibaDirect.com at time of publication printing. Reseller/Retailer pricing/products may vary. © 2006 Toshiba America Information Systems, Inc. All rights reserved.

DO THE IMPOSSIBLE:

**Respond to 30 emails before
finishing your coffee...**

simply by speaking.



30 emails. 17 page report. Surf the Web. We all need to accomplish more in less time than ever before. There's no better way to overcome the impossible than with Dragon NaturallySpeaking. Dragon gives you the power to control your PC, quickly and accurately capture your reports, emails, slides, and documents...simply by speaking.

Your speech is instantly turned into text at up to 160 words per minute, at an amazing 99% accuracy.

Get Dragon NaturallySpeaking now and make the impossible—possible!

NUANCE.COM/NATURALLYSPEAKING



Available at

amazon.com



COMPUUSA

Office DEPOT
Taking Care of Business

STAPLES
that was easy

© Copyright 2006 Nuance Communications, Inc. All rights reserved.

Nuance, the Nuance logo, Dragon NaturallySpeaking, the Dragon logo are trademarks and/or registered trademarks of Nuance Communications Inc. and/or its affiliates in the United States and/or other countries. All other trademarks are the properties of their respective owners.



NUANCE
Dragon Dictation Solutions



COVER STORY

88 Never Call Tech Support Again!

When PC woes strike—as they inevitably will—don't reach for the phone. Instead, grab our expert guide to fixing common ills, and solve the problem yourself. Also, if you aren't ready to cut the cord, we offer tips from the pros on how to get the best results from your tech support call.



Cover photography by Marc Simon.

PC WORLD

JUNE 2006
VOLUME 24 ♦ NUMBER 6
WWW.PCWORLD.COM

FEATURES

SHOPPING

100 All-Star Tech Stores

With so many PC and electronics stores on the Web and down the street, how do you decide where to shop? Thousands of readers told us which places offer the widest selection, the best values, and the finest service.

NOTEBOOKS

115 Desktop Killers

For years, desktop replacements were more like desktop impostors. But high-powered notebooks now challenge stationary PCs on performance, display quality, and (of course) portability. Here are seven of the best.

CELL PHONES

125 Pick the Perfect Cell Phone

Your phone has more and more features these days—handling e-mail and data, surfing the Web, taking snapshots, and playing music. We looked at 17 models to find which ones do which tasks best.



ON THE COVER

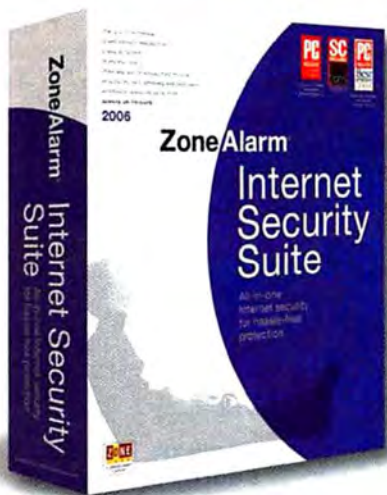


SUITE.

SWEET.

ENTER THE ZONEALARM® SUITE SWEET SWEEPSTAKES

Protect your PC with the award-winning ZoneAlarm® Internet Security Suite, and you could win one of two **Dell™ XPS™ 600 Multimedia Desktops**, three **30 Gb Apple® iPod®s** or the **GRAND PRIZE - a 42" LG Plasma HDTV**.



GRAND-PRIZE



First Prize (2 first prizes)

**Dell
PC**

Second Prize (3 second prizes)

**Apple
iPod**

No purchase necessary. U.S. residents only. Void in Puerto Rico. Void where prohibited. Sweepstakes ends July 31, 2006. Terms and Conditions apply. See the Official Rules. *Image used by permission of LG Electronics Inc.



www.zonelabs.com/sweet

©2006 Zone Labs, L.L.C., A Check Point Software Technologies Company, 475 Brannan Street - Suite 300, San Francisco, CA 94107 USA. All rights reserved. All trademarks of Zone Labs used herein (including but not limited to ZoneAlarm, Zone Labs, and the Zone Labs logo) are trademarks or registered trademarks of Zone Labs, L.L.C. and/or Check Point Software Technologies, in the United States and other countries. All other trademarks are the property of their respective owners.

Go to find.pcworld.com/52938

REVIEWS & RANKINGS

- 60 Color Laser Printers**
Six under-\$1000 models get down to business.
- 62 Top 10 Color Lasers**
- 64 Notebook PCs**
Lenovo 3000 C100 and ThinkPad X60s
- 66 Top 10 Desktop PCs**
- 68 Utility Software**
Iolo System Mechanic 6
- 69 Desktop PC**
Apple Mac Mini
- 69 Scanner**
Epson Perfection V700
- 70 Top 5 LCD TVs**
- 72 Search Software**
Microsoft Windows Live Search
- 75 Point-and-Shoot**
Fujifilm FinePix V10
- 75 Productivity Suite**
WordPerfect Office X3
- 76 Top 5 Digital SLRs**
- 78 Network Search**
O-yA DeepSearch 100
- 79 Graphics Boards**
nVidia-based cards from BFG, PNY, and XFX
- 80 Backup Software**
Symantec Norton Save & Restore
- 80 Removable Storage**
Quantum GoVault Drive
- 82 More Reviews**

See page 60 for a complete list of new products reviewed.

FIND-IT URLS

TO ACCESS INFORMATION about any item in *PC World* with an accompanying Find-It URL, enter find.pcworld.com/xxxxx (where xxxxx is the appropriate five-digit number) into your browser's location field. You'll jump to a Web page containing the information you want.

COMING UP IN JULY

100 Best Products of 2006: We rank this year's World Class-caliber hardware, software, and services.
All-in-One Security Suites: We test which products protect you the best and which are easiest to use.

Online Storage: Web-based services can safeguard your data and make files a snap to access and share.
Build Your Own PC: Use our how-to guide to create your dream PC for about what you would pay retail.



69



45



66

DEPARTMENTS

- 17 Up Front**
Vista delayed! XP on Macs! What's the future?
- 41 Letters**
Comments on laptop and wireless-net security.
- 45 Consumer Watch**
Avoid the perils of early adoption; make stolen data self-destruct; how to spot Windows fakes.
- 51 Hassle-Free PC**
Teach your cell phone some smart new tricks.
- 53 Gadget Freak**
Some home theater tweaks don't cost a bundle.
- 55 Bugs and Fixes**
IE hole opens the door to drive-by downloads.
- 154 Full Disclosure**
Cell phone users deserve better data services.

NEWS & TRENDS

- 20 New Privacy Threats**
As you conduct your ever-more-connected life, the digital trail left behind puts your privacy at risk.
- 24 Boot Camp Lets Intel Macs Run Windows XP**
In our early tests, Apple's software does a great job of dual-booting Windows XP and Mac OS X.
- 28 Why Wait for Vista?**
Many of the delayed OS's features are available right now, thanks to free and low-cost add-ons.
- 30 New Devices Promise Protection in a Box**
Automatically managed gateways aim to block security threats before they reach your network.
- 32 Plugged In**
How capable is a "Vista Capable" system, really? Plus: New search sites offer refined results.

HERE'S HOW

- 132 Windows Tips**
Set strong password policies to protect your PC.
- 136 Answer Line**
Guard against software installation disasters.
- 138 Internet Tips**
Post videos on the Web in real time—almost.
- 140 Hardware Tips**
Use RAID to obtain faster and safer hard drives.
- 142 VoIP Tips**
Precautions to help you avoid Net phone hassles.

RESOURCES

- 12 How to Contact PC World**
- 144 PC World Marketplace**
- 153 Advertiser Index**



ONCE YOU KNOW, YOU NEWEGG.



No Payments
for **6 months**
with your
NEWEGG.COM
PREFERRED
ACCOUNT

Enjoy no payments for 6 Months and FREE rush processing with the Newegg.com Preferred account! It's the credit account customized for shopping at Newegg.com. Never have to enter an account number again during checkout! With zero fraud liability, members-only benefits and low interest financing, it's the smart move. Promotion ends 07/31/06.

2005 BizRate Circle of Excellence Gold Honoree.

AMD Athlon™ 64 3800+

Venice 1GHz FSB
512KB L2 Cache
Socket 939 Processor

\$305.00



AMD Sempron™ 64 3300+

Palermo 800MHz
FSB 128KB L2 Cache
Socket 754 Processor

\$125.00



THE LATEST ATHLON 64 PROVIDES FASTER

Antec



\$84.99

Antec Solution Series
NSK2400 MicroATX Desktop
Computer Case 380W ATX12V

WD Western Digital



\$319.99

Western Digital 500GB
My Book Premium WDG1C5000N
7200 RPM 16MB Cache USB 2.0

Thermaltake
COOL & QUIET YOUR LIFE



\$108.99

Thermaltake Tsunami
VA3000BWA Black Aluminum ATX
Mid Tower Computer Case

OLYMPUS
FOCUS ON LIFE



\$799.99

Olympus E-500 8MP
w/14-45mm & 40-150mm Dual
Lens Kit 4/3" CCD 2.5" LCD

Canon



\$899.99

Canon DC40 2.7" 123K LCD
10x Optical Zoom 200x Digital
Zoom 1/2.8" 4.3MP (Gross) CCD

ViewSonic



\$999.99

ViewSonic N3260W 32" 16:9
LCD HDTV 1366x768dpi HDTV
Tuner Inside No-Glare screen

SAMSUNG



\$679.99

Samsung 214T-Black 21.3"
LCD Monitor a-si TFT/PVA LCD
1600x1200dpi S-Video TDS

SONICWALL



\$475.00

SonicWALL TZ 150 Unified
Threat Management Appliance
1x10/100Mbps WAN Ports

BEST PLACE TO BUY

- ONLINE

- SOFTWARE

- PERIPHERALS

- CORE COMPONENTS



... Enter Promo Code PCW20606 for a **FREE T-SHIRT** ...

AMD Athlon™ 64 4000+
San Diego 1GHz HT
1MB L2 Cache
Socket 939 Processor

\$369⁰⁰



AMD Athlon™ 64 X2 4600+
Manchester 1GHz FSB
2 x 512KB L2 Cache
Socket 939 Dual Core Processor

\$589⁰⁰



AMD

**AMD Athlon™ 64 X2
4800+ Toledo 1GHz
HT 2 x 1MB L2 Cache
Socket 939
Dual Core Processor**

Dual-core technology is like having two processors, and two working together is better and faster than one working alone. Do more in less time.

\$689⁰⁰

PROCESSING THAN A VEGAS WEDDING.

JetAudio



\$295⁹⁹

JetAudio 30GB USB 2.0
Ultimate Portable Multimedia
Player Model iAUDIO X5L

PLANTRONICS
World Leader in Communications Modules



\$78⁰⁰

Plantronics DISCOVERY 640
Bluetooth Headset w/ volume
control and voice-activated dialing

MSI
MICROSTAR INTERNATIONAL



\$69⁹⁹

MSI K8N Neo4-F Socket 939
NVIDIA nForce4 ATX for AMD
Motherboard DDR 400

Verbatim



\$24⁹⁹

Verbatim 8.5GB 8X DVD+R
Dual Layer 10 Pack Slim Case
Excellent quality and Reliability.

LINKSYS



\$104⁹⁹

Linksys WRT54GL 802.11g
Wireless-G Media Storage Link
Router with SpeedBooster

LITEON



\$54⁹⁹

LITE-ON Black 16X DVD+R
2MB Cache ATAPI/E-IDE DVD
Burner With LightScribe

Logitech



\$309⁰⁰

Logitech Z-5450 315 Watts 5.1
THX™ certified, Dolby® Digital and
DTS for pure 5.1 digital sound

hp
invent



\$349⁹⁹

HP LASERJET 2600N Up to 8ppm
600 x 600 dpi w/HP Image REt
2400 Laser Personal Color

- 98% of orders ship within 1 business day
- 35,000 customer testimonials
- 350,000 product reviews from customers
- "A" rating on ANY merchant ranking site

Check Out Downloads on PCWorld.com

Now With Over
15,000 Titles



Get connected
to the hottest free
and trial downloads
including:

Games
Systems Utilities
Screen Savers
Audio Tools
Video Tools
Antivirus Software
and More!

PC WORLD

PC WORLD

PHONE:
415/243-0500
FAX:
415/442-1891
E-MAIL:
letters@pcworld.com
WEB:
www.pcworld.com

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

STAFF E-MAIL
ADDRESSES:
To contact any PC
World staff member,
simply format the
address as follows:
firstname_lastname@
pcworld.com

EDITOR IN CHIEF Harry McCracken
CREATIVE DIRECTOR Robert Kanes
EDITOR, PCWORLD.COM Ramon G. McLeod
MANAGING EDITOR Kimberly Brinson
EXECUTIVE EDITORS Edward N. Albrow, Randy Ross
TEST CENTER DIRECTOR Ulrike Diehlmann

EDITORIAL

ASSISTANT MANAGING EDITOR
Paul-Michael King
SENIOR EDITORS
Yardena Arar, Eric Dahl, Kalpana
Ettenson, Rex Farrance, Karl Koessel,
Tom Mainelli, Anush Yegazarian
SENIOR WRITER Alan Stafford
SENIOR ASSOCIATE EDITORS
Andrew Brandt, Eric Butterfield,
Anne B. McDonald, Dennis O'Reilly,
Melissa J. Perenson, Narasu
Rebbapragada, Dan Sommer
SENIOR REPORTER Tom Spring
ASSOCIATE EDITORS Danny Allen, Laura
Blackwell, Liane Cassavoy, Erik Larkin
SENIOR WEB PRODUCER David Lake
SENIOR COPY EDITORS
Stephen Compton, Steven Gray,
Tracy Yee-Vaught, Sally Zahner
EDITORIAL ASSISTANT Amber Bouman
INNOVATION JOURNALISM FELLOW
Erika Ingvald
FOUNDER David Bunnell
FOUNDING EDITOR Andrew Fluegelman

ART AND DESIGN

ART DIRECTOR Barbara Adamson
DEPUTY ART DIRECTOR Pierre Granier
ASSOCIATE ART DIRECTORS Jeff Berlin,
Beth Kamoroff, Carolyn Perot
DESIGNER Chip Taylor
DIGITAL IMAGING SPECIALIST Rick Rizner

CONTRIBUTING EDITORS

Grace Aquino, Steve Bass, Scott Dunn,
Stuart J. Johnston, Stephen Manes,
James A. Martin, Aofie M. McEvoy, Scott
Spanbauer, Lincoln Spector, Kirk Steers,
Carla Thornton, Dan Tynan

PC WORLD TEST CENTER

MANAGER OF BENCHMARK DEVELOPMENT
James Motch
DATA MANAGER
Jeffrey Kuta
SENIOR PERFORMANCE ANALYST
Elliott S. Kirschling
SENIOR DATA ANALYST
Tony K. Leung
DEVELOPMENT ANALYST
Thomas Luong
PERFORMANCE ANALYST Chen Xing Wang
SENIOR TEST CENTER COORDINATOR
Greg Adler

MAILING LISTS

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

BACK ISSUES

PC World issues are available in digital format starting with the July 2002 issue. Go to www.pcworld.com/singlecopy. PC World issues and article copies are available on microfilm and microfiche from UMI, 300 N. Zeeb Rd., Ann Arbor, MI 48106-1346; 800/521-0600.

PCW COMMUNICATIONS

PRESIDENT, CEO Jeff Edman
VP, PUBLISHER - PC WORLD MAGAZINE
Wayne Silverman
VP, PUBLISHER - PCWORLD.COM,
CUSTOM PUBLISHING
Michael Carroll
SENIOR VP, COO/CFO Vicki Peilen
VP, HUMAN RESOURCES Kate Coldwell
VP, CONSUMER MARKETING
Shawne Burke Pecar

NEW PRODUCT ANNOUNCEMENTS

Send press releases via e-mail to
newproducts@pcworld.com.

SUBSCRIPTION SERVICES

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

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

WEB: www.pcworld.com/customer
E-MAIL: pcwcustserv@cdsfulfillment.com
(Send your full name and the address at
which you subscribe; do not send
attachments.)

PHONE: In the U.S. 800/234-3498
New orders 800/825-7595
FAX: 515/432-6994

QUESTIONS AND SUBMISSIONS

Send material electronically to the appropriate online address listed below, or mail it to PC World. We reserve the right to edit letters. PC World pays \$50 for published *Here's How* tips and questions; accepted submissions will be acknowledged by payment. Editors cannot guarantee personal responses to all questions.

ANSWER LINE: answer@pcworld.com
BUGS AND FIXES: bugs@pcworld.com

CONSUMER WATCH:
consumerwatch@pcworld.com

FULL DISCLOSURE:
stephen_manes@pcworld.com

HARDWARE TIPS:
kirk_steers@pcworld.com

HASSLE-FREE PC:
hasslefreepc@pcworld.com

INTERNET TIPS: nettips@spanbauer.com

LETTERS: letters@pcworld.com

ON YOUR SIDE: onyourside@pcworld.com

PLUGGED IN: eric_dahl@pcworld.com

PRIVACY WATCH:
privacywatch@pcworld.com

WINDOWS TIPS: scott_dunn@pcworld.com

REPRINTS AND PERMISSIONS

You must have permission before reproducing any material from PC World. Write to PC World, Reprints and Permissions, 501 Second St. #600, San Francisco, CA 94107, or e-mail permissions@pcworld.com; include a phone number. To order reprints of your company's editorial coverage in PC World, call 717/399-1900 ext. 135.

ASUS recommends
Microsoft® Windows® XP



The power of dual-core in a thin, light design

Life in Style-

In your work and
in your play, people
admire you for your style.

Your air of freedom. Your impeccable taste. One company offers you the freedom of superior mobile performance with styles that inspire. The ASUS W2J notebook, based on Intel® Centrino® Duo Mobile Technology, enables high definition capabilities for a stunning home theater experience anywhere. Unique design details—like its sleek, brushed aluminum chassis—provide an unmatched tactile elegance. Because life without style is like bottom shelf vodka.



A vivid 1680x1050 17" cinematic widescreen LCD draws you into the action.



An integrated TV tuner lets you pause, record, and fast forward live TV.



At nearly 1" thin, the W2 received Reddot and iF design awards in 2005.



NewEgg.com
800.390.1119

TigerDirect.com
800.800.8300

ZipZoomFly.com
510.739.1890

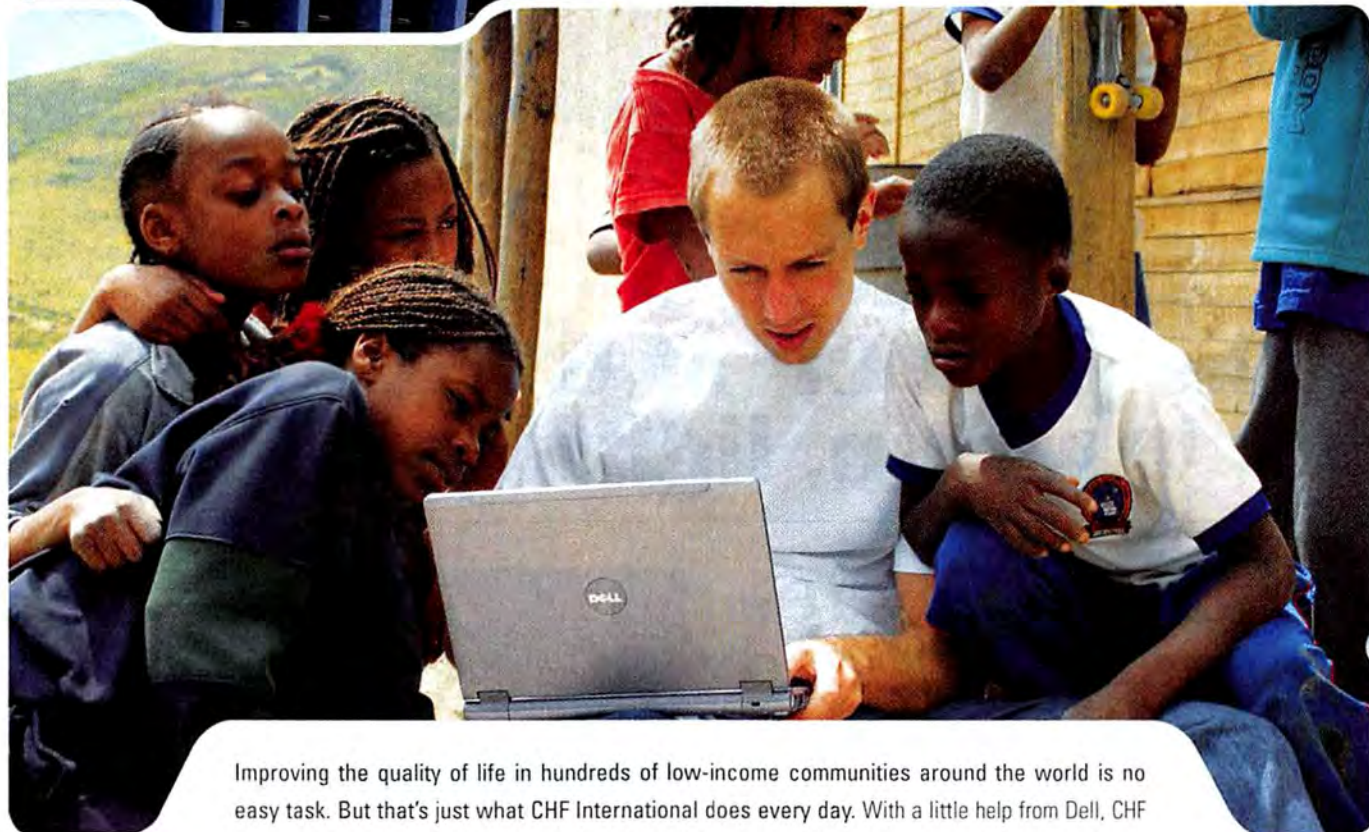
usa.asus.com/style/pcworld/



CHF
International

Powered by Dell Small Business

INTRODUCING DELL'S LATEST TECHNOLOGICAL INNOVATION: A BETTER WORLD.



Improving the quality of life in hundreds of low-income communities around the world is no easy task. But that's just what CHF International does every day. With a little help from Dell, CHF has expanded its community-building efforts from 16 countries to 38 in just seven years. Whether they're improving basic infrastructure, providing loans for new housing initiatives, or nurturing local economies with enterprise development programs, CHF is helping to enhance the social, economic, and environmental conditions for millions in need. Powered by proprietary software that runs on Dell servers, CHF headquarters, donors, project managers, and other stakeholders can coordinate their efforts and share project details in a real-time environment. That's the direct path to growth. That's pure Dell.

POWEREDGE™ 2850* RACK SERVER

\$1899

Lease as low as **\$51/mo.** (48 prmts.)*
E-VALUE Code: 07882-pe2850-min
Small Business Pricing

High-Speed 2U Rack Server – Optional Dual-Core Processing on Select Configurations

- Intel® Xeon® Processor (2.80GHz, 2MB Cache, 800MHz FSB)
- Upgradable to Dual-Core Intel® Xeon® Processor featuring dual-core processing (2.80GHz, 2x2MB L2 Cache, 800MHz FSB)
- 1GB ECC DDR2 SDRAM (Up to 12GB)
- 73GB* (10,000 RPM) Ultra320 SCSI Hard Drive
- 24X IDE CD-ROM
- Dual Embedded Intel® PRO Gigabit* NICs
- 3-Yr Basic Enterprise Support (Next Business Day On-Site Service* M-F 8am-6pm, Hardware Warranty Support)
- Systems purchased with Microsoft® Windows® Server 2003 R2, Standard Edition Operating System, starting at \$2698

POWEREDGE™ 1855* BLADE SERVER

\$1799

per blade Lease as low as **\$48/mo.** (48 prmts.)*
E-VALUE Code: 07882-pe1855-bsapp
Small Business Pricing

Optional Dual-Core Processing on Select Configurations

Dual Processor Blade Server Configuration Per Blade:

- Intel® Xeon® Processor (2.80GHz, 2MB Cache, 800MHz FSB)
- Upgradable to Dual-Core Intel® Xeon® Processor featuring dual-core processing (2.80GHz, 2x2MB L2 Cache, 800MHz FSB)
- 1GB ECC DDR2 SDRAM (Up to 12GB)
- 36GB* (15,000 RPM) Ultra320 SCSI Hot-Swap Hard Drive (Up to 600GB*)
- 3-Yr Basic Enterprise Support (Next Business Day On-Site Service* M-F 8am-6pm, Hardware Warranty Support)
- Requires PowerEdge™ 1855 Enclosure for operation; not included. PowerEdge™ 1855 Enclosures start at \$2999.

POWEREDGE™ 830* TOWER SERVER

\$799

Lease as low as **\$22/mo.** (48 prmts.)*
E-VALUE Code: 07882-pe830sapp
Small Business Pricing

1P Value Tower Server – Optional Dual-Core Processing on Select Configurations

- Intel® Celeron® D Processor 331 (2.66GHz, 256KB Cache, 533MHz FSB)
- Upgradable to Intel® Pentium® D Processor 840 featuring dual-core processing (3.20GHz, 2x1MB L2 Cache, 800MHz FSB)
- 512MB ECC DDR2 SDRAM (Up to 8GB)
- 80GB* (7200 RPM) SATA Hard Drive
- 48X CD-ROM, 680MB, INT
- Embedded Broadcom Gigabit* NIC
- 3-Yr Basic Enterprise Support (Next Business Day On-Site Service* M-F 8am-6pm, Hardware Warranty Support)

*These devices have not been approved by the Federal Communications Commission for use in a residential environment. These devices are not, and may not be, offered for sale or lease, or sold or leased for use in a residential environment until the approval of the FCC has been obtained.

THE TOTAL ENTERPRISE SOLUTION.

Reliable. Expandable. Scalable. And just plain "able." Dell™ PowerEdge™ servers with Intel®

Xeon® Processors provide unique answers for businesses of all sizes. Especially when working in tandem with network support products like PowerVault™ storage, PowerConnect™ switches and Dell's OpenManage™ Systems Management software. Together, they offer flexible, high-performance technology, security, and the power to run critical apps. Sounds like just the edge you're looking for.



NEW DELL™ POWERVAULT™ 110T LTO-3 TAPE DRIVE

Automated, high-capacity back-up and recovery data solution with WORM protection for enterprise and departmental servers and Network Attached storage.

\$4549

Best SMB Switch

— InfoWorld 2006 Technology of the Year Award
Dell PowerConnect 3424P

Delivers an array of enterprise-class features in a tidy package



POWERCONNECT™ 3424P POWER-OVER-ETHERNET GIGABIT SWITCH¹

Robust 24-Port Managed fast Ethernet switch delivering industry-standard technology that integrates data, voice, and power on standard Ethernet infrastructure.

\$999



The Service & Support Professionals Association (SSPA), the leading organization for I.T. support professionals, has awarded Dell Enterprise Services its 2005 STAR Award for service excellence in the category of mission-critical support.



CREATE A CUSTOMIZED I.T. INFRASTRUCTURE WITH DELL'S CUSTOM NETWORK ASSESSMENT FOR INSTALLATION & IMPLEMENTATION.

Dell-certified I.T. Professionals can assess and evaluate your current network infrastructure and business requirements and help develop a comprehensive optimization plan for your exact needs. So whether you're upgrading an existing network or installing a new one, Dell can recommend and deploy the optimal mix of hardware, software and services you're looking for. Call and find out what Dell can do for your business. Chances are it's a lot more than you think.

See how Dell can help your business at dell.com/pcworld

call 800.626.4806

PURE



Call: M-F 7a-8p Sat 8a-5p, CT

***Pricing/Availability:** Pricing, specifications, availability, and terms of offer may change without notice. Taxes, fees, shipping, handling and any applicable restocking charges, other than reshipping offer, if applicable, are extra and vary. Offers may be combined with other select offers or discounts. U.S. Dell Small Business new purchases only. Items leased will be subject to applicable end-of-lease options or requirements. Dell cannot be responsible for pricing or other errors, and reserves the right to cancel orders arising from such errors. **On-Site Service:** Service may be provided by third-party. Technician will be dispatched, if necessary, following phone-based troubleshooting. Subject to parts availability, geographical restrictions and terms of service contract. Service timing dependent upon time of day call placed to Dell. U.S. only. **Leasing:** Monthly payment based on 48-month Fair Market Value ("FMV") QuickLease and does not include taxes, fees, shipping and handling charges. Your monthly payment may vary, depending on your creditworthiness. QuickLease arranged by Dell Financial Services L.P. ("DFS"), an independent entity, to qualified Small Business customers. Minimum transaction size of \$500 required. At the end of the FMV QuickLease, you can: purchase the equipment for the then FMV, renew the lease or return the equipment to DFS. Please contact your DFS representative for further details. All terms subject to credit approval and availability, and are subject to change without notice. **Gigabit Ethernet:** This term does not connote actual operating speed of 1GB/sec. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required. **Hard Drive:** For hard drives, GB means 1 billion bytes; actual capacity varies with preloaded material and operating environment and will be less. **Trademarks/Copyright Notices:** Dell, the stylized E logo, E-Value, Dimension, Inspiron, Latitude, OptiPlex, PowerEdge, Dell Precision, PowerVault, CompleteCare, ExpressCharge, Tri-Metal and UltraSharp are trademarks of Dell Inc. Intel, Intel logo, Intel Inside, Intel Inside logo, Pentium, Pentium Inside, Celeron, Celeron Inside, Xeon and Xeon Inside are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. ©2006 Dell Inc. All rights reserved.

ONE CONTACT.
UNLIMITED DISPLAY SOLUTION RESOURCES.



©2006 NEC Display Solution of America, Inc. All rights reserved.

866.NEC.MORE
WWW.NECDISPLAY.COM/SOLUTIONS



NEC
NEC Display Solutions



Windows' Future: Bad News, Good News

Vista is running late. Macs are running XP. What does that mean for you?

WHEN MICROSOFT SPRUNG the fact that Windows Vista wouldn't reach most folks until next January, it was momentarily startling—but it was also déjà vu all over again. After all, the tradition of Windows slippage began with version 1.0, announced in 1983 but a no-show until 1985.

Shortly after the Vista news came down, Apple unloaded a true bombshell: Boot Camp, its new utility for Intel-based Macintoshes, would let you install Windows alongside Mac OS X. All of a sudden, one system could be a Windows PC and a Mac.

Both developments are reflected in this issue. On page 24, Senior Editor Eric Dahl's Boot Camp story reports on how an iMac does Windows, complete with our Test Center's results. Eric's *Plugged In* column (page 32) examines what the "Windows Vista Capable" stickers on new PCs actually mean. And in "Why Wait for Vista?" (page 28), Contributing Editor Scott Dunn looks at add-ons that give XP Vista-like capabilities right now.

THE (SLOW) ROAD TO VISTA

THE VISTA DELAY amounts to only a few weeks—and with Microsoft saying it needs the time to get security right, no rational Windows user would want it to cut corners to hit a deadline. In other words, this is not that big a deal.

The larger question is whether Vista itself will be a big deal. As I write, there's no indication that it will offer much in the way of breakthroughs. In fact, much of what it promises—from tighter security to handy little desktop applets—is already here in the form of downloadable third-party enhancements.



IT'S WINDOWS XP! On an iMac! Co-conspirators Eric Dahl and Danny Allen with PC World's first XP-OS X machine.

Why isn't Vista bolder? In part, that's because for all of Windows' changes over the past two decades, the business model behind it remains the same. Microsoft still slogs away for years on a gargantuan update, sticks the finished product in a box, and charges \$100 or more for it.

Compare that with the online world, where innovative tools and services pop up almost every day and get updated frequently. Oh, and there's the little fact that an amazing percentage of the best stuff doesn't cost a dime, at least for now.

It's increasingly tough for a product as antediluvian as Windows to remain relevant. (The new Windows Live services—at www.live.com—are genuinely Webby, but they're not really finished, and they're not really Windows as we know it.) That's a depressing prospect for Microsoft, or

for anyone who is pinning their hopes on being instantly wowed by Vista.

At the same time, there's reason for optimism about Windows' future. Boot Camp is a reminder that operating systems are ultimately about letting software work on particular hardware. All those Windows programs being able to run on Apple's inventive machines is only good news.

And the most important thing about Vista may be how it will enable new software to take advantage of cutting-edge hardware such as 64-bit CPUs and ATI and NVidia's latest graphics. True Vista programs won't arrive when the OS does—but without it, they'd never arrive.

"When you shop for a PC, look at the whole platform," advises Associate Editor Danny Allen, who spearheaded this issue's notebook roundup (page 115). For laptops, says Danny, the next advance will come from new technology such as Intel's update to its Centrino mobile platform, code-named Santa Rosa and due in the first half of next year. Laptops built around it will include features such as NAND memory to reduce boot-up time.

Oddly enough, with better hardware down the road, "Microsoft may be doing buyers a favor by making them wait," Danny muses. The combination of Vista, Vista apps, and next-generation PCs (and Macs) should make for interesting times in 2007. And the plot will continue to thicken for Windows and Windows users, in ways that may surprise us all. ■

Harry McCracken is editor in chief of PC World. Contact him at mageditor@pcworld.com; read his blog at blogs.pcworld.com/techlog.



It's a win-win-win. Print, copy and scan in brilliant
Finally, a 24 ppm networked color multifunction

Lucky you. The Xerox WorkCentre C2424 Color Multifunction is the most versatile color multifunction you can get for under \$2,000. Print, copy and scan in crisp black and white,

or brilliant color with Xerox Solid Ink Technology. It's clean, versatile and incredibly fast at up to 24 pages per minute, with an industry-leading first-page-out time of just

Call, click or contact: 888-247-5107 • xerox.com/office/1982 • Your local reseller

KPOT



color, at amazing speed. The Xerox WorkCentre® C2424.
for under \$2,000. **Xerox Color. It makes business sense.**

six seconds. Its speed and performance increase productivity by saving end-user time and maintenance. Easy to use, compact enough for any office,



completely integrated and with a superior image quality of 2400 FinePoint™, the Xerox WorkCentre C2424 Color Multifunction is the winning ticket.

PRINT COPY SCAN

XEROX.

Technology | Document Management | Consulting Services

NEWS & TRENDS

EDITED BY EDWARD N. ALBRO

- 22 HOW TO KEEP YOUR PRIVATE DATA REALLY PRIVATE**
- 24 WINDOWS RUNNING ON A MAC: PRETTY SPEEDY**
- 28 IMPATIENT FOR VISTA? GET ITS BEST FEATURES NOW**
- 30 NEW HARDWARE PROMISES NETWORK SECURITY**
- 32 PLUGGED IN: DRAWBACKS OF SOME FUTURE-PROOF PCs**

New Privacy Threats

AS YOU GUARD YOUR PRIVACY AGAINST STANDARD THREATS LIKE SPYWARE AND PHISHING, YOUR DATA IS LEAKING OUT VIA LEGIT FIRMS YOU DO BUSINESS WITH. BY ERIK LARKIN

GPS QUERIES, CELL phone calls, Web searches—all are quick conveniences. We get our directions, chat with our friends, find our sites, and never think of that data transaction again. But these records create a growing problem, say privacy advocates: They leave a detailed digital trail of where we went, who we talked to—even what we were thinking.

The records can persist for decades, and no comprehensive federal law protects them. Even if you believe the firms you do business with wouldn't sell your records to an unscrupulous marketer, you're not safe. As long as it exists, your data can be sold in bankruptcy proceedings, or snagged by hackers, con artists, and anyone with a court order, says Ari Schwartz, deputy director of the Center for Democracy



and Technology, a consumer advocacy organization.

All these personal records about us are growing. And a number of recent cases have demonstrated just how vulnerable the records can be.

your physical location and driving behavior can be gathered and used against you.

Connecticut-based American Car Rental installed GPS devices in its cars to track speed and location, according to state supreme court documents. The devices wirelessly phoned home to American every time a client drove faster than 79 mph for at least 2 minutes; American then tried to charge its customers \$150 for each instance. American was sued, and the court ruled that the company could not charge a speeding fee—but the court didn't prevent the firm from using GPS devices to track driver speed and location.

Government may get into the GPS act as well. To make up for a projected gas tax shortfall (ironically due to successful fuel efficiency pro-

BEYOND THE LIMIT

GPS DEVICES CAN be a god-send for intrepid explorers and the easily lost alike. But as one court case shows, the intensely personal details of



CHRIS HOOFNAGLE, West Coast office director for the Electronic Privacy Information Center, a consumer advocacy organization.

grams), Oregon's Department of Transportation is considering a tax based on mileage driven rather than gas purchased. A GPS unit in every car would track the mileage.

The department's Web site assures state residents that "no privacy issue exists" with the plan, because the devices would send in only number of miles driven and not location info. But while Oregon has opted not to record locations, there is little to indicate that, like American Rental Car, it could not do so if it chose.

RULES ROULETTE

BECAUSE NO comprehensive national privacy laws exist, figuring out what a business (or government) can do with your data depends on your state, the industry, and the type of information involved. "One company could be covered by seven or eight different types of privacy laws," says the CDT's Schwartz.

Advocates have pushed for a national standard for years,

but acknowledge that we're nowhere near getting one.

Consider something as private as what you watch on television. Cable companies are governed by specific laws that spell out what they can and can't do with the details of your viewing habits; for instance, they are generally prohibited from sharing your information with third parties. But digital video recorders like TiVo fall outside those laws, says Schwartz.

"TiVo has a pretty strong privacy policy for what they do with the information" they collect, and the company is bound by it, he says. But coming up with that policy was a business decision, not a legal mandate, and the company could choose to change its policy at any time.

"The consumer dilemma is, similar products or services can have very different privacy implications," says Chris Hoofnagle, West Coast office director for the Electronic Privacy Information Center, a

privacy advocacy group. Users shouldn't be expected to know that, he says, "but they are."

SEARCHED AND SEIZED

USERS WHO ARE concerned about privacy also need to know details about what every business actually does with their information. Take Internet searches, for example.

Once you get your search results, you forget about the search and move on. Search companies don't forget. They store those searches, often along with an identifier showing who ran the search; how well the firm safeguards your data varies by search engine.

The important questions, Hoofnagle says, are: "How long will the data be kept, for what purposes will it be used, and what do [the companies] do when the police come knocking on the door?"

A case in point: The U.S. Department of Justice recently sought "a massive amount of information from Google's search index, and [ordered Google] to turn over a significant number of search queries entered by Google users," according to court documents. The Justice Department subpoenaed several search engines for information in defense against a lawsuit brought against the U.S. Attorney General's office over the Child Online Protection Act. According to the Justice Department and the judge's ruling, AOL, Microsoft, and Yahoo all complied with the request at least in part. In fact, many companies' privacy policies state that they will give the government data if asked.

Google fought, and won. Sort of. The judge ruled that the government could have ▶

IN BRIEF

Product Pipeline



SUPERFAST WI-FI: Though the 802.11n standard for superfast Wi-Fi isn't expected to be final for another year, products based on the IEEE's initial draft are beginning to appear on shelves. Belkin's N1, Buffalo Technology's AirStation Nfiniti, D-Link's RangeBooster N, Linksys's Wireless-N, and Netgear's RangeMax Next lines feature routers for \$150 to \$250 and adapters for \$130. They promise real-world throughput of up to 150 megabits per second at close range, but only if all gear is in the same product line. Also, there's no guarantee you'll be able to upgrade to the eventual standard.

Tidbyte

SPYWARE SUIT: New York attorney general Eliot Spitzer is seeking a court order barring the online ad firm Direct Revenue from installing "spyware" or sending ads through software it allegedly has surreptitiously installed on millions of PCs. Direct Revenue called the New York Supreme Court lawsuit "baseless," saying it focuses on practices the company ended years ago, and were legal at the time.

a list of some site addresses found in Google's index, but denied the demand for search terms. The government had not asked for information that might have specified who conducted each search, but U.S. District Judge James Ware noted several potential privacy risks related to search strings, such as in the case of a "vanity search" where someone might look for data about themselves. And he highlighted a potentially serious privacy concern with searches run by a third party about another party, such as "[name] third trimester abortion san jose."

Google doesn't disclose its data retention policies, and it didn't respond to our questions about those policies. But Hoofnagle says that data older than 180 days can be subpoenaed more easily than newer info. Google cookies last over three decades on your PC.

Like Google's searches,

Yahoo's use a cookie with a unique code; each search is tied to that identifier. The code isn't linked to personal data, like your age or location, but if you search while logged in to Yahoo, that search is tied to your Yahoo profile.

Yahoo stores those search details "for as long as it's use-

special offers aimed at users, it never gives user data to its partner, Anklesaria says.

CELLULAR SIEVE

EVEN IF A company does not willingly share your information with third parties, you may not be safe. Until the beginning of this year, your cell

those records to anyone willing to shell out \$150 or so.

The good news is that these sites are shutting down due to an "incredible amount of enforcement scrutiny," says Hoofnagle, whose organization has testified before Congress on the matter. But since the demand for your data isn't going away, "my fear is that they'll simply move it underground," Hoofnagle says.

Government, he says, treats privacy issues like isolated fires: Scandals erupt when thieves steal loads of information from data brokers or pretexters run amok, then Congress crafts specific laws in response. A law setting national standards for data privacy would prevent many of those fires, but none is likely anytime soon. Until Congress changes its crisis approach to privacy issues, users who want to take control of their private data are on their own.

A slew of sites offered stolen phone records to anyone willing to shell out \$150 or so.

ful," says spokesperson Nissa Anklesaria. And they're useful indeed. Yahoo's successful finance site came about in part because the firm saw many people running searches for financial information. However, Yahoo keeps your personal details to itself: Even when Yahoo works with third parties on ad campaigns and

phone call list, for example, was easy pickings for unscrupulous agents. So-called pretexters were making a thriving business of calling cell phone firms, masquerading as a client, and getting a copy of that person's last bill—with a list of all phone numbers for calls both made and received. A slew of sites then offered

PRIVACY TIPS

FOUR WAYS TO TAKE BACK YOUR PRIVACY

RESTORE YOUR PRIVACY by taking control of the information that businesses and other parties can access about you.

Opt out: Companies can share a lot of your data—unless you tell them to stop. The Center for Democracy and Technology offers an excellent free service at opt-out.cdt.org that links to online opt-out forms for numerous businesses, and that can generate opt-out letters for you to mail to firms that lack online options. Also, when signing up for any new service, look for the check box that refers to sending you special offers and be sure you're not automatically signed up.

Protect your call records: Contact your cell provider and set up a password on your account. You can also ask the provider to remove call details from your bill



to keep others from seeing them (though you'll lose them, too). To check if you've been compromised, ask if the firm has released your records or if anyone has activated an online account in your name.

Read the policy: Reading privacy policies or End-User License Agreements

(EULAs) is like flossing—we know we should, but we usually don't bother. The free EULalyzer from Javacool Software (find.pcworld.com/52876) makes the task much easier by examining the policy or EULA for you and searching for keywords (such as "Third Party"). The software then rates what it finds to let you know which ones to beware of.

Surf and search anonymously: One quick-and-dirty Google cookie anonymizer at find.pcworld.com/52878 removes your unique identifier from the Google cookie. Know that using it will clear any Google preferences you've set, like how many search results display per page. Also, you'll find a guide to many resources for anonymously surfing the Internet at find.pcworld.com/52880.

Displays so **BIG** you'll have to
change your **PERSPECTIVE**. We did.



The 23" VP2330wb and 20" VG2021m. Two of ViewSonic's many bigscreen LCD displays.

20" - 23" LCD DISPLAYS | BIG. BRILLIANT. BEAUTIFUL.

Lose yourself in big screen LCD displays. All our superior features – ergonomics, high performance, elegant design – are represented in our super size displays. Get superior front of screen performance with PerfectSuite® control management software in every VP2330wb. Experience real multimedia with speakers and multiple inputs in the VG2021m. Or see fast response time in widescreen with the VX2025wm. Just a few of many huge products from the visual experts of ViewSonic.

**BUY NOW. CALL 888-881-8781 OR VISIT VIEWSONIC.COM/BIG
FOR DEALER LOCATIONS AND DETAILS ON OUR BIG PRODUCTS.**



the choice of professionals

OPERATING SYSTEMS

Boot Camp Lets XP Run on Intel Macs

APPLE'S BETA SOFTWARE MAKES CREATING A DUAL-BOOT SYSTEM QUICK AND EASY.

WINDOWS XP HAS arrived on Intel-based Macs, courtesy of two new pieces of software—Apple's Boot Camp and Parallels' Parallels Workstation 2.1. We tested both products and found Boot Camp an intriguing high-performance option for anyone who'd like to run OS X but still needs Windows for productivity or gaming.

Boot Camp and Parallels Workstation take different approaches to bringing Windows to Macs. Apple's utility helps automate the process of creating a dual-boot machine that can run Windows natively. The functionality will be built into the next release of Mac OS X, dubbed Leopard. In contrast, Parallels, a \$40 download, employs Intel's virtualization technology to run Windows and other operating systems from inside OS X.

So how well do they work?

We ran Boot Camp's installer on an iMac and found the process amazingly smooth. The graphics drivers were solid, and the 20-inch iMac's display response in app and gaming tests was fine. As a virtual OS environment, Parallels couldn't run our WorldBench 5 or gaming tests, but it performed adequately in hands-on testing.

GOING TO BOOT CAMP

BOOT CAMP WORKS only on Apple's new Intel-based Macs and requires the latest version of Mac OS X (10.4.6) plus a firmware update. After you've updated your computer, you can download, install, and run Boot Camp Assistant, which burns a CD of Windows drivers for you and helps you repartition your Mac's hard disk and install Windows XP.

On the iMac we tested, Boot Camp cleverly handled the



BOOT CAMP'S Startup Disk preferences page is where you choose which operating system will start by default when you boot up.

series of reboots required to get XP set up. Once the system is fully configured, you can hold down the <Option> key while booting to choose which OS to start. Boot Camp also installs an OS X preferences page and a corresponding XP Control Panel applet to let you pick the default OS.

All in all, under Boot Camp our test system performed just like a real Windows PC in basic application testing—exactly what you'd want from a usable dual-boot machine. Firefox downloaded and installed without a hitch, and iTunes streamed songs easily from other computers on the network. Both wired and wireless networking operated fine in our experience.

The quick and dirty verdict on Boot Camp performance? Most impressive. The hardware in our 20-inch iMac is similar to a high-end laptop's, and our application and gaming test results were exactly what you'd expect from that type of machine (see below).

Parallels, on the other hand, felt like a virtual OS. The performance hit is smaller than what you would get from Virtual PC, though, and the environment was apparently stable and responsive enough to run non-performance-intensive applications. It's not a solution for gamers, but for any person who would prefer to spend all of their time in OS X, it might be a good option.

—Eric Dahl

TEST REPORT

BOOT CAMP PERFORMANCE IMPRESSES

IN OUR WORLDBENCH 5 and gaming tests, a 20-inch iMac running Windows XP ran neck and neck with similar Windows PCs.

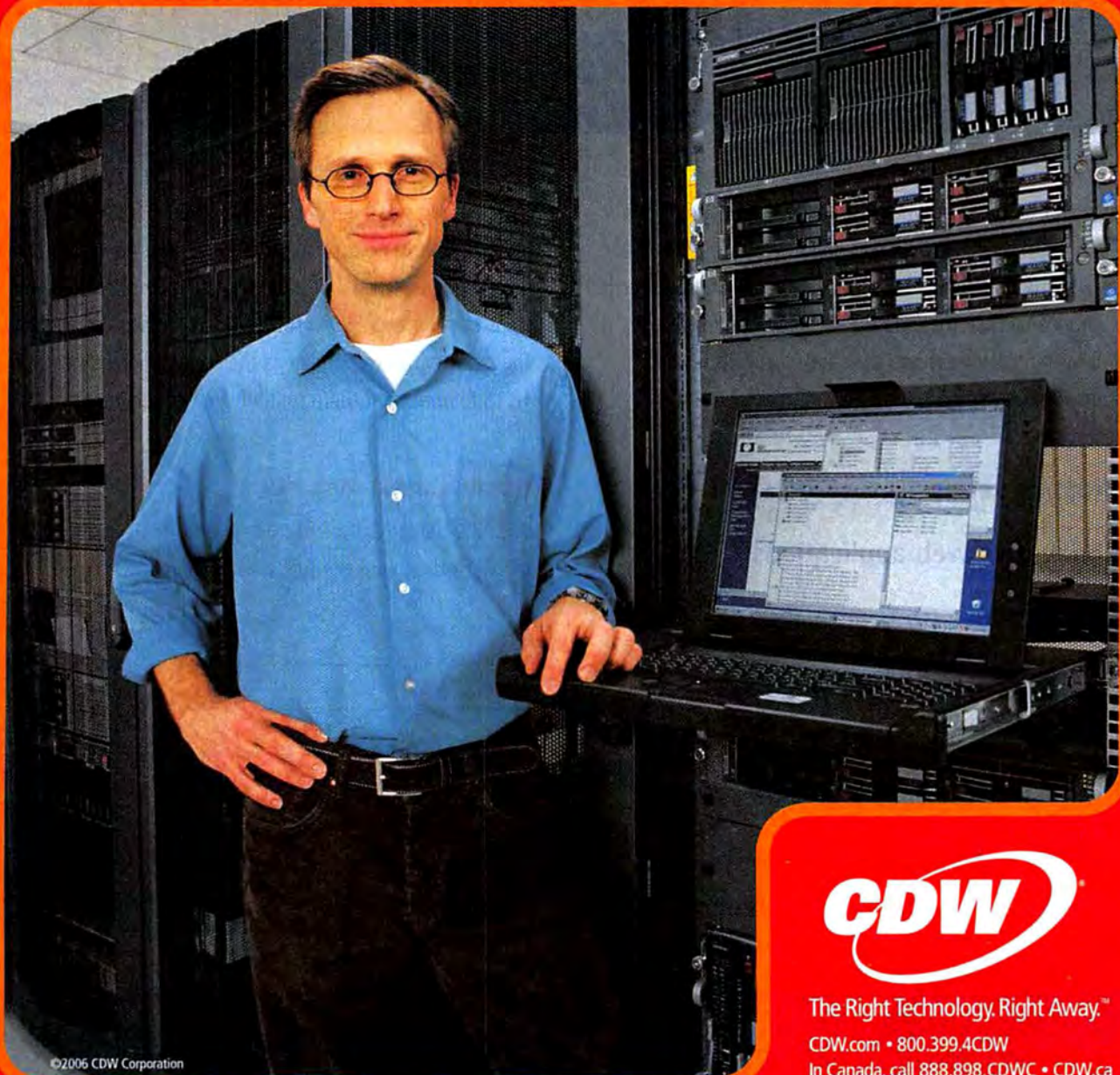
TESTED SYSTEM	CPU/RAM	Graphics hardware	WorldBench 5 <i>Enter</i>	Doom 3 (1024 by 768) ¹	Doom 3 (1600 by 1200) ¹	Far Cry (1024 by 768) ¹	Far Cry (1600 by 1200) ¹
Apple iMac	2-GHz Core Duo/ 1GB RAM	ATI Radeon X1600, 128MB RAM	96	48	41	93	65
COMPARABLE NOTEBOOK PCs							
HP Compaq nx9420	2.16-GHz Core Duo/ 1GB RAM	ATI Mobility Radeon X1600, 256MB RAM	101	44	37	92	62
Acer TravelMate 8200	2-GHz Core Duo/ 2GB RAM	ATI Mobility Radeon X1600, 256MB RAM	100	56	47	101	77

TEST CENTER FOOTNOTE: ¹Numbers are in frames per second. Test run without antialiasing. CHART NOTES: Best scores are in bold. All tests conducted by the PC World Test Center. For details on how we test, go to find.pcworld.com/52482. All rights reserved.

How can you protect your network and your peace of mind?

(We've got the answer.)

Confidence. When it comes to security information or anything else in technology, CDW delivers just that. That's why we give you a trained, dedicated account manager who knows your technology setup and the products we carry. So when you call you get faster, more insightful answers. That's also why we have industry-certified technology experts available. As well as technical support anytime you need it. Add in access to the industry's largest in-stock inventories and fast delivery, and you've got a technology resource that's a little different. It's one you can count on.



©2006 CDW Corporation



The Right Technology. Right Away.™

CDW.com • 800.399.4CDW

In Canada, call 888.898.CDW • CDW.ca

1&1 – THE CLEAR WINNER



Award-Winning Web Hosting

When you're the best at what you do, people notice. That's why 1&1 was named Best Web Hosting Company of 2005 by Hostreview.com, a leading independent web hosting research firm. And it's not just the industry experts who are sold on 1&1. With 5 million customers and counting, many of our best recommendations still come by word-of-mouth.

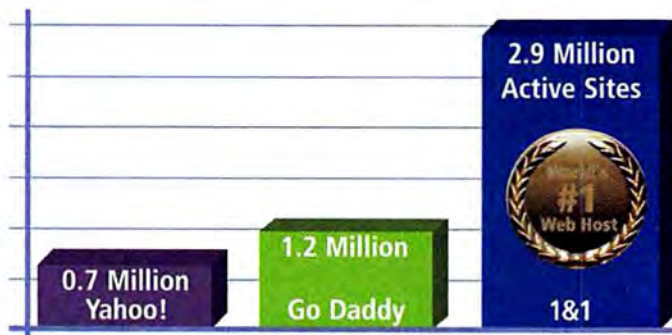
- ✓ Hosting services provided since 1995
- ✓ Innovative web applications
- ✓ 150 in-house programmers
- ✓ One-stop shop for all your website needs
- ✓ All-inclusive prices with no hidden charges
- ✓ 90-day money back guarantee

Follow the Leader

As the world's #1 web host, 1&1 continues to raise the standard for reliable hosting even as we maintain our low prices. 1&1 has taken the guesswork out of web hosting by offering all-inclusive plans starting at \$2.99/month, with no hidden costs or fine print. The industry has responded as the competition rushes to match 1&1's features, but there can only be one leader.

World's Largest Web Host

With 2.9 million active sites worldwide, 1&1 is a global leader in volume and web hosting power.



Source: Netcraft Ltd – www.netcraft.com April 1, 2006

NER IN WEB HOSTING



**FREE
DOMAINS
INCLUDED**
.com, .net, .org, .info

1&1

HOME

\$4⁹⁹

Price Per Month	
Included Domains	2
Web Space	50 GB
Monthly Transfer Volume	500 GB
E-mail Accounts	1,000 IMAP or POP3
Mailbox Size	2 GB
Website Builder	12 Pages
Photo Gallery	✓
Dynamic Web Content	✓
Web Statistics	✓
Chat Channels	✓
Database	25 MySQL (Linux)
Search Engine Tools	✓
PHP Support (Linux)	✓
Perl Support (Linux)	✓
Software Suite (\$600 Value)	✓
90-Day Money Back Guarantee	✓
Support	24/7 Toll-free Phone, E-mail

VALUE

**1&1 delivers
the best value
for your money!**

No setup fee

YAHOO!

STARTER

\$11⁹⁵

	1	\$1.99/year with purchase
Web Space	5 GB	50 GB
Monthly Transfer Volume	200 GB	500 GB
E-mail Accounts	200 POP3	1,000 POP3
Mailbox Size	2 GB	10 MB
Website Builder	✓	Freeware
Photo Gallery	✓	✓
Dynamic Web Content	✓	—
Web Statistics	✓	✓
Chat Channels	—	✓
Database	MySQL Support	25 MySQL (Linux)
Search Engine Tools	Extra Charge Applies	\$29.95/year additional
PHP Support (Linux)	✓	✓
Perl Support (Linux)	✓	✓
Software Suite (\$600 Value)	—	—
90-Day Money Back Guarantee	—	—
Support	24/7 Toll-free Phone, E-mail	24/7 Phone, E-mail

Go Daddy

DELUXE

\$6⁹⁵

or visit us now **1and1.com**

Go to find.pcworld.com/52410

1&1

© 2006 1&1 Internet, Inc. All rights reserved. Prices based on a comparison of regular prices effective 3/21/06. Product and program specifications, availability, and pricing subject to change without notice. Visit 1and1.com for details. Go Daddy is a registered trademark of Go Daddy Software, Inc.; Yahoo! is a registered trademark of Yahoo! Inc.

WINDOWS UTILITIES

Why Wait for Vista?

FREE AND LOW-COST ADD-ONS BRING VISTA FEATURES TO YOUR CURRENT XP SYSTEM.

VISTA DELAY, SCHMISTA delay. You'll have to wait a little bit longer for Microsoft's new operating system (see Editor in Chief Harry McCracken's *Up Front* column on page 17 for more on the delay), but you can get many of Vista's security, performance, and interface improvements in Windows XP right now, usually for little or no money.

NEED SPEED?

VISTA PROMISES to start and shut down faster than XP, as well as to quicken application launches. SystemBoosterXP (find.pcworld.com/52808) uses a technique similar to Vista's prefetching, which anticipates the files you're likely to request next to speed file and app loading. You can try the utility for 30 days before paying a \$20 registration fee.

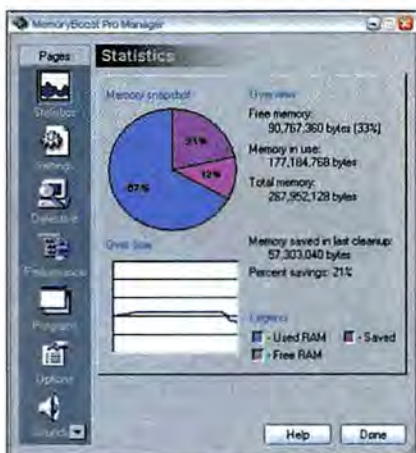
If you're running out of system memory, MemoryBoost Pro (find.pcworld.com/52812) hunts down RAM hogs, corrects memory leaks, and frees up unused memory. If a particular application needs all the memory it can get, you can create a "boost shortcut" that gathers all available RAM before it launches. MemoryBoost Pro costs \$20 and provides a 30-day free trial period. If that's out of your price range, the freeware utility FreeRAM XP Pro (find.pcworld.com/52814)

is designed to do much the same thing, although with relatively modest features.

SAFE KEEPERS

IN VISTA YOU'LL be able to secure your data by putting your hard drive's encryption key on an external USB drive. You can do something a lot like this for your notebook computer via Kensington's \$70 PCKey (find.pcworld.com/52816), which protects an entire hard drive, or with the company's \$50 PCKey LE (find.pcworld.com/52818), which safeguards individual files. You must insert the hardware key into a USB port and enter a password to unlock its 128-bit Advanced Encryption Standard protection and access your data. If you register your product and password at the Kensington Web site, you get support for lost passwords and keys.

Parents will be delighted



THE \$20 MEMORYBOOST PRO program helps you manage your PC's memory more effectively.



GET AN INSTANT VIEW of all your currently open windows, and then click the one you want to enlarge, with the \$10 WinPlosion utility.

with Vista's ability to block objectionable content. But for \$40, SentryPC (find.pcworld.com/52826) lets you block undesirable Web sites, as well as stifle online chatting, objectionable words or phrases, and unwelcome applications. You can limit the hours and days the computer and/or specific applications may be used. The trial version runs for only an hour at a time, but at least you can try its features before buying the full app.

LOOKS MATTER

VISTA'S NEW AEROGLASS interface isn't just window dressing; it will also help you work more efficiently by letting you locate data faster and move quickly among open windows. For example, Vista will list a file's properties and other metadata in a pane at the bottom of Explorer windows. The freeware InfoTip Extension (find.pcworld.com/52830) allows you to beef up the pop-up info tips you see when you hover your mouse pointer over a file icon. You can also customize the information that

appears, and even display the contents of a text file. Unfortunately, this utility provides no additional information for MP3s, WMAs, WMVs, and other music and video files (which arguably already have pretty good info tips).

For a very Mac-like way to switch applications, try the \$10 shareware program WinPlosion (find.pcworld.com/52838). As with Macintosh OS X's Exposé feature, moving your pointer to a designated corner will display all open windows in a zoomed-out view; just click one of the windows to restore the previous view, but with the targeted window in front.

If you're looking for some of the transparency Vista's interface uses, you can buy tools that apply a variety of see-through effects to Windows (such as the \$20 Actual Transparent Windows from Actual Tools, find.pcworld.com/52840). But why bother? Freeware can do most of the same tricks. To apply transparency to windows or the taskbar, try TransApps from Vasilios Freeware (find.pcworld.com/52872); it does both—though little else.

—Scott Dunn

Small Workgroup Office ●

● Branch Office

● Corporate Office

Road-Warrior Office ●

● Home Office

**Take cost out of your business and increase productivity.
No matter where you do business.**

The Brother Advantage

- Comprehensive selection
- Increased productivity
- Lower acquisition costs
- Reduced consumable costs
- 24/7/365 support and service
- Free evaluation program



Mobile Printing Solutions



Labeling Solutions



Desktop Laser Solutions



Color Laser Solutions



Network Printer Solutions



Multi-Function Solutions



Fax Solutions

Brother Printer, Fax and Multi-Function Center® models — designed to increase productivity while decreasing overhead.

Considering that over 94% of Fortune 1000 company employees work outside corporate headquarters*, equipping them with a cost-effective solution is, to say the least, a major challenge.

That's why Brother's Commercial Division is committed to providing superior and reliable imaging solutions that increase productivity while reducing costs. This enables businesses like yours to effectively address critical organizational goals and challenges.

But it is our product reliability, coupled with a responsive nationwide support and service network, that has companies like yours putting Brother at the top of their requisition lists.

Brother's Commercial Division welcomes the opportunity to put our resources to work for you. Contact us today so we can show you how we can positively impact your bottom line while enhancing your performance.

For more information, call 1-866-455-7713.

*Purchase Influence in Larger American Businesses (Erdos & Morgan, 2001).

At your side.™
brother®

© 2005 Brother International Corporation, Bridgewater, NJ • Brother Industries Ltd., Nagoya, Japan
For more information visit our Web site at www.brother.com

SECURITY

New Devices Promise Protection in a Box

SECURITY GATEWAYS CLAIM TO STOP THREATS BEFORE THEY REACH YOUR NETWORK.

KEEPING A PC secure is a hassle. You need to run anti-virus and antispyware software, a firewall, and perhaps an antiphishing toolbar, all of which have to be updated and managed. But manufacturers of a new class of security appliances are promising simpler security through hardware that stops threats before they reach your network.

These smart gateways run security software that is managed automatically. New virus definitions and application updates are pushed to the devices from the companies that sell and manage them.

But can a security-focused gateway truly replace the desktop antivirus and firewall software you run on your PC? Our tests indicate the answer is no, as security appliances can't remove infections that are already on computers or stop all new infections. But security appliances offer more substantial protection than a typical hardware gateway, and they can prevent unwary users from downloading certain types of malicious software.

THREE NEW OPTIONS

WE LOOKED AT three security appliances: Netgear's \$150 WGT624SC Super G Wireless Router (find.pcworld.com/53050), the \$150 Spam Cube (www.spamcube.com), and TrustEli's \$200 Eli Security Appliance (www.trusteli.com). The Netgear and TrustEli devices both include software to protect against virus-

es, spyware, phishing attacks, and spam—plus a firewall and software to filter objectionable Web content. The Netgear unit also includes a one-PC license for Trend Micro Home Network Security software. The Spam Cube is more limited in function: The device filters spam and scans your e-mail for viruses.

All of this additional security doesn't come cheap. Besides the cost of the gateways, you'll be charged a monthly or annual maintenance fee for software updates. The SpamBox has no maintenance fee for spam filtering, but its optional antivirus scanning is \$52 a year. Netgear charges users \$99 a year (after the first year of use) for maintenance on its Security Edition router. TrustEli charges \$120 per year for its update service; you pay for the first year of service when you buy the device.

While you don't have to be a networking expert to install these products, the process isn't exactly a plug-and-play experience, either.

The Eli Security Appliance requires you to do some configuration on the device itself; then, once the unit can connect to the Internet, you must make additional changes on a secure, password-protected Web page. For instance, you can enable virus scanning only via the secure Web page.



DEVICES FROM TRUSTELI (top) and Netgear promise simpler network security.

The only difference between setting up the Netgear security appliance and any other Netgear gateway is a page on its Web-based installation interface that enables or disables the security settings. Fill in a check box labeled 'Enable Security Services', and the unit's built-in Trend Micro Security software begins filtering incoming e-mail and will block any attempt to load unsavory Web pages. A separate settings page permits you to decide which general categories of Web sites you want to block; categories include gambling, hacking, and porn.

CUBE O' SPAM

THE SPAM CUBE is the easiest of the three to set up: Just plug one end into your broadband connection and the other into your network gateway. The Spam Cube flags suspect

messages by adding a '[SPAM]' or '[VIRUS]' label to the e-mail subject line. Users of Microsoft Outlook or Outlook Express can add 'This is Spam' and 'This is Not Spam' toolbar buttons, for training the Spam Cube. But using the device with a different mail client is tougher: If it labels legitimate messages as spam, the only way to correct it is to visit the unit's Web-based control panel.

While security appliances can stop some kinds of malicious soft-

ware, such as viruses attached to e-mail messages, these devices can't completely replace antivirus software and two-way software firewalls, such as ZoneAlarm, that monitor activity on each PC. That's because security appliances can't clean a virus or spyware infection from a computer, and they can't prevent users from copying infected files onto their machines from a device like a USB flash memory drive or CD.

But by blocking the sites that host malware downloads, and filtering spam and scam e-mail, security appliances can prevent users from falling into some common security traps. For small businesses with Web-surfing employees, or even homes with download-crazy teenagers, they provide another layer of protection.

—Andrew Brandt



WORRY LESS. ACHIEVE MORE.



Trend Micro Worry-Free Security Solutions

When you're chasing your ambitions, you can't slow down to worry about security. Get the all-in-one security designed specifically for Small and Medium Business—a breakthrough approach that provides Automatic Protection 24/7 with zero administration. Trend Micro. Far more protection, far less worry.

Get a **FREE 30-day trial** at www.trendmicro.com/worryfree



PLUGGED IN

ERIC DAHL

What Is a 'Vista Capable' PC?

PLUS: MORE RIVALS FOR GOOGLE AND A NEW TYPE OF HANDHELD.

PCs GET READY FOR VISTA

The Buzz: If you've been out shopping for a new PC recently, you've probably noticed "Vista Capable" stickers on machines. Microsoft hasn't nailed down the actual minimum requirements for Windows Vista; it has offered some guidelines, though (see find.pcworld.com/52786), and these machines meet them. To run the no-frills Vista Home Basic version, a computer must be equipped with a "modern" CPU, 512MB of RAM, and a DirectX 9-class graphics processor—not exactly high-end stuff. Here's yet another reason to pass on PCs with integrated graphics: For the full Vista experience, you'll need more graphics



hardware, including a Pixel Shader 2.0-capable GPU and at least 64MB of fast-running graphics memory.

Bottom Line: Spend an extra \$100 or so for a decent graphics card, and you won't be sorry. Sure, an integrated-graphics system will be capable of running Vista—in much the same way that I'm "capable" of hitting a single off Randy Johnson.

NEW SEARCH OPTIONS

The Buzz: Google's great, but it doesn't do everything. Lately I've seen a resurgence in interesting new search sites that aim to help you parse the vast field of results for any search you run. Kosmix offers three different search categories—Health (in beta), Travel (in alpha), and Politics (in alpha)—and each breaks down your results into a number of useful subcategories for easier browsing. A search at Congoo lets you freely read content that normally sits hidden behind the registration-only wall at sites like those of the *Financial Times*, *AdWeek*, and *Billboard*. And Acoona's SuperTarget feature gives you intelligent options to narrow down your searches for news stories, businesses, or Web sites.

Bottom Line: I'm all for new search options, and these are good ones, but leave me out of the growing Google backlash. Come on people, just because the band's popular doesn't mean it has sold out.

HYPED HANDHELDS

The Buzz: Excitement continues to surround Origami, the Intel and Microsoft handheld PC project that's now officially called the Ultra Mobile PC. In the Unit-

HERE\NOW

1 WEBAROO: Search the Web even when you're offline by downloading packs of information. webaroo.com

2 AJAXWRITE: It's not actually an Ajax app, but this impressive online word processor works like one. ajaxwrite.com

3 NEW SONOS: Ultra-slick, \$999 bundle streams digital music to multiple rooms. sonos.com

4 JOBSTER: Interesting, Ajax-based job search site integrates Google maps and popularity listings. jobster.com

5 OBLIVION: Sure, I'm late mentioning it, but that's only because I can't stop playing this amazing RPG. elderscrolls.com



ed States, Asus and Samsung have each announced plans to release the tablet-like units, which will include a tool called Microsoft TouchPack that optimizes the touch screen for both stylus input and fingertip controls.

Bottom Line: The UMPCs I've seen look like "tweener" products to me: too big to fit in a pocket, but too small to use for real work. The fact that one of them costs as much as a standard notebook isn't a selling point, either. ■

You can contact PC World Senior Editor Eric Dahl at eric_dahl@pcworld.com; visit find.pcworld.com/31643 to read additional Plugged In columns.

FUTURE TECH

FAST-CHARGE BATTERIES

THERE'S NOTHING GLAMOROUS about the capacitor—the energy-storing device inside your electronics that you've been warned for years not to touch. But researchers at MIT and elsewhere are hard at work creating so-called supercapacitors that could eventually supplant laptop batteries. Their big advantage: recharge time. Normal rechargeable batteries rely on a chemical reaction to store and release energy, and fully recharging a battery can take an hour or more. A supercapacitor can achieve a full charge in just a few seconds. Supercapacitors are already seeing limited use, and MIT estimates that future capacitors will provide enough power to replace laptop and cell phone batteries.

Acer recommends Windows® XP Professional.

acer

Ferrari 4000

TECHNOLOGY DRIVER

May/June 2006



Acer®, like Ferrari, is the technology driver of tomorrow. Both produce desirable, eye-catching and devastatingly fast products that embody the passion, spirit and experience of years leading the competition. The magnificent carbon fiber casing of the **Ferrari 4000** conceals the very latest 64Bit technology, full wireless connectivity and widescreen monitor. Powerful, dark and purposeful, the **Ferrari 4000** has the presence of a true champion.

- AMD Turion™ 64 Mobile Technology ML-40
 - AMD PowerNow!™ Technology
 - HyperTransport™ Technology
 - Enhanced Virus Protection Technology¹
- Genuine Windows® XP Professional x64 Edition
- 1GB DDR333 SDRAM
- 120GB² hard drive
- Integrated DVD-Super Multi double-layer drive
- 5-in-1 card reader for optional MultiMediaCard™, Secure Digital card, Memory Stick®, Memory Stick PRO™ or xD-Picture Card™
- 15.4" WSXGA+ (1680 x 1050) TFT display
- ATI® MOBILITY™ RADEON® X700 graphics, 128MB DDR
- 802.11b/g WLAN, Bluetooth®, gigabit LAN, V.92 modem
- One-year limited warranty¹

Ferrari 4006WLMi

\$2,199

(LX.FR40M.027)

Ferrari

OFFICIAL LICENSED PRODUCT

Produced under license of Ferrari Spa. FERRARI, the PRANCING HORSE device, all associated logos and distinctive designs are trademarks of Ferrari Spa.

For the name of a reseller near you or further information, please call Acer or visit our Web site: **800-571-2237 | www.acer.com/us**

acer

acer

F-20"

- 20" wide-screen TFT LCD, Acer CrystalBrite Technology
- 1680 x 1050 native resolution
- 800:1 contrast ratio
- 176° horizontal viewing angle
- 176° vertical viewing angle
- Two 5.0W integrated speakers
- VGA, DVI-D signal connectors
- 300 cd/m² brightness
- 8ms gray-to-gray response time
- External power adapter
- Gloss black/red color

F-20"
\$499

(ET.L380B.063)

Ferrari

OFFICIAL LICENSED PRODUCT

Produced under license of Ferrari Spa. FERRARI, the PRANCING HORSE device, all associated logos and distinctive designs are trademarks of Ferrari Spa.



Acer® Flat Panels: Displaying Quality & Value

Acer AL2416Wd

- 24" wide-screen TFT LCD
- 1920 x 1200 native resolution
- 1000:1 contrast ratio
- 178° horizontal viewing angle
- 178° vertical viewing angle
- VGA, DVI-D signal connectors
- 500 cd/m² brightness
- 6ms gray-to-gray response time
- Internal power adapter
- Silver color

Acer AL2416Wd

\$799

(ET.L6102.018)



\$120 PRICE CUT!



Acer® TravelMate™ 4400

Powerful Business Asset



The Acer TravelMate 4400 features everything you need to perform at your best in today's business environment, including advanced graphics capabilities, wide-screen display and wireless connectivity. Moreover, because this notebook is powered by AMD Turion™ 64 Mobile Technology, you'll experience leading-edge 32-bit performance and seamless 32- to 64-bit migration. For added convenience get the ezDock Docking Station, your one-step connection to desktop peripherals.



Acer TravelMate 4404WLMi

\$1,199

AMD Turion™ 64 Mobile Technology ML-34
Genuine Windows® XP Professional
(LX.T7806.091)

- AMD Turion™ 64 Mobile Technology ML-34
 - AMD PowerNow!™ Technology
 - HyperTransport™ Technology
 - Enhanced Virus Protection Technology¹
- Genuine Windows® XP Professional
- 1GB DDR333 SDRAM
- 120GB² hard drive
- Integrated DVD-Super Multi double-layer drive
- 6-in-1 card reader for optional SmartMedia™ card, MultiMediaCard™, Secure Digital card, Memory Stick®, Memory Stick PRO™ or xD Picture Card™
- 15.4" WXGA (1280 x 800) TFT display
- ATI® MOBILITY™ RADEON® X700 graphics, 64MB DDR
- 802.11b/g WLAN, gigabit LAN, V.92 modem
- One-year limited warranty³

15.4" WIDE-SCREEN



Prices shown are estimated street prices and do not include tax or shipping. Retailer or reseller prices may vary.

Acer® ezDock

Manage and organize peripheral connections with ease. Add or remove devices instantly, without turning off your notebook. The one-plug Acer ezDock features 21 interface ports and two card slots for desktop-like expansion possibilities, as well as PCI Express™ technology and a Kensington® lock slot.



Acer ezDock Docking Station

\$299

(LC.D0103.004)

Compatible with the TravelMate 8200, 8100,
4670, 4650, 4400, 3010, 3000, C310, C200;
Ferrari 4000

acer

Compare LCD Prices/Features & You'll Choose Acer®



Acer AL2051 W

\$409

(ET.L7008.006)

Acer AL2051 W

- 20" wide-screen TFT LCD, Acer CrystalBrite Technology
- 1680 x 1050 native resolution
- 800:1 contrast ratio
- 176° horizontal viewing angle
- 176° vertical viewing angle
- Two 1.5W integrated speakers
- VGA, DVI-D signal connectors
- 300 cd/m² brightness
- 8ms gray-to-gray response time
- External power adapter
- Silver/black color

BUILT-IN SPEAKERS



Acer AL1951C

\$359

(ET.L4108.068)

Acer AL1951C

- 19" TFT LCD
- 1280 x 1024 native resolution
- 700:1 contrast ratio
- 150° horizontal viewing angle
- 135° vertical viewing angle
- Two 1.5W integrated speakers
- VGA, DVI-D signal connectors
- 400 cd/m² brightness
- 4ms response time
- External power adapter
- Silver/black color

4MS RESPONSE TIME



Acer AL1916W

\$249

(ET.L5209.005)

Acer AL1916W

- 19" wide-screen TFT LCD
- 1440 x 900 native resolution
- 500:1 contrast ratio
- 150° horizontal viewing angle
- 130° vertical viewing angle
- VGA signal connector
- 300 cd/m² brightness
- 8ms response time
- Internal power adapter
- Black color

\$30 PRICE CUT!



Acer AL1916 Ab

\$249

(ET.1916B.008)

Acer AL1916 Ab

- 19" TFT LCD
- 1280 x 1024 native resolution
- 700:1 contrast ratio
- 140° horizontal viewing angle
- 140° vertical viewing angle
- VGA signal connector
- 300 cd/m² brightness
- 8ms response time
- Internal power adapter
- Black color

8MS RESPONSE TIME



Acer AL1717 Bbmd

\$229

(ET.1717B.MD8)

Acer AL1717 Bbmd

- 17" TFT LCD
- 1280 x 1024 native resolution
- 700:1 contrast ratio
- 150° horizontal viewing angle
- 135° vertical viewing angle
- Two 1.0W integrated speakers
- VGA, DVI-D signal connectors
- 300 cd/m² brightness
- 8ms response time
- Internal power adapter
- Black color

\$10 PRICE CUT!



Acer AL1716 Bb

\$219

(ET.1716B.00B)

Acer AL1716 Bb

- 17" TFT LCD
- 1280 x 1024 native resolution
- 700:1 contrast ratio
- 150° horizontal viewing angle
- 135° vertical viewing angle
- VGA signal connector
- 300 cd/m² brightness
- 8ms response time
- Internal power adapter
- Black color

8MS RESPONSE TIME



Acer® Aspire™ E360

Multitasking at a New Level

Multitasking takes on a whole new meaning with the **AcerPower E360**, just one of the new Acer desktops to feature AMD processors. You'll experience a performance boost of up to 80 percent thanks to the AMD Athlon™ 64 X2 Dual-Core Processor, even when running power-hungry digital media on the **AcerPower E360**. This is because dual-core technology is like having two processors, each one handling different applications. Moreover, this processor features simultaneous 32- and 64-bit computing capabilities, allowing you to get the most from your 32-bit applications and make a seamless transition to 64-bit software.

- AMD Athlon™ 64 X2 Dual-Core Processor
 - AMD64 Technology
 - Enhanced Virus Protection¹
 - Cool'n'Quiet™ Technology
 - HyperTransport™ Technology
- Genuine Windows® XP Media Center Edition
- 1GB DDR SDRAM
- 250GB² SATA hard drive
- DVD-Dual drive (DVD+/-RW) and DVD-ROM drive
- 9-in-1 card reader for optional MultiMediaCard™, Secure Digital card, SmartMedia™ card, Memory Stick®, Memory Stick PRO™, CompactFlash® I/II card, Microdrive® or xD-Picture Card™
- ATI® Radeon® X600SE graphics, 256MB HyperMemory™; TV-out, DVI
- Gigabit LAN, V.92 modem
- One-year limited warranty³

9-IN-1 CARD READER



Monitor sold separately.



Acer Aspire E360-U-D3801

\$799

AMD Athlon™ 64 X2 Dual-Core Processor 3800+
Genuine Windows® XP Media Center Edition

Prices shown are estimated street prices and do not include tax or shipping. Retailer or reseller prices may vary.

acer

Acer® Projectors with DLP™ Technology

Digital Light Processing™ from Texas Instruments is an all-digital display technology for projectors and other products that delivers the best picture in terms of clarity, brilliance and color.



- 2000 ANSI lumens
- XGA (1024 x 768) native resolution
- 2000:1 contrast ratio
- 16.7 million displayable colors
- PC and Mac compatible

Acer PD120D

\$899

(EYJ2201.012)

PD120D



- 2000 ANSI lumens
- SVGA (800 x 600) native resolution
- 2000:1 contrast ratio
- 16.7 million displayable colors
- PC and Mac compatible

Acer PD100

\$669

(EYJ2101.006)

PD100



Projector Accessories

Acer projectors come with these accessories: remote control (batteries included) with laser pointer; carrying case; lens cap; CD-ROM user's guide; quick-start instructions; AC power cord; VGA (D-sub) to component/HDTV adapter; VGA (15-pin D-sub), composite video (RCA), S-video, USB and audio (mini-to-mini phone jack) cables.

For permanent placement of a projector in a conference room or classroom, you'll want an easy-to-install Ceiling Mount. Also, consider keeping a Replacement Lamp on hand for your Acer projector.

Replacement Lamp

\$199

(ECJ2101.001)

- Expected life in hours: 2,000 standard mode, 3,000 economy mode
- Designed for Acer PD120D and PD100

Ceiling Mount

\$79

(EZ.PCM03.007)

- 6.6 pounds
- Designed for Acer PD525, PD120D, PD116P and PD100

Acer® Aspire™ 5000

Power for Productivity



For your home or for your office the full-featured Acer Aspire 5000 notebook provides the must-have computing features, including a versatile DVD-Dual drive (DVD+/-RW) and wireless connectivity. You can also expect desktop-caliber performance from this multimedia powerhouse thanks to AMD Turion™ 64 Mobile Technology.

- AMD Turion™ 64 Mobile Technology
 - AMD PowerNow!™ Technology
 - HyperTransport™ Technology
 - Enhanced Virus Protection Technology¹
- Genuine Windows® XP Professional
- 512MB DDR333 SDRAM
- 80GB² hard drive
- Integrated DVD-Dual drive (DVD+/-RW)
- 15.4" WXGA (1280 x 800) TFT display, Acer CrystalBrite Technology
- SiSM760GX chipset with integrated Mirage™ 2 graphics
- 802.11b/g WLAN, 10/100 LAN, V.92 modem
- One-year limited warranty³

\$50 PRICE CUT!

Acer Aspire 5003WLMi

\$849

AMD Turion™ 64 Mobile Technology ML-32
Genuine Windows® XP Professional
(LX.A5106.020)

**Made for mobility with
AMD64 performance**



Acer Notebook Service Upgrades Protect Your Valuable Investment

Quality is built into every notebook Acer makes, and each comes with a one-year standard limited warranty.³ It includes hardware technical support via toll-free phone plus a concurrent International Traveler's Warranty for travel outside the U.S. and Canada. Extra protection is available with one of these upgrades:

2-Year Extension of Limited Warranty (146.AB820.EX2)

\$99

Prepays freight to and from Acer repair depot.
Excludes extension of International Traveler's Warranty.

It's a tough world out there, and accidents do happen—sticky spills, dangerous drops, nasty knocks—which is why you should consider the Total Protection Upgrade. It runs concurrently with the limited warranty¹ and limited warranty extension and covers the cost of a replacement unit if your covered notebook cannot be repaired.

2-Year Extension of Limited Warranty + 3-Year Total Protection Upgrade (146.AD077.002)

\$199

Prepays freight to and from Acer repair depot.
Excludes extension of International Traveler's Warranty.

Prices shown are estimated street prices and do not include tax or shipping.
Retailer or reseller prices may vary.

acer

acer

Acer recommends Windows® XP Professional

Acer® Aspire™ 3000 Entertainment Starts Here

- Mobile AMD Sempron™ Processor 3300+
 - AMD PowerNow!™ Technology
 - HyperTransport™ Technology
 - Enhanced Virus Protection Technology¹
- Genuine Windows® XP Professional
- 512MB DDR333 SDRAM
- 80GB² hard drive
- Integrated CD-RW/DVD-ROM combo drive
- 15.4" WXGA (1280 x 800) TFT display, Acer CrystalBrite Technology
- SiSM760GX chipset with integrated Mirage™ 2 graphics
- 802.11b/g WLAN, 10/100 LAN, V.92 modem
- One-year limited warranty³



COMBO DRIVE

Acer Aspire 3005WLCi

\$799

Mobile AMD Sempron™ Processor 3300+
Genuine Windows® XP Professional
(LX.A5506.028)



Prices shown are estimated street prices and do not include tax or shipping. Retailer or reseller prices may vary.

¹ Enhanced Virus Protection (EVP) is enabled by Microsoft® Windows® XP Service Pack 2. By default, EVP will protect the user's Windows operating system only. Users must enable the protection of their applications and associated files to be protected from memory buffer overrun attacks. AMD and Microsoft strongly recommend that users use third-party anti-virus software as part of their security strategy.

² When referring to storage capacity, GB stands for one billion bytes and MB stands for one million bytes. Some utilities may indicate varying storage capacities.

³ For a free copy of the standard limited warranty end-users should see a reseller where Acer products are sold or write to Acer America Corporation, Warranty Department, P.O. Box 6137, Temple, TX 76503.

© 2006 Acer America Corporation. Information and prices are subject to change without notice. Pricing is effective from May 1, 2006 through June 15, 2006. Product images are representations of some of the models available and may vary from the model you purchase. Acer, the Acer logo and TravelMate are registered trademarks of Acer Inc. Aspire is a trademark of Acer America Corporation. Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. AMD, the AMD Arrow logo, AMD Athlon, AMD Athlon Logo, AMD PowerNow!, AMD Sempron, AMD Sempron Logo, HyperTransport, and combinations thereof, are trademarks of Advanced Micro Devices, Inc. The DLP logo and DLP medallion are trademarks of Texas Instruments.

For the name of a reseller near you or further information, please call Acer or visit our Web site: **800-571-2237 | www.acer.com/us**

acer

LETTERS

LETTERS@PCWORLD.COM

**HOW STRONG IS
THE LEMON LAW?**

**BATTLE OF THE
HIGH-DEF DISCS**

**CHEAPER
ACCOUNTING**



SECURITY: WIRELESS NETS

REGARDING BECKY WARING's article "Get More Out of Your Wireless Network" [April]: It was nice to see some mention of the encryption levels that the products can support, as security is becoming ever more important.

My home wireless network has WPA encryption. I chose an iPaq hx4700 Pocket PC unit mainly for that reason—it was then one of the few handheld models to support WPA security.

Reviews for any wireless product should include mention of the types of security it supports. This will help readers choose a secure and compatible product, and will show vendors that encryption levels are gaining consumers' attention (and perhaps it will push vendors to include more than just the weak WEP).

*Alan Barrington-Hughes
Tega Cay, South Carolina*

SECURITY: LAPTOPS

APRIL'S ANSWER LINE ["Stop Would-Be Notebook Thieves in Their Tracks"] suggests putting your laptop between your

legs for security—but this should not be an option unless you keep the machine visible. One of my coworkers had his laptop stolen when he put it underneath a table between his legs. He was wearing heavy winter boots and didn't feel a thing.

Kathryn J. Rosen, New Hope, Minnesota

I WAS PLEASED that the column mentions tracking software for laptop recovery, specifically Computrace from Absolute Software (www.absolute.com).

Our son's laptop and those of his two roommates were stolen from their University of Maryland dorm room late last year. Our son's notebook was recovered a few weeks later, thanks to this program. Unfortunately, his two roommates were not so lucky, as their portables lacked any tracking application.

Janet Maalouf, via e-mail

PROTECT YOUR DOMAIN NAME

THE ARTICLE "Find a Good Home for Your Home Page" [Consumer Watch, April] left out one important point: You should always register your site's domain name yourself. Do not rely on the Web hosting company to register it for you, even if it offers to do so for free.

I received a domain name for my personal Web site as a bonus for signing up with my hosting company. I was very pleased with both my site's availability

and the quality of technical support. However, the company failed to renew my domain name in a timely manner, and the name was snatched up by a third party that demanded \$1888 to return it. While admitting its error, my hosting company would not meet this demand—so I had a Web site without a domain name, rendering it inaccessible.

J. Trent Corbett, Chesterfield, Virginia

WARRANTY LAW IS LIMITED

THE ARTICLE "Lemon-Law Rights for PC Owners" [On Your Side, April] states, "the federal Magnusson-Moss Warranty Act says that a company that doesn't provide successful warranty repair for any product must provide a new replacement or a full refund." However, only the provider of a full warranty must provide a lemon-law-style replacement or refund. Virtually all warranties for consumer goods are limited and do not include replacement.

Still, the recommendation to maintain careful records reflecting all problems and interactions with the vendor is sound advice for any warranty-related dispute.

Jeffrey M. Yeatman, Baltimore

SPAM STORY'S IRONY

THANKS FOR YOUR article in the April issue about the changing face of spam ["Spam Mutates," *News and Trends*]. Besides giving a lot of useful information, you also provided my laugh for the day. The irony of a public relations executive decrying the obtrusiveness and ubiquity of advertising was not lost on me.

Brian Mark, via e-mail

BLU-RAY VS. HD DVD

APRIL'S GADGET FREAK column ["High-Def Discs Battle for Your Bucks"] includes the claim [from a Toshiba spokesperson] that "HD DVD players will be ►

TELL US WHAT YOU THINK

RATE THIS ISSUE by going to www.pcworld.com/pcwinput—you could win a \$500 gift certificate from Amazon.com. You'll need to provide the subscriber number from your mailing label to take this survey online. The site explains the official rules and also describes how you can participate in the drawing if you're not a PC World subscriber.

SUPERCHARGE YOUR SEARCH: USE PC WORLD'S FIND-IT SERVICE

PCWORLD

TECHNOLOGY ADVICE YOU CAN TRUST

At PC World, we know you want to find quality information quickly and browse more efficiently. That's why we've developed an innovative Find-It service, which reduces any URL to a simple five-digit code.

HOW IT WORKS

Click the **USE FIND.PCWORLD.COM** button, located on every PCWorld.com page, and enter the five-digit Find-It number, or enter a Find-It URL (for example, find.pcworld.com/46300) in your browser.

PRODUCT INFORMATION

We now feature Find-It URLs specific to each ad, giving you a fast and easy way to get to the product information you want.

Don't waste valuable time searching for the information you want. Use PC World's Find-It service.

Perfect little addition

The new Maxtor Shared Storage Drive is simple and work files across your small office or home. Our easy-to-use software automates setup and folders private. And our exclusive Drag and Drop feature makes it even easier. Meet the ideal playmate for your PC.

Go to find.pcworld.com/46843

ADVANCED CAMERA

1	Canon PowerShot G6	Best \$579	find.pcworld.com/46872
Bottom line: The chunky G6 won best in show by performance.			
2	Olympus C-7070 Wide Zoom	Best \$450	find.pcworld.com/48091
Bottom line: The C-7070 has been around a while, but it has a lot to offer.			
3	Canon PowerShot Pro1	Best \$699	find.pcworld.com/43164
Bottom line: The Pro1's compact case makes it a pleasant surprise.			
4	Canon PowerShot S215	Best \$499	find.pcworld.com/48058
Bottom line: This is Canon's only model with an optical image stabilizer.			
Fujifilm FinePix S9000			

ADVERTISER'S INDEX

find.pcworld.com/ plus the five digit code directly to any advertiser in this issue.

Advertiser	Page Number	Find-It URL #	Advertiser
Acme, Inc.	18-19	46859	Acme, Ltd.
Computer Tech.	102B-102C	46850	Lenmar Electronics
Alpha Corp.	91-98	46849	LG Electronics
Linksys	151	46858	Linksys
Maxtor	119	46880	Maxtor Corporation
Microsoft	66	46832	Microsoft

LETTERS

cheaper [than Blu-ray ones], and so will the discs." Although that claim is often repeated, its basis seems to be that replicators can use their existing molds for the 0.6mm-thick HD DVD half discs, while Blu-ray requires a 1.1mm-thick substrate with a 0.1mm cover layer. However, this distinction will become insignificant with high-volume production. (CD and DVD require different molds, yet prices are becoming comparable.)

Jerry Hartke, President
Media Sciences, Inc.

A TIP FOR SMALL BUSINESSES

IN APRIL'S LETTERS, Skip Schwarz writes about "QuickBooks' Hidden Cost": the expense of the payroll module.

Like him, I was put off by this cost (I'm a one-person company). I discovered www.medlin.com, which supplies payroll computation and other accounting modules. You have to transfer Medlin's computations into QuickBooks, but at a per-annum cost of \$45, it's worth it to me—it's a savings of over \$150 per year.

Gregory Andracke, New York

PC World welcomes letters to the editor. We reserve the right to edit for length and clarity. Send e-mail to letters@pcworld.com.

CORRECTIONS

IN THE CHART for May's "TV Your Way" (*News and Trends*), the notes for Verizon's FiOS TV should have said that set-top box fees are monthly: about \$4 for standard definition, \$10 for high definition, and \$13 for HD DVR. Also, it was SBC Communications that bought AT&T.

In the "Vista Comes Into View" section of April's "Windows Hacks," a box about the operating system's Start menu should have stated that the Power Off button combines the power saving of Windows XP's standby mode with the safety of hibernate mode (saving your current state to RAM so that it awakens faster, but also to your hard drive so you won't lose data if the power goes out).

PC World regrets the errors.



ENHANCE YOUR
POWERPOINT
PRESENTATIONS
IN SECONDS!

New Companion Software for PowerPoint®

In just seconds, Ovation™ automatically turns lifeless PowerPoint® slides into a stunning, world-class presentation and then helps you deliver that presentation more effectively.

Breathtaking Visuals

At the click of a button, Ovation transforms boring slides into dynamic presentations so professional they look like they cost thousands of dollars to produce. These high-voltage visuals include better-looking text, smooth motion, subtle lighting effects and eye-catching animated backgrounds. Ovation takes presentations so far beyond plain PowerPoint, you can't appreciate the impact until you see it yourself.

New Tools for Better Delivery

Ovation also helps you deliver your material more effectively with a suite of innovative tools. The scrolling teleprompter helps you stay confident and on point while reminding you of key facts, figures and dates. The TimeKeeper™ keeps you on time during your presentation, and the powerful Go Deeper feature leaves you ready to respond to audience questions with expanded information.

With Ovation, your audience will be impressed – and other presenters will be dying to know your secret!



\$99⁹⁵ MSRP

***"Ovation makes me look great!
I can't imagine giving another
presentation without it."***

*– David D.
Educator*

PowerPoint is a registered trademark of Microsoft Corporation. Ovation is not affiliated with Microsoft. ©Copyright 2006 Serious Magic, Inc.

FREE DOWNLOAD

30-day trial at www.pcovation.com

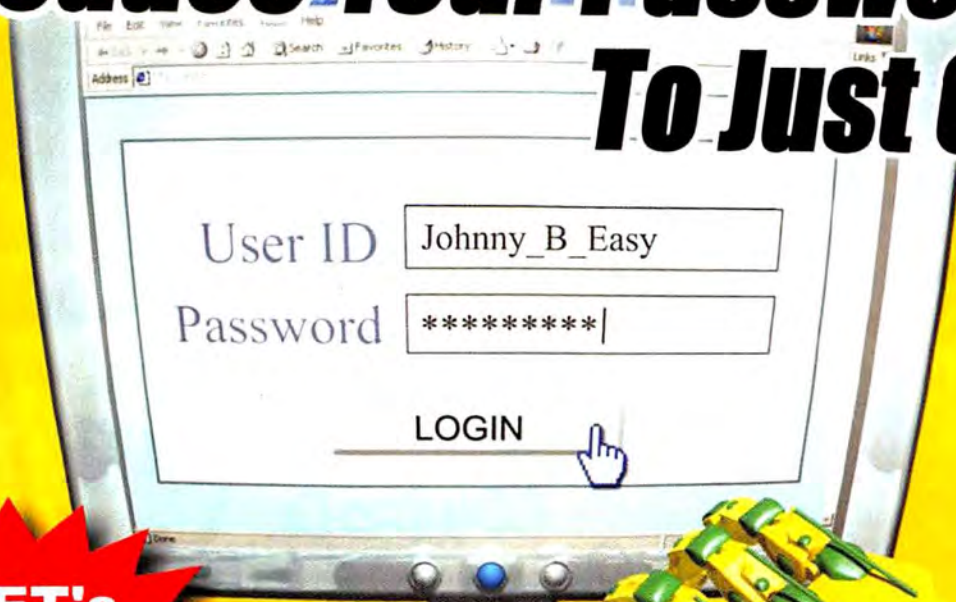
Available at:



and other fine resellers

**SERIOUS
MAGIC**

Reduce Your Passwords To Just One



**CNET's
Software of
the Year**

You Remember One Password, RoboForm Remembers the Rest - It's That Easy

- **Memorizes** your passwords and **Logs You In** automatically.
- **Fills** long registration and checkout forms with one click.
- **Encrypts** your passwords to achieve complete security.
- **Stores** your passwords on your computer, not on a server.
- **Backs up** your passwords, **Copies** them between computers.
- **Syncs** your passwords to Pocket PC, SmartPhone, and Palm.

"My favourite password manager... Easy to use, does not pop up ads in my face or grab information from me. Most importantly, it simply works well."

Financial Times

"Easy to use and without any hidden spyware... Innovative, lean, useful product."

Wall Street Journal

Over 8 Million Downloads



WWW.ROBOFORM.COM/PCW

Download it for **FREE** today!





CONSUMER WATCH

YARDENA ARAR

DON'T END UP FEELING LIKE A GUINEA PIG

MAKE YOUR STOLEN DATA SELF-DESTRUCT

HOW TO SPOT A FAKE COPY OF WINDOWS

Dodge the Perils of Early Adoption

Buying a hot new product shouldn't feel like paying to be a beta tester.

I LOVE TECHNOLOGY—always have. As a veteran *PC World* editor (and now steward of this column), I'm lucky enough to be paid to check out many of the latest gadgets and services we believe you might find useful or fun.

But all too often I'm reminded that it is a job. Case in point: A few weeks ago, I tested a very neat-sounding new product from Linksys, the Wireless G Music Bridge. I couldn't wait to bring it home. It's a small box with Wi-Fi and ethernet that connects to a stereo receiver via conventional audio cables and then lets you stream music from a Windows PC over your network to play through the stereo instead of the computer's speakers (you can read my review of the device, from the May issue, at find.pcworld.com/52756).

But when I tried to set it up one night, I couldn't get the darn thing to work. I spent some 3 hours on the phone with a well-meaning tech support rep in India, reconfiguring and rebooting ad nauseam, before I gave up. Eventually, Linksys determined that the Music Bridge was incompatible with products—such as my Belkin Pre-N Wireless Router—that are based on first-generation MIMO chips from Airgo Networks.

Good fodder for my review—but what if I had been an early adopter who had paid \$100 for the Music Bridge? I might not be so philosophical.

That's the thing about diving into uncharted technology waters: The earlier you try something new, the more likely that you'll be paying top dollar to find bugs the vendor missed. If this sounds

familiar, read on to commiserate, and to get a few tips on avoiding or dealing with the glitches and bugs that even vendors acknowledge you'll probably encounter.

INEVITABLE GLITCHES

"ANYTIME YOU HAVE a new category of product, such as the Music Bridge, there are risks of running into problems,"



concedes Eric Deming, senior product marketing manager for Linksys's Home Networking Unit.

This isn't always the fault of a careless vendor. Due to the huge diversity of PCs and peripherals, it's all but impossible to test a tech product in every environment in which it's likely to be used. And bugs are a fact of tech life: It's a major reason many IT departments and indi-

viduals hold off on getting new versions of Windows until months—or a couple of years—after they're first released.

But what if you do jump in early, and you encounter problems? Linksys's Deming says your support call would eventually get transferred to a product marketing manager, and your feedback would be incorporated into future versions. "It may make [early adopters] feel like they are contributing to how the product develops," Deming says.

Realistically, however, most people won't stick around long enough to have their issue moved up to the product manager level—or be willing to suffer for the greater good of improving the device or application for those who buy later. Instead, an early adopter who runs into difficulties will more likely get steamed and return the unsatisfactory purchase.

John Kelley of Richmond, Virginia, a production support manager for a tobacco company, is one user who knows how it feels to "pay good money for a latest-and-greatest product that's missing many pieces, or ... doesn't work as advertised."

Last year Kelley upgraded from Mac OS 10.3 (Panther) to the first version of Mac OS 10.4 (Tiger). In the upgrade he encountered numerous bugs, including a driver for his multifunction printer that didn't allow him to scan documents.

Within two months the first update, 10.4.1, fixed some of the problems. It was a mixed bag, however: "A few steps forward, but many steps back," Kelley says.

Another drawback of being the first to try something new: the early-adopter ►

tax, or the premium you pay for tech gear that's first off the line compared with its price a few months later. "You kind of know that's going to happen," says Mark Mendel of Netcong, New Jersey, whose early-adoption addictions include high-end graphics boards and fast new PCs.

Having patience is one way to avoid the expense and hassle of early adoption. Do you really need to be the first person in the neighborhood with a dual-core PC or a Squeezebox? At the very least, try to pick and choose the objects of your hot-gadget affections. Maybe a video-enabled iPod is worth buying the first week, but a dual-core computer can wait.

But for people like Kelley and Mendel, waiting is not an option. "A lot of it is just being able to say 'I have it,'" Mendel says when asked about the appeal of being first on the bandwagon. In that case, how can you minimize the chances of disappointment, or get help with problems?

Linksys's Deming says to start by checking the vendor's Web site for drivers and firmware upgrades. "I don't even use

the installation CD," he says. Software upgrades to fix bugs can occur anytime, even if a product has just shipped.

And while you're at it, check for a new version of the manual, often available as a downloadable PDF. The manual of a Windows Mobile GPS device I recently

Always check the vendor's Web site for drivers and firmware upgrades.

received failed to show all the contents of the packaging—a minor mistake, but a confusing one. The vendor, Pharos, said it had changed the manual, but the new version didn't make it into my package.

Check the product maker's support site for solutions, of course, but don't stop there. Some vendors procrastinate indefinitely in providing vital information.

Take RealNetworks, for example: When I tried unsuccessfully to play tracks I'd purchased from its Rhapsody music service using the Listen Rhapsody 3.01 software on a different PC, I found no useful suggestions in its knowledge base. Only after extensive research in user forums did I uncover a bizarre but effective remedy (involving a DRM-related software download you could initiate only by trying to play the tracks on a Real player, not on Rhapsody's Listen client).

SEARCH FOR ANSWERS

THE MORAL OF that story: Be untiring in your willingness to search online forums. Start with the vendor's own forums, if they exist; otherwise, find third-party forums via a search engine. Simply enter the product name and a few succinct keywords describing the problem (error message excerpts sometimes work). If you were the first person online to buy the product the day it came out, such a search will be a long shot, but it remains worth trying. At the very least, you will ►

PRIVACY WATCH

This Stolen Laptop Will Self-Destruct in 5 Seconds



FOR MANY FANS of the classic *Mission: Impossible* television series of the late sixties and early seventies, the best part came in the first 5 minutes, when the tape giving the assignment dissolved into a cloud of gray smoke. It's an attractive concept

for anyone who deals with sensitive information: If your data is in danger of being stolen, have it self-destruct.

A growing number of products make the idea a reality for lost or stolen laptops, PDAs, and cell phones. Some software will wipe clean a hard drive or memory card that falls into the wrong hands. Some hard drives have a so-called poison pill to physically destroy the drive if it has been tampered with.

These technologies can certainly help big businesses that lose devices containing important corporate data. But you don't need to work at a large company to see the benefit: Just imagine a thief prowling through the account information and passwords you store on a portable device.

Until recently only large corporations could get such products. Now, however, versions for individuals and small businesses are starting to appear. Absolute Software, which makes Lojack for Laptops (www.absolute.com), will add a remote-kill

feature to the next version of the program, so if a portable is stolen, the firm will be able to send a command to wipe out specific files—or even the entire contents of the hard drive.

Two companies make software for PDA smart phones that wipe the device's memory upon receipt of a special SMS text message. Bluefish Wireless (www.bluefishwireless.com) sells a \$15 program called Central that does this for Palm Treo devices. Windows Smartphone users should check out the \$10 PDAKill software from www.SCPSoft.com.

I haven't yet seen a USB flash memory drive that can wipe itself clean, but Ensconce Data Technology sells external and internal hard drives for laptops and desktops that contain "Dead on Demand" technology (www.ensconcedata.com). In a pinch, these drives can commit suicide: They contain a small canister filled with a corrosive chemical that can render the platters useless. Software on the computer will trigger release of the chemical if tampering is detected, or the user can press a predetermined set of keys to put their data six feet under.

Destroying your own data is certainly a drastic solution, but for some people the kill-pill option is well worth considering. If hardware carrying precious data is stolen, your privacy, or your company's bottom line, could depend on it.

—Andrew Brandt

IT'S A NOTEBOOK.
IT'S A TABLET.
IT'S THE BEST OF BOTH WORLDS.



LifeBook® T4000 Tablet PC

**Fujitsu recommends
Microsoft® Windows® XP Tablet PC Edition**

- Configurable to only 4.3 lbs.
- A versatile, built-in modular bay
- Up to 8.5 hours maximum battery life
- XGA wide-view display with optional indoor/outdoor XGA wide-view and standard SXGA+ high-resolution displays



It's a notebook



that converts



into a tablet

Why limit yourself to an ordinary tablet or notebook? The Fujitsu LifeBook T4000 Tablet PC with Intel® Centrino® Mobile Technology instantly changes from one to the other with just a twist and flip of its brilliant, 12.1" screen. From the field to the back office, this no-compromise solution is the only mobile computing platform you need. With its built-in modular bay, you have the flexibility to burn CDs and DVDs, work up to 8.5 hours between charges, or trim down to a nimble 4.3 lbs. It also features the exclusive Fujitsu BayLock™ utility, which keeps the media drive and its contents safe should you accidentally hit the release button while in Tablet PC mode. To find out why the LifeBook T4000 Tablet PC gives mobile professionals the best of both worlds, visit www.shopfujitsu.com/LifeBookT4000 or call **1.800.FUJITSU**.

FUJITSU

THE POSSIBILITIES ARE INFINITE

Go to find.pcworld.com/52956



MOBILE
TECHNOLOGY

© 2006 Fujitsu Computer Systems Corporation. All rights reserved. Fujitsu, the Fujitsu logo and LifeBook are registered trademarks of Fujitsu Limited. Intel, Intel Inside, Intel Inside logo, Centrino, Intel Inside the Centrino logo, the Intel logo and the Intel Inside logo are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Microsoft and Windows are registered trademarks of Microsoft Corporation.

quickly get a sense of where other users of your product category hang out.

If you don't find any helpful posts, don't be shy about pushing for escalation of your complaint to a product manager or senior support rep—and then posting the solution, when you get it, on whatever forum you deem appropriate. Personally I get a lot more satisfaction from fixing my problem and then helping other users than from simply providing feedback to help a technology company put out a better version next time. ■

Yardena Arar is a senior editor, Andrew Brandt is a senior associate editor, and Amber Bouman is an editorial assistant for PC World. E-mail them at consumerwatch@pcworld.com, privacywatch@pcworld.com, or onyourside@pcworld.com. To read previously published Consumer Watch, Privacy Watch, or On Your Side columns, visit find.pcworld.com/31703, find.pcworld.com/31706, or find.pcworld.com/31709, respectively.

ON YOUR SIDE

Is My Copy of Windows Genuine or Not?

U LAST YEAR I upgraded my Windows 98 PC with a copy of Microsoft Windows XP SP2 Professional I bought online from a company that has since gone out of business. At the time I verified the software's validity using Microsoft's Windows Genuine Advantage site, which I had to do in order to download and install Windows Media Player and the beta of Microsoft AntiSpyware.

However, a month ago, when I tried to upgrade to the shipping version of the antispyware software, my copy of XP failed the WGA validation test. Why would my copy of XP have passed the validation test once and then failed?

Billie J. Osborne

Whites Creek, Tennessee

On Your Side responds: A spokesperson for Microsoft says that while Osborne's plight is rare, it does occur with pirated software that has a counterfeit Product Activation key. The validation process, which happens whenever a Windows user requests a software download, checks the user's key against those in Microsoft's database of counterfeit keys. Since Microsoft is constantly finding new counterfeits, the results of the validation check can change.

Microsoft recommends visiting the WGA Web site (microsoft.com/genuine) to learn how to recognize fakes, and, if necessary, to fill out a report of a counterfeit. Some customers may be eligible for free replacement software.

—Amber Bouman



Bluetooth 2.0 Technology

Fastest!

GBU221 (Class 2) & GBU321 (Class 1)



For more information and a chance to win an IOGEAR Bluetooth 2.0 USB Adapter, please visit www.iogear.com/PCW-bluetooth

The fastest animal on the planet now has some competition. IOGEAR's USB Adapters with the latest Bluetooth 2.0 wireless technology make connecting up to seven Bluetooth peripherals faster. Just plug the adapter into your computer's USB port and you can now wirelessly share files, music and video at up to three times the speed of previous Bluetooth devices.

Available at...

Fry's
ELECTRONICS

Buy.com
The Internet Superstore

amazon.com

COMPUSA

MICRO CENTER

newegg.com

IOGEAR INC.

Toll Free: 866-946-4327 • www.iogear.com • sales@iogear.com

Go to find.pcworld.com/52908

IOGEAR



Notebooks

TOSHIBA



1.6GHz Satellite Pentium M Tablet PC
Intel® Centrino™ Mobile Technology Pentium® M Processor 725
1.6GHz, 512MB, 60GB HD, DVD/CD-RW, 802.11bg wireless,
14.1" XGA Display, Windows XP Tablet Edition 2005
(Toshiba Reconditioned - Model R15-S822)

only **\$859** #3140590



NEW!

2.8GHz Media Center P4 Wireless DVD±RW Notebook
Intel Pentium 4 Processor 520 & HT Technology
2.8GHz, 512MB RAM, 80GB HD, DVD±RW Drive,
802.11g Wireless, 17" XGA Display, Dual TV Tuner /
Video Recorder, Windows XP Media Center

only **\$1,195** #3390733



SONY

FS Series

NEW! 1.7GHz VAIO P Pentium M Wireless Notebook
Pentium M Centrino 1.7GHz, 512MB RAM, 40GB
Hard Drive, DVD/CD-RW Drive, Wireless 802.11
b/g, 15.4" WXGA LCD Display, Windows XP Pro.

only **\$1,064** #3156462



NEW!

1.66GHz Pavilion 1.66GHz Intel Core Solo Wireless Notebook
1.66GHz Intel® Centrino™ mobile technology
featuring Intel® Core™ Solo processor T1300,
512MB RAM, 100GB HD, DVD±RW & CD-RW
Combo DL, Modem, Wireless 802.11a/b/g,
15.4" WXGA (1280 x 800), WinXP Home

only **\$1,149** #3382448



NEW!

1.8GHz Pavilion AMD Turion™ 64 Mobile Processor ML-32 Processor Notebook
1.8GHz AMD Turion™ 64 Mobile Processor
ML-32 with PowerNow!™ Technology, 512 MB
RAM, 80 GB HD, DVD±RW & CD-RW Combo DL,
Modem, 17.0" WXGA+ (1440 x 900), WinXP Home

only **\$1,109** #3382459



NEW!

2.0GHz Pavilion AMD Turion™ 64 Mobile Wireless Notebook
2.0GHz AMD Turion 64 Mobile Processor ML-37
with PowerNow!™ Technology, 512 MB RAM,
160GB HD, DVD±RW DL, Modem, 802.11a/b/g
WLAN, 17" WXGA HD BrightView Widescreen
(1440 x 900), WinXP MCE

only **\$1,299** #3354723

MP3 Players & Games

Apple® iPod® nano Apple Authorized Reseller

The pencil-thin iPod® nano packs the entire iPod® experience into an impossibly small design.

Starting at **\$144**

#3340041 iPod nano 1GB - White (240 Songs) **\$144**
#3340042 iPod nano 1GB - Black (240 Songs) **\$144**
#3128832 iPod nano 2GB - White (500 Songs) **\$194**
#3128839 iPod nano 2GB - Black (500 Songs) **\$194**

COWON

20GB MPEG4 Audio/Video Player With 4 Inch Widescreen Display, A2 White



only **\$339** #3252656

SANDISK

Sansa E250 MP3 Player 2GB



only **\$153** #3375171

#3379794 Sansa E250 MP3 Player 4GB **\$196**
#3379795 Sansa E270 MP3 Player 6GB **\$239**

CREATIVE

Nomad Muvo NX 128MB MP3 Player/USB Flash Memory Drive



only **\$79** #2101349



1GB MP3 Player / USB Drive



only **\$52** Price is after \$15 mfr mail in rebate. Price before rebate is \$67.99. Expires 4/30/06.
#3158708

GAME ON!

PlayStation Portable



(Sony Reconditioned)
only **\$179** #3381628
Price is after \$20 mfr mail in rebate.
Price before rebate is \$199. Expires 5/31/06

DS (Dual Screen) Handheld Gaming System



only **\$99** #2663737
Price is after \$34 mfr mail in rebate.
Price before rebate is \$133. Expires 5/31/06

Microsoft
XBOX 360 Platinum System w/ Hard Drive Bundle



only **\$699** #3247795

Cameras

MiniDV Camcorder with 32x Optical Zoom, GR-D370US
1/6" 680K Pixel CCD / 32x Optical Zoom / 800x Digital Hyper Zoom / 16:9 Video Mode / Video and Still Images / MiniDV Video and SD Still Storage / 2.5" LCD

JVC



only **\$296** #3352986

7.1MP Stylus 720SW Ultra Slim Digital Camera
Less than 0.8" thick, 7.1 Megapixel, 2.5" LCD Viewscreen, 3x Optical / 5x digital zoom, movie mode.



OLYMPUS

only **\$376** #3338343

256MB Secure Digital (SD) Card



Free #3110247
Free after \$40 mfr mail in rebate.
Price before rebate is \$40. Expires 5/31/06

6.0MP Cyber-shot® 3x Optical Zoom Digital Camera (DSC-W50)

Everything you need in one compact, high-performance model. Simple controls, 3X optical zoom, 6.0 megapixels, 32MB internal memory and a bright 2.5" LCD screen.



only **\$227** #3338157

6.0MP PowerShot A700 Digital Camera
6x Optical / 4x Digital zoom, 2.5" LCD view screen, SD/MMC card slot.



Canon
only **\$319** #3351866

6.0MP CoolPix with 3x Optical Zoom
Wi-Fi Enabled COOLPIX S6. High Quality 3x Optical Zoom-4x digital zoom for a total zoom of 12x.



only **\$446** #3352214

Flat Panel & LCD's

soyo

32" Widescreen HD-Ready LCD TV, Silver
Detachable side stereo speakers, 1200:1 contrast ratio, a fast 12ms response time, DVI plus component video inputs for HD.



only **\$829** #3385860

niko
32" Widescreen HD Ready LCD TV



only **\$749** #3332560
Price is after \$100 mfr mail in rebate.
Price before rebate is \$849. Expires 5/31/06

niko
26" Widescreen HD Ready LCD TV - Silver



only **\$559** #3332559
Price is after \$100 mfr mail in rebate. Price before rebate is \$659.99. Expires 5/31/06

SHARP
26" AQUOS® LCD TV (Advanced Super View)



only **\$799** #2739349

SONY
7" Widescreen Drop-Down TV with CD & Clock Radio



only **\$175** #3365182 (Sony reconditioned)

GEM
17" LCD Flat-Panel Display



only **\$146** #2597281
Price is after \$90 mfr mail in rebate.
Price before rebate is \$236. Expires 5/31/06

19" Ultra Slim LCD Flat-Panel Display (Dual Inputs - DVI / VGA)



only **\$199** #3250831
Price is after \$90 mfr mail in rebate.
Price before rebate is \$289. Expires 5/31/06

19" Ultra-Light LCD Flat-Panel Display



only **\$183** #3333803
Price is after \$95 mfr mail in rebate.
Price before rebate is \$278. Expires 5/31/06

We Accept Visa, MasterCard, American Express, Diners Club, Discover!

See Site for additional rebate information and price drops. Prices and specifications are subject to change without notice. Limited to stock on hand. While we do our best to check errors, mistakes may occur - check Web site to verify pricing. See Site for policies and procedures.



Go to find.pcworld.com/52423

Directory

You can place orders online 24 hours a day, 7 days a week. Or call to order:

Toll Free: (877) 888-2678 or

(310) 225-4044

Fax: (310) 630-3977



6 Months. No Interest. No Payments!

See Site for Details

Microsoft®

- ☐ CAN IT SAVE US TIME
- ☐ WILL IT REQUIRE OUTSIDE SUPPORT
- ☐ AND WHAT ABOUT TCO
- ☐ IS IT LINUX
- ☐ OR WINDOWS SERVER

☒ GET THE FACTS.

TELEFLORA CHOSE WINDOWS SERVER OVER LINUX AND UNIX, AND SAVED 35% IN DEVELOPMENT COSTS.

"Developing our new POS system on Windows Server™ 2003 and .NET cost us 35% less than a Linux or UNIX solution, and we're able to deploy new features and new services twice as fast. That gives us and our 25,000 florist customers, a crucial advantage in our rapidly changing industry."

—Jim Siplon, EVP/CTO

teleflora.

For these and other third-party findings, go to microsoft.com/getthefacts



Windows
Server™ 2003

© 2006 Microsoft Corporation. All rights reserved. Microsoft, Windows, the Windows logo, and Windows Server are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. The names of actual companies and products mentioned herein may be the trademarks of their respective owners.



HASSLE-FREE PC

STEVE BASS

Smart Ways to Use Your Cell Phone

Teach your phone to make free 411 calls, save photos, and back up your data.

I'LL BET YOUR smart phone isn't so smart. I have tricks for saving money, downloading digital pictures instead of e-mailing them, and more. Stay on the line....

FREE 411 CALLS

The Hassle: I hate paying \$1.25 to call 411 from my phone. Any advice?

The Fix: I have two quick workarounds. First, try 1-800-FREE411 (find.pcworld.com/52494), a toll-free information service. Sometimes when I tried the service, I talked with a live operator; other times I got an automated voice. The only cost is spending about 12 seconds listening to an ad—and often, there isn't an ad at all. (Use FREE411 on your landline as well.) Don't like that idea? If your phone can browse the Web, try go2.com (find.pcworld.com/52492), a free service that offers listings of local information, including driving directions.

SAVING PHONE PHOTOS

The Hassle: I just bought a camera phone, and I would like to download photographs to my PC without having to e-mail each one.

TOOL OF THE MONTH

Retrieve Recent Files (and Apps)—Fast!

NOT A DAY goes by when I don't need immediate access to files I've worked with in the previous couple of weeks. I used to have a trick: I would right-click and drag *My Recent Documents* to the desktop and select *Create Shortcuts Here*. (The folder is at C:\Documents and Settings\username\My Recent Documents.) But with RecentX, I can

get quick (and easy) access to recent files and folders as well as to programs and Web sites. It docks practically anywhere on my desktop, and I can configure its transparency level. I've set it to clean up unused items after two weeks, too. I know—free is best. But \$20 isn't bad for such a handy tool. Get a 30-day trial at find.pcworld.com/52510.



The Fix: Many new phones come with the necessary paraphernalia—cables and software—or have built-in Bluetooth or infrared adapters that can do the job.

If your phone didn't include a way to make the transfer, or if you're unhappy with it, you can zap your phone photos to your computer with Susteen's DataPilot Individual Kit Software (find.pcworld.com/52496). Prices range from \$30 to \$70, depending on your phone model. The tool uses a USB cable that matches

your phone; you can also sync and back up your phone book, as well as upload videos and MP3s.

Quick Tip: Use Pix2Fone (find.pcworld.com/52498), a free add-on, to send photos—for logos or screen savers—from your phone to supported phones and services.

SMART BACKUPS

The Hassle: The DataPilot is cool, but all I want to do is back up data in my phone. How about it?

The Fix: I get the feeling you like kvetching. If your phone has a SIM card, you may be able to use a SIM reader (priced at under

\$13) to back up your phone's data. Vavolo's USB Universal SIM Card Reader and Writer (find.pcworld.com/52500) looks like a flash drive and works the same way. Just plug it into a computer's USB port, and it will read SIM cards; it works on any GSM SIM card. No SIM card? Then try the \$30 BackupPal (find.pcworld.com/52502), a no-frills backup device that connects directly to your cell phone.

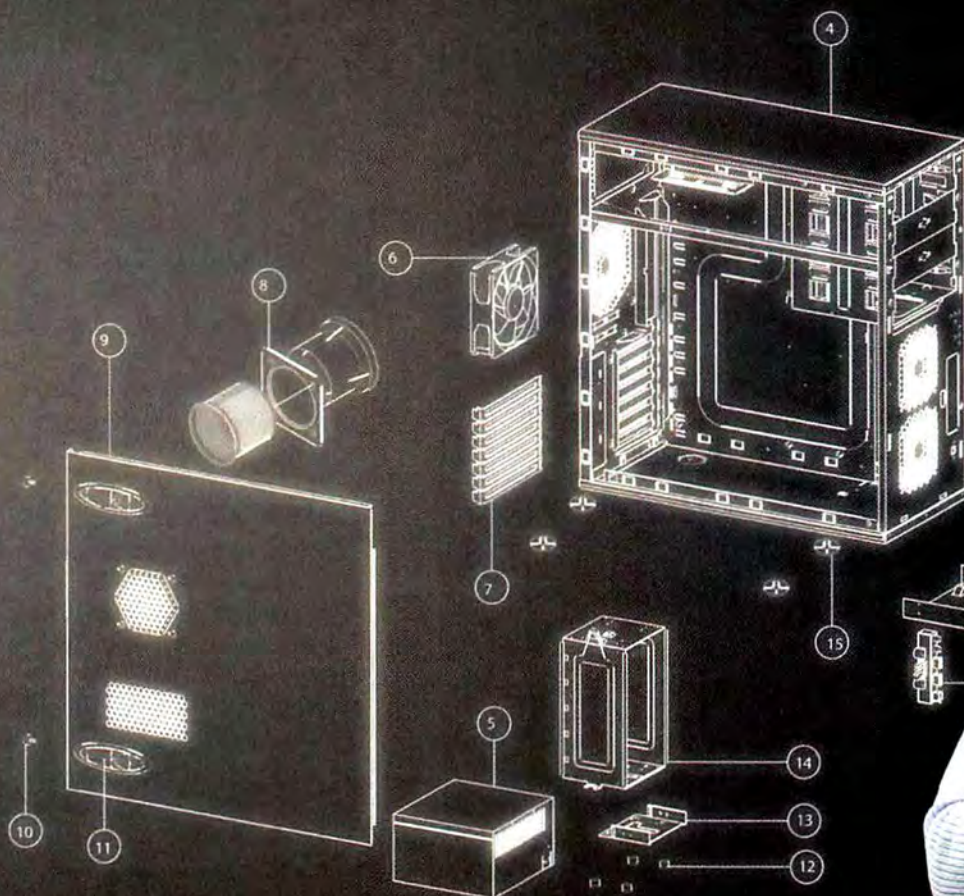
MAGNIFIED DISPLAY

The Hassle: I'm not young anymore and can't read my cell phone's display.

The Fix: You and me both. Try the Phone Monocle (\$10, find.pcworld.com/52504), a lens that slips over your cell phone's display and magnifies the image. ■

Contributing Editor Steve Bass writes the Bass Blog (see find.pcworld.com/50264) and is the author of *PC Annoyances*, published by O'Reilly (see find.pcworld.com/43818). Contact him at hasslefreepc@pcworld.com. To read his previous columns and newsletters, go to find.pcworld.com/50268.

(Quality + Value) - (Heat + Noise) = New Solutions Series



The New Solution Series continues Antec's tradition of providing high quality and affordable cases. Made with a sturdy 0.8mm cold-rolled steel construction with sizes ranging from full tower to micro ATX, these high quality cases are designed to be environmentally friendly as well as highly efficient. Antec's Quiet Computing™ technology has been integrated into each case with noise reducing features like quiet TriCool™ fans, and drive trays equipped with silicone grommets. The New Solution Series cases have a solution for everyone, making them perfect for home, office and anywhere in between. For more information, please visit www.antec.com/newsolutionseries.

Go to find.pcworld.com/52896

Antec
The Power of You





GADGET FREAK

DAN TYNAN

Sweet Home Theater—For Any Budget

You don't have to break the bank to have a great home theater experience.

BLUESMAN WILLIE DIXON once sang, "I did not say I was a millionaire, but I said I have spent more money than a millionaire." That's how I feel about home theater gear: I'm always spending money on it, and there's always more to buy.

But you don't have to be rich to spiff up your home theater. Whether you can spend \$200 or \$2000, you can tweak your speakers, pump up your picture, unclutter your setup, and get a better experience in the bargain.

Retire your wires: Better audio and video cables can enhance your experience for very little cash. For a start, your speaker cables should be at least 16-gauge thick and use solid gold connectors instead of braided wires. You can find these at any electronics shop for prices starting at 50 cents a foot.

Component cables serve better images than composite, coaxial, or S-Video connections do, but you don't have to blow big bucks on boutique brands (see "The Cable Game," September 2005, find.pcworld.com/52748). A good component cable like Monster Cable's Monster Video 3 series runs \$70 to \$150, depending on length (www.monstercable.com). HDTV owners—especially those who hope to watch HD DVD or Blu-ray movies in high-def glory—should buy an HDMI cable to connect the cable or satellite box to the set (assuming their HDTV and source both have HDMI ports). You can purchase a decent one from CableWholesale.com or Startech.com for \$30 to \$60.

Make sound investments: If you don't already own a 5.1-channel surround-sound system, buy one, says Danny Briere, author of *Home Theater For Dummies*.

Even cheapo home-theater-in-a-box systems aren't half bad, though Briere advises consumers to stick to brand names and expect to pay at least \$400 for a system with an integrated A/V receiver.

Dollar for dollar your best investment is to buy better speakers, says Joe Hart, a design specialist for Hifi House located in Broomall, Pennsylvania. But he adds that



a higher price doesn't necessarily ensure higher quality, and vice versa. For example, surround systems like Paradigm's Cinema 70 CT (\$499, www.paradigm.com) or Definitive Technologies' Pro Cinema 60 (\$699, www.definitivetech.com) can deliver "scary good" 5.1 sound for a reasonable amount of money, Hart says. Make sure to audition the speakers before you take them home to get the best sound for your buck.

Expand your horizons: Have \$1000 or more to spend? Time to start thinking about a bigger screen. You can pay as little as \$1800 for a 42-inch rear-projection HDTV like Sony's Wega KDF-E42A10, or

even for a low-end 42-inch plasma like the AOC Envision Series A42HD84 (www.aocmonitor.com). Both units can display a 720p high-definition signal.

The cheapest route to a big picture is an all-in-one system such as Epson's MovieMate 25, which combines a projector in front with a DVD player and two JVC speakers, plus an external subwoofer (\$1199, www.epson.com). Setting the unit up is as easy as making popcorn—just uncrate the thing, plug it in, and pop in a DVD. You'll have to make several sacrifices, though. The MovieMate displays at only DVD quality (480p), so it's not suitable for HDTV, and its high sensitivity to ambient light makes it hard to use in a sunny room. In comparison, a true 1080p HDTV front projector like Sony's VPL-VW100 lists for nearly \$10,000. And if you're going to spend that much, why not go whole hog?

Kris Peterson, VP of sales for Best Buy's Magnolia Home Theater subsidiary, says if money were no object he would construct an invisible home theater—complete with a 100-inch screen, speakers, subwoofers, and a massive DVD/digital music server built into acoustically paneled walls. Toss in integrated lighting controls, IP-based security cameras, stadium seating, and other cosmetics, and we're talking about a price tag "north of \$100,000," he says.

Want that setup? You'd better save your money—or use it to play the lottery. ■

Contributing Editor Dan Tynan is the author of *Computer Privacy Annoyances* (O'Reilly Media, 2005). You can send him e-mail at gadgetfreak@pcworld.com.

A PLATFORM DESIGNED FOR

DIGITAL ENTERTAINMENT IN THE HOME



Get ready for a new kind of consumer entertainment PC that will change the way you enjoy entertainment at home. AOpen Viiv-ready system, based on Intel Viiv technology, delivers the multi-tasking power of a dual-core processor-based PC and sleek new designs that fit your life style. Digital media enthusiasts can usher in the next generation of digital media software for amazing high-definition video and photo editing, content creation, and audio mixing.

miniPC MP945-VX



Smallest Viiv Ready PC in the World, supports Intel Core Duo Processor. Measures just 6" x 6" x 1.97" Ultra quiet 29dBA operation, Component & Composite Connectors, slot loading optical drive. HD audio support
Visit: <http://minipc.aopen.com/US>

EPC945-m8



Slim Viiv Ready Entertainment PC for the living room. Supports Intel Dual Core Pentium D processor, ultra quiet 29dBA operation, Microsoft Windows XP Media Center Edition support and includes MCE remote control.
Visit: <http://usa.aopen.com/products/epc/epc945-m8.htm>

For Product Distribution:



Where to buy miniPC:

<http://minipc.aopen.com/US/wheretobuy>

Where to buy EPC:

<http://epc.aopen.com/US/wheretobuy>

Go to find.pcworld.com/52442

All logos are trademarks of their respective companies



1911 Lundy Ave, San Jose, CA 95131, 1-888-97-AOPEN



Plug Critical Holes in IE and Office

Plus: A fix for problems when you resume from standby and hibernation states.

IT'S HAPPENED again. Crackers recently began exploiting a newly revealed major security bug in Internet Explorer before Microsoft could issue a patch. These so-called zero-day exploits—where less than a day passes between the revelation of a vulnerability and attacks against it—are becoming more frequent. And that's bad news for us all.

Security research firm Secunia found this hole, which affects virtually all versions of IE, from 5.01 through 6 Service Pack 2. Beta previews of IE 7 that predate March 20, 2006 (build 5335.5 or later) are vulnerable as well.

Though attacks exploiting this breach have been sporadic so far, make sure to get the fix. The flaw opens the door to the dangerous drive-by download attack, where just visiting a malicious Web site can pull viruses and spyware onto your computer—no click required.

Simply viewing a corrupt banner ad on a page could trigger the attack routine as well.

Here's how the bug works: A booby-trapped site or image sends your system a poisoned "CreateTextRange" JavaScript



The IE flaw opens the door to the drive-by download.

command that scrambles IE's idea of what's supposed to be where, leaving IE (and Windows) flummoxed. A split second later, the cybervulture's attack program swoops in to carry out whatever nefarious activities the attacker has devised. No matter what the

specifics, you'll be the loser.

A bit of good news: Just previewing an Outlook e-mail message containing a link to a malicious site won't trigger the exploit. But the usual warning applies: Never click a link in any message that's even slightly suspicious.

Microsoft will distribute a patch via Windows Update by the time you read this. In the meantime, the company's suggested (if draconian) workaround is to disable or prompt for all JavaScript. JavaScript is a type of programming found in many different Web pages, and disabling it means a lot of sites will display incorrectly or may keep you from logging in. To implement the workaround in IE, click *Tools•Internet Options*, and select the *Security* tab. Click *Internet•Custom Level*. Under *Settings*, in the *Scripting* section, scroll down to *Active Scripting*, click either *Prompt* or *Disable*, and then click *OK*.

Two security companies have released their own temporary workaround patches, but analysts recommend using either Microsoft's workaround or an alternate browser such as Firefox or Opera. Microsoft also warns against using third-party patches.

For additional details, see Microsoft's advisory at find.pcworld.com/52858. When it is ready, the patch will be at

IN BRIEF

Fix for Sleepy PCs

RIP VAN WINKLE PCs—those running Windows XP Service Pack 2 that won't wake up from standby or hibernation mode—now have a cure: Microsoft has fixed a glitch with XP's "data execution prevention" security feature. Since the patch isn't security related, you'll need to manually download it from find.pcworld.com/52864.

Real Security Patch

REALNETWORKS HAS released a patch for several critical security holes in RealOne Player 1 and 2, Helix Player 1.x, and RealPlayer 8, 10, and 10.5. Windows, Linux, and Mac versions are all at risk. Get the patch at find.pcworld.com/52866.

find.pcworld.com/52860. Of course, all of these problems will be solved by this time next year when Microsoft releases Windows Vista. Right? ■

Stuart J. Johnston is a contributing editor for PC World. Visit find.pcworld.com/31580 to see more Bugs and Fixes columns.

BUGGED?

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

LOCK THE DOOR TO YOUR OFFICE SUITE

MICROSOFT HAS PATCHED six-count 'em, six—critical Microsoft Office security holes. For Windows users, these holes are "critical" only for Office 2000, and merely "important" to patch for other versions, says the company. For Mac users, Excel 2004 and Excel X are affected, with the flaws rated as "important."

The patches for the Office 2000 and Outlook 2000 holes, which leave you open to a complete takeover of your PC, automatically distribute via Microsoft Update, as do those for more recent versions including Office XP Service Pack 2 and 3. For other versions, or if you don't use Microsoft Update, get the appropriate patch and more info at find.pcworld.com/52862.



The Always-On Playmate

Robosapien™ V2 breaks new ground in entertainment robots

Close your eyes for a moment and imagine the ideal friend and companion.

For starters, he's probably someone who is ready, willing, and able to spend time with you any time you want. He loves games. He interacts really well with some of your other friends and has kind of a sassy attitude. He's pretty agile and doesn't bruise, even when he falls. He'll also bring you things at your request, kind of like a personal assistant.

Sound too good to be true? It's not. There are all of these pleasures of companionship plus a lot more fun and excitement built into Robosapien V2 from WowWee Robotics (www.wowwee.com), the premier consumer entertainment robotics company. A remarkable fusion of intelligent technology and humanlike personality, Robosapien V2 is packed with advanced features that make it about the closest thing to a real live friend and playmate.

Standing nearly two-feet tall and a full eight inches taller than the original Robosapien™, Robosapien V2 sees, hears, and speaks. He recites up to 160 unique phrases, often in reaction or response to some stimulus in his environment to let you know what he is doing. With his focused infrared vision sensors, foot sensors, and gauntlet sensors, Robosapien V2 can not only hear loud sounds but also can react by walking toward them. If the sound is from someone right in front of him, Robosapien V2 will acknowledge the guest with a pleasant "Hey there!"

So advanced is the vision system of Robosapien V2 that he can actually detect obstacles and react accordingly, and can differentiate between certain colors of objects both near and far. Spotting a nearby object, he might blurt out, "Gimme, gimme, gimme!"

PROGRAMMABLE, AGILE, AND AUTONOMOUS

Robosapien V2 can be remotely controlled or can act autonomously in his environment. He can be programmed three different ways in controller program mode and three ways in positional program mode, with the benefit of being able to hold up to six programmed routines in his memory at any given time. In the positional program modes—main, left, and right—you program Robosapien V2 like a puppet as you manually move his body parts into different positions.



What's more, he can pick up, drop, or even throw objects, and he is flexible and agile enough to sit, twist, bend, lie down, and get back up again. Robosapien V2 comes with his own bowling set and the know-how to play the game right in your den.

And get this. If you already own other robotic companions from WowWee, Robosapien V2 has the unique capability to interact with his fellow robots. For example, should the aggressive and feisty Roboraptor™ begin to act up, Robosapien V2 just might try to calm him down. Or if Robopet™ is just hanging around being lazy, Robosapien V2 might try to get him to do a few of his many tricks.

In addition to Robosapien V2, Robopet, and Roboraptor, WowWee also makes and markets the WowWee Alive™ Chimpanzee, an incredibly realistic simian based on the principles of Hollywood special effects. With four distinct moods—curiosity, fear, anger, and happiness—Alive Chimpanzee is fully programmable and has touch sensors that allow him to feel and respond to human contact.

For more information on the Robosapien V2 or any of the other amazing and entertaining robotic friends from WowWee, go to www.wowwee.com.

Advertisement

ROBOSAPIEN™ V2

HUMANOID, INTERACTIVE, WAY COOL

Built on the foundation of Robosapien™—the bestselling robot of all time—Robosapien V2 is the next generation in consumer robotics.

Towering over your living room floor at a remarkable 24" in height, Robosapien V2 offers more advanced dynamic motion, powerful interactive sensors, natural speech capability, and, of course, a unique personality. The only humanoid entertainment robot who can strut his stuff, Robosapien V2 uses fluid biomechanical movements for walking, bending, sitting, standing, lying down, standing up, and dancing. You can't cut up the rug without some special moves. And Robosapien V2's got all of the best moves covered. Armed with articulated shoulders and wrists, movable hands, and a flexible waist, Robosapien V2 can dance his way around your home.

Humanoid activity isn't restricted to this robot's movements, Robosapien V2 also has an interactive humanoid personality!



"GIMME, GIMME, GIMME"

Unlike other robots, Robosapien V2 can interact with his environment, autonomously. Whether filled with chairs, tables, pets, or people, this robot can see, hear, and walk his way around your house avoiding

obstacles in his path. This is free roam mode.

Using a unique dual-range infrared (IR) vision system and elaborate touch sensors, Robosapien V2 will act like one of the family during these free roam strolls.

Bristling with a battery of sophisticated sight, sound and touch sensors, Robosapien V2 is capable of unprecedented multi-sensory environmental interaction with both humans and objects.

Equipped with a sensitive suite of tilt sensors, Robosapien V2 actually knows up from down. If he has fallen, he can indeed get up. To inform you about this prone position, he'll utter, "I need to be upright for this" and, in a few seconds, be back on his own two feet.



"LET ME SCAN THAT"

Make a sudden movement in Robosapien V2's line of vision and he will flinch and ask you to identify yourself. Once

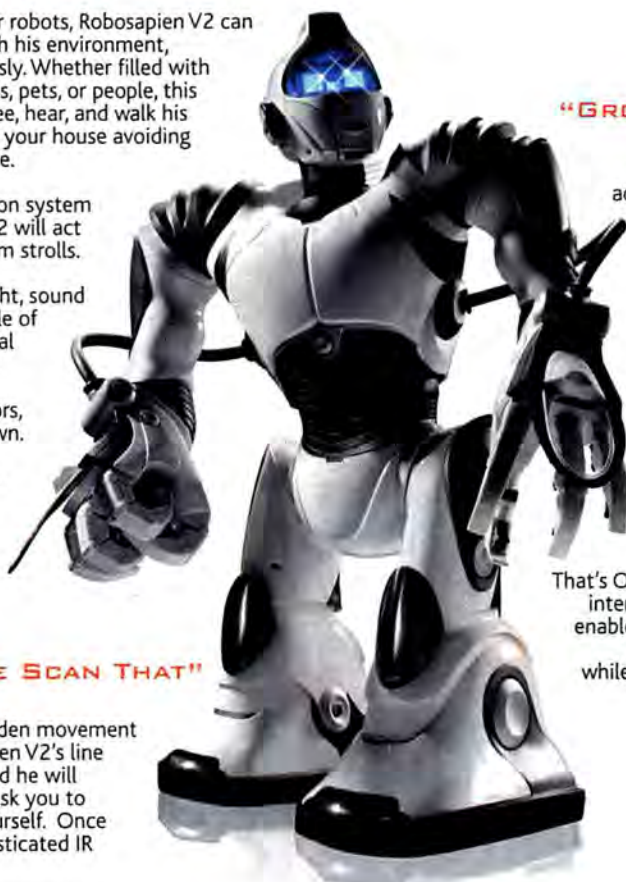
identified, you will be tracked with a sophisticated IR vision system.

But there is more than IR vision that meets this robot's eye. Robosapien V2 can see colors, too. Red, green, and blue objects can be recognized and tracked with his color vision camera.

What does that mean to you? Hold something blue in front of Robosapien V2's head and it will be recognized and grabbed. Now using his dual-range IR vision, Robosapien V2 will look for other blue objects, walk over to them, and drop his blue object. Just think, all of your blue socks can be sorted into a pile on your bedroom floor.

"GET YOUR OWN DRINK"

Remember that personality that you liked so much in Robosapien? Well, it's fully developed in Robosapien V2. Diabolical laughter, warning messages, and sharp-tongued robot wit are all dispensed in clear understandable natural speech. Packed with over 120 phrases, comments, reactions, and observations, Robosapien V2 is downright chatty.



"GROUP HUG"

If you don't like the way Robosapien V2 is acting or interacting, control him directly or program your own sequence of movements and animations.

Packed with 100 pre-programmed functions and 6 programming modes, this robot also has 2 demonstration programs for an instant "out-of-the-box" WOW.

A powerful multi-function controller is included with Robosapien V2. Use this controller to access all functions and features, as well as for creating program routines.

Oh, you don't like programming? That's OK. Robosapien V2 includes a revolutionary, interactive "puppet" programming feature that enables you to create a customized routine. Just move his body into different positions while Robosapien V2 automatically records and remembers each position.



"WHAT WAS THAT?"

If you set him into Guard Mode, Robosapien V2 won't sleep on duty. Guarding your most valued possessions, he'll alarm intruders and give you a final head count of all intrusions.

If some of your family members are robots, too, like Roboraptor™ and Robopet™, Robosapien V2 is capable of interacting with these fellow Robo companions.

All of this interactivity can be tiring. This robot knows when enough is enough with a battery-saving auto-shut off function or by catching some quick "Zs" in sleep mode. You see, Robosapien V2 is more than a robot, he's a fusion of technology and personality.



Available NOW at:
Best Buy Circuit City Discovery Stores Fry's Electronics Radio Shack The Sharper Image
Visit us on the web at www.wowwee.com or for more info please call toll free 1 800 310 3133

© 2006 Wowwee Ltd.
Go to find.pcworld.com/52936



Upgrade Your Sound

Music • Movies • VoIP Internet Phone • Cell Phones

ETY.COM™ Headset

- The most technologically advanced headset of its kind
- Clear two-way conversation
- Directional noise-canceling microphone

Includes
FREE
VoIP
Adapter



High Fidelity Noise-Isolating Earphones

- Accurate music reproduction
- High noise isolation
- In-the-ear secure fit

Visit www.etymotic.com to see our complete line of elite audio gear for your music, movies, VoIP internet phone and cell phones.

ETYMOTIC RESEARCH INC.

World Leader of In-the-Ear Technology

www.etymotic.com 888-389-6684

FIND.PCWORLD.COM/52946

Ditch the Disc!

Convert Your CD Collection to MP3 without a Computer!

Convenient - Easily transfers digital music to your MP3 player, flash memory card and flash drive... no computer needed!

Portable - Lightweight and battery/AC operated, provides true digital sound on-the-go.

Fast and Simple - One touch operation

Versatile - Plays Audio and MP3 CD's



Insert CD and download songs to your MP3 player, memory card or flash drive.

EZDigiMusic™



1-800-828-6475

www.eznpn-usa.com

EZPrP™ and EZDigiMusic™ are trademarks of EZPrP Technologies Corp. All other trademarks mentioned herein are property of their respective owners.

FIND.PCWORLD.COM/52948

Two 700/650 Cases

the ideal
GIFT
for
DAD
or
GRAD

- PERFECT FIT! Device specific protective case
- Sleek, lightweight, and extremely durable
- FREE Stuffak Loss Protection label
- Lifetime Warranty on all RhinoSkin cases

rhino • skin™
ultimate device protection

FREE
SHIPPING
with promo code:
protect
rhinoskin.com

also available at

COMPUSA

web orders
www.rhinoskin.com

phone orders
1.800.887.6407



iPod Cases

FIND.PCWORLD.COM/52950

PC WORLD

TECHNOLOGY ADVICE YOU CAN TRUST®

Supercharge Your Search: Use PC World's Find-It-Service

Don't waste your valuable time searching for the information you want. Use *PC World's* Find-It service. Find quality information quickly and browse more efficiently with *PCWorld's* innovative Find-It service.

HOW IT WORKS

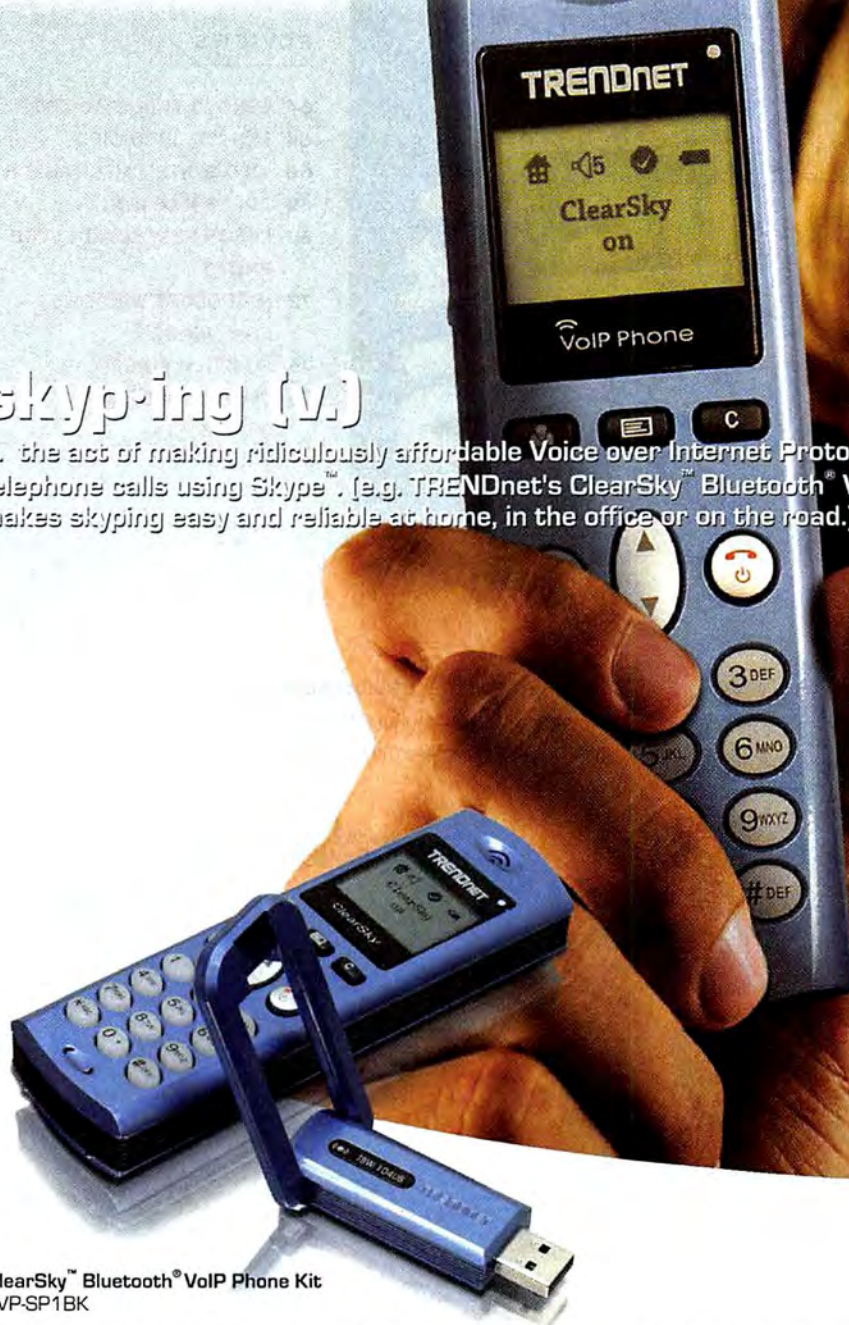
Enter a Find-IT URL (for example, find.pcworld.com/46300) in your browser or click the button on any **USE FIND.PCWORLD.COM** PCWorld.com page and enter the five-digit Find-It number.

PRODUCT INFORMATION

Find-It URLs are also specific to each ad, for a fast and easy way to get to the product information you want.

skyping (v)

1. the act of making ridiculously affordable Voice over Internet Protocol (VoIP) telephone calls using Skype™. (e.g. TRENDnet's ClearSky™ Bluetooth® VoIP Phone Kit makes skyping easy and reliable at home, in the office or on the road.)



ClearSky™ Bluetooth® VoIP Phone Kit
TVP-SP1BK

TRENDnet's ClearSky™ Bluetooth® VoIP Phone Kit for Skype™ (TVP-SP1BK) allows you to talk to friends, family or co-workers around the world at a fraction of the cost of traditional phone service. The included Skype™ software allows you to make FREE PC to PC calls to other Skype™ users and allows you to dial out (SkypeOut™) and receive (SkypeIn™) calls from regular telephones and mobile phones. Best of all, with the long-range Bluetooth® adapter you can talk and roam anywhere you feel comfortable in your home or office without being chained to your computer.

Bluetooth® Handset supports popular Skype™ functions such as Contacts, History, SkypeIn™, SkypeOut™, Conference Call, etc.

High Power USB Class 1 Bluetooth® Adapter supports Enhanced Data Rate (EDR) technology for long range communication up to 100 meters (328ft.).

Compliant with MSN Messenger, Yahoo Messenger and more

Supports up to 60+ hours of standby and 6+ hours talk time

Handset includes Rechargeable Lithium-ion Battery

Includes Skype™ Software

2-Year Warranty

For Pre-Sales advice, please call 1-888-326-6061.

Buy.com TigerDirect.com

newegg.com

PC Connection

eCost

Fry's

Go to find.pcworld.com/52964



TRENDnet

REVIEWS & RANKINGS

EDITED BY KALPANA ETTENSON & RAMON McLEOD

- 64 **LENOVO THINKPAD X60S**
- 64 **LENOVO 3000 C100**
- 68 **IOLO SYSTEM MECHANIC 6**
- 69 **APPLE MAC MINI**
- 69 **EPSON PERFECTION V700 PHOTO**
- 72 **MICROSOFT WINDOWS LIVE SEARCH**
- 75 **FUJIFILM FINEPIX V10**
- 75 **COREL WORDPERFECT OFFICE X3**



STANDING TALL: DELL'S 3100cn (left) comes standard with an extra paper tray, making it tower over the less-expensive Oki C3200n.



Color Lasers Get Down to Business

Our lab tests reveal the best bargains among the latest low-cost color laser printers.

COLOR LASER PRINTERS

TEST CENTER IT'S HARDLY A challenge any longer to find a color laser printer for as little as \$399. All six models we tested this month cost less than \$1000, and all are faster and deliver better print quality than previous units we have tested. Nor do these office workhorses skimp on features: They come network-

capable, often with two paper trays so you can keep a second paper stock (such as company letterhead) loaded and ready.

Our Best Buy may appear somewhat familiar, since it's a

close cousin of the last chart's top-seeded printer. The \$499 Dell 3100cn looks and behaves much like our earlier Best Buy, the discontinued Dell 3000cn, but adds a sec-

ond paper tray and drivers for Apple and Linux OSs. The two Dells turned in almost identical speeds in our tests, printing text at 17.8 pages per minute—more than 5 ppm faster than the average for all previously tested models.

If blisteringly fast print speeds are your top priority, however, your best choice is Oki Printing Solutions' \$799

PCW RATINGS



FOR A FULL explanation of our rating system and for information about our test methodology, visit find.pcworld.com/49902. Read more on page 82.

- 78 O-YA DEESEARCH 100
- 79 BFG GEFORCE 7900 GT OC
- 79 PNY GEFORCE 7900 GTX
- 79 XFX GEFORCE 7600GT
- 80 SYMANTEC NORTON
- 80 SAVE & RESTORE
- 80 QUANTUM GOVAULT DRIVE
- 82 MORE REVIEWS
- 82 AT PCWORLD.COM

- 62 TOP 10 COLOR LASER PRINTERS
- 66 TOP 10 DESKTOP PCs
- 70 TOP 5 32-INCH LCD TVs
- 76 TOP 5 DIGITAL SLR CAMERAS



76



69

C5800Ldn. This new model was the swiftest printer across the board, printing text at a rapid 19.5 ppm, color graphics at a brisk 6.1 ppm, and glossy photos at 6.1 ppm.

BETTER PRINTS

THE LAST TIME we evaluated low-cost color lasers (for our December 2005 issue), print quality was a decidedly mixed bag. Our new crop of printers delivered better quality, on average, in all categories.

The Dell 3100cn earned an unprecedented three Superior scores—for text, line art, and grayscale graphics quality—marking the first time we've awarded a color laser our top score in any print quality category. The 3100cn's color print scores were closer to average, however: Graphics on plain paper had slightly fuzzy details, and skin tones in photos looked unnaturally orange.

Three other new models received Superior scores, each in a different area. Though it failed to make the chart, the \$999 Konica Minolta's MagiColor 5440 DL achieved its high mark for razor-sharp text. Oki Printing Solutions' \$399 C3200n, which placed third, produced an almost

flawless line-art print. And Lexmark's \$699 C524n aced our grayscale graphics test, but missed our chart in part due to its high price.

The ability to print on glossy paper specifically designed for use with laser units is a relatively new feature for color laser printers, but all six of the models we tested this month have it. The average print speed on glossy paper was lethargic, though, at 1.8 ppm.

The quality of glossy photo prints from a color laser falls significantly short of what

you'd get from a good inkjet printer, too. Five of the ten models on the chart earned a rating of Poor for photo print quality; most other models earned only a Fair. Colors tended to look unnatural, depth and details frequently got lost, and textures that should have looked smooth were often marred by visible dots or cross-hatch patterns.

Still, if you plan to print business brochures—and not photo-quality images—on glossy paper, most of these models should fit your needs.

Unlike inkjet printers, color lasers don't produce better print quality on glossy paper; our photos looked identical whether they were on plain or glossy paper. Interestingly, the highest print quality score went to Dell's 3100cn, a model that doesn't claim to print on glossy paper at all. We tried it anyway with Hammermill Color Laser Gloss paper, and the results were surprising: The 3100cn generated the most attractive glossy photos we've seen from a sub-\$1000 color laser printer.

The mediocre photo image quality that these color lasers produced helps explain why only a few printers in this class can print photos directly from a digital camera. In fact, Konica Minolta's MagiColor 2430DL is the only printer on the chart that comes standard with a PictBridge port.

To enable this optional feature on its sibling, the MagiColor 5440 DL, you would have to purchase a \$249 card and an additional 128MB of RAM for \$129. Whether the feature is worth the expense involved may depend on how willing you are to load your images onto a PC first: In the tests we conducted, the ►



THE COMPACT HP Color LaserJet 3800n is easy to maintain.

MagiColor 5440 DL took almost 5.5 minutes to print a 3.6MB file taken directly from a Canon PowerShot S80 camera onto a sheet of letter-size

glossy paper. Of course, printing the same photo on letter-size paper via the direct-print feature on a Canon i9900 ink-jet printer took just as long.

Setting up the latest color lasers is not difficult. The four new models that reached the chart are well designed, have a backlit two-line monochrome

LCD, and make replacing the toner cartridges an easy task.

While all of the models we tested offer USB 2.0 and ethernet connectivity, only a handful support older connectivity and operating systems. For example, your options are somewhat limited if you require a parallel port: Just five printers on the chart, including our Best Buy and the number two Brother HL-2700CN, have a parallel port. Both of those printers also come with drivers for Windows NT, but the other three models that are new to the chart do not. Linux users are better served: Only the Oki C3200n and Brother HL-2700CN lack Linux drivers.

BREAKING IT DOWN

EVEN IF YOU want to spend the bare minimum on a color laser printer, you can get a fair number of features and reasonably good image quality. For example, the Oki C3200n and the Dell 3100cn include paper-handling features similar to those on relatively expensive models, and both have an embedded Web server for remotely managing the printer. The Oki doesn't offer PCL or PostScript, however, while the Dell supports both.

In some cases the most significant trade-off you have to make in buying a relatively inexpensive model involves the options: For example, you can't get an additional paper tray for the \$399 C3200n, and adding a duplexer and the required 64MB of extra memory costs \$488, making the overall price higher than the \$799 you'd pay for the much faster Oki C5800Ldn, which comes already equipped with a tray, duplexer, and extra memory.

—Eric Butterfield

	COLOR LASER PRINTER	PCW Rating	Performance	Features and specifications
1	Dell 3100cn Best Buy \$499 NEW find.pcworld.com/52616 ► Bottom line: This model offers plenty of paper capacity, plus fast text printing and high quality at an excellent price.	88 Very Good	• Text quality: Superior • Graphics/photo quality: Good/Good • Tested speeds (ppm): 17.8 text/ 3.4 graphics	• 25 ppm text • 5 ppm graphics • 2400-by-600-dpi maximum resolution
2	Brother HL-2700CN \$500 find.pcworld.com/45958 ► Bottom line: Among the fastest at printing text. Letters looked fuzzy; graphics were dark. Compact design has letter-size paper limit.	81 Very Good	• Text quality: Fair • Graphics/photo quality: Poor/Poor • Tested speeds (ppm): 18.7 text/ 3.1 graphics	• 31 ppm text • 8 ppm graphics • 2400-by-600-dpi maximum resolution
3	Oki Printing Solutions C3200n \$399 NEW find.pcworld.com/52624 ► Bottom line: Low-priced GDI-based printer sacrifices options and features, but this model did well at printing text.	81 Very Good	• Text quality: Good • Graphics/photo quality: Fair/Poor • Tested speeds (ppm): 11.6 text/ 4.3 graphics	• 20 ppm text • 12 ppm graphics • 1200-by-600-dpi maximum resolution
4	Konica Minolta MagiColor 2430DL \$500 find.pcworld.com/49736 ► Bottom line: Performance was above average, and estimated costs per page are competitive. PictBridge support is standard.	80 Very Good	• Text quality: Good • Graphics/photo quality: Fair/Fair • Tested speeds (ppm): 13.0 text/ 2.7 graphics	• 20 ppm text • 5 ppm graphics • 2400-by-600-dpi maximum resolution
5	Xerox Phaser 6120n \$499 find.pcworld.com/49742 ► Bottom line: Graphics quality was better than on most competing models, though pages printed slowly. Supports PCL and PostScript.	80 Very Good	• Text quality: Fair • Graphics/photo quality: Good/Fair • Tested speeds (ppm): 14.7 text/ 1.6 graphics	• 20 ppm text • 5 ppm graphics • 600-by-600-dpi maximum resolution
6	Oki Printing Solutions C5800Ldn \$799 NEW find.pcworld.com/52626 ► Bottom line: GDI-based printer has a built-in duplexer; fastest printer for both text and graphics on the chart.	79 Good	• Text quality: Very Good • Graphics/photo quality: Good/Fair • Tested speeds (ppm): 19.5 text/ 6.1 graphics	• 28 ppm text • 24 ppm graphics • 1200-by-600-dpi maximum resolution
7	HP Color LaserJet 3800n \$999 NEW find.pcworld.com/52618 ► Bottom line: Model has a small footprint and is easy to maintain, but it's comparatively expensive. Supports PCL and PostScript.	79 Good	• Text quality: Very Good • Graphics/photo quality: Good/Fair • Tested speeds (ppm): 16.5 text/ 5.3 graphics	• 22 ppm text • 22 ppm graphics • 600-by-600-dpi maximum resolution
8	Lexmark C522n \$499 find.pcworld.com/49738 ► Bottom line: Unit delivered good performance at a low price. Toner cartridges are easy to replace. Supports both PCL and PostScript.	78 Good	• Text quality: Good • Graphics/photo quality: Fair/Poor • Tested speeds (ppm): 14.3 text/ 3.8 graphics	• 20 ppm text • 20 ppm graphics • 1200-by-1200-dpi maximum resolution
9	Konica Minolta MagiColor 2450 \$499 find.pcworld.com/48336 ► Bottom line: It resembles the Xerox Phaser 6120n in features and performance, but printed lackluster graphics. Has PCL and PostScript.	77 Good	• Text quality: Fair • Graphics/photo quality: Fair/Poor • Tested speeds (ppm): 14.4 text/ 1.6 graphics	• 20 ppm text • 5 ppm graphics • 9600-by-600-dpi maximum resolution
10	HP Color LaserJet 3600n \$599 find.pcworld.com/49740 ► Bottom line: Speedy graphics printer generated slightly thin-looking text. Easy to use and maintain, with reasonably priced options.	77 Good	• Text quality: Fair • Graphics/photo quality: Fair/Poor • Tested speeds (ppm): 13.0 text/ 5.6 graphics	• 17 ppm text • 17 ppm graphics • 600-by-600-dpi maximum resolution

CHART NOTE: Prices and ratings are as of 3/24/06. See find.pcworld.com/53118 for more about the products ranked on this chart.



A WIDER SCREEN RATIO ALLOWS YOU TO SEE THE WHOLE PICTURE.



16:10 wide screen ratio • Ultra-high resolution • PC/Mac compatible



INTRODUCING THE LG FLATRON™ WIDE SCREEN LCD MONITORS. Featuring response times as fast as 5ms and 16:10 aspect ratios, our wide screen monitors are perfect for working with multiple applications simultaneously or watching movies. Add to that the combined power of contrast ratios as high as 1400:1 and our unique *f*-ENGINE - the world's first picture-enhancing chip for monitors - and you'll see colors that are more brilliant and images more crisp and vibrant. We also back all of our monitors with the best warranty program in the industry. That's what we call the full picture.

Vivid As...Brilliant As...Innovative as LG.



Specifications are subject to change without notice. Screen image simulated. See dealer for warranty details.
©2006 LG Electronics, Inc. Englewood Cliffs, NJ. LG Design, Life's Good, and FLATRON are trademarks of LG Electronics, Inc.

www.LGusa.com

Go to find.pcworld.com/52958

Latest ThinkPad Is a Top-Notch Ultraportable

NOTEBOOK

TEST THE **LENOVO ThinkCenter Pad X60s** is a speedy, well-designed ultraportable notebook geared toward business users. The pricey unit replaces the ThinkPad X41, and while it leaves out a few features you'll find on comparable laptops—such as a built-in optical drive—the X60s is still one of the best ultraportable models you can buy.

ThinkPad X60s

Lenovo

PCW Rating **84** Very Good

This top-rated ultraportable provides a great keyboard, superior performance, and an outstanding design.

List: \$2299

find.pcworld.com/52694

Carrying an Intel 1.66-MHz Core Duo L2400 processor with 512MB of RAM, our shipping unit was one of the fastest ultraportables we have tested, receiving a score of 83 on WorldBench 5. The X60s's performance exceeds that of laptops running the 1.73-GHz Pentium M 740 chip, and generally matches those with 1.86-GHz Pentium M 750 CPUs. The X60s also provided outstanding battery life in our tests: 8 hours, 21 minutes from its eight-cell lithium ion battery.

In addition to its strong performance, this ThinkPad



THE IMPRESSIVE
Lenovo ThinkPad X60s (shown with its included dock) replaces the ThinkPad X41.

is wonderfully well designed. The keyboard is superb; typists will love the layout and deep keystrokes. You'll also find dedicated keys for volume and for Lenovo's useful ThinkVantage Productivity Center help software.

The 3.5-pound X60s includes three USB ports, one

FireWire port, and slots for SD and PC Cards. Adding the X6 UltraBase docking station (included in the \$2299 price) increases the total weight to 6.1 pounds and supplies the DVD-ROM/CD-RW combination drive, as well as one parallel, one serial, and four USB connections.

I have two particular gripes with this otherwise very impressive laptop: It has only an eraserhead pointing device (the choice I happen to prefer), and it lacks a built-in optical drive. Beyond those quibbles, however, this ThinkPad is an outstanding ultraportable for business users and anyone else who wants a well-designed machine.

—Dan Sommer

Lenovo's New Budget Laptop Is Bland but Solid

NOTEBOOK

TEST WHEN IT ACQUIRED **Center** IBM last year, Lenovo assured everyone that it would continue to make IBM's distinctive ThinkPad series laptops but would also introduce new products. In the top portion of this page you'll see the first part of that pledge fulfilled (the company's new ThinkPad X60s); and now Lenovo has made good on the second part of that promise, releasing new notebook and desktop PC models under its own brand. I looked at the Lenovo **3000 C100** and found a low-cost laptop that offers a nice assortment of features and solid performance for a great price. But it's no ThinkPad.

LENOVO'S 3000 C100 is fast and inexpensive, but it can't match a ThinkPad in appearance or details.



On the plus side, the 3000 C100 offers a fairly robust configuration: It includes a 1.73-GHz Pentium M 740 processor, 512MB of RAM, a two-in-one media-card reader, and a DVD±RW drive that's located on the front of the laptop for easy access. The system's 15-inch standard-aspect screen is bright and easy to

read, although it would have been better as a wide screen. The machine weighs a fairly manageable 6.4 pounds.

My shipping system turned in strong performance: The C100 managed a score of 77 on our WorldBench 5 test suite, making it one of the best-performing all-purpose notebooks we've evaluated. It turned in super-long battery life, as well—just short of 5 hours. Unfortunately, the C100 lacks many of the thoughtful design touches that make ThinkPad notebooks so popular. For example, there's no signature red

eraserhead input device (just a touchpad). And its keyboard isn't nearly as comfortable to type on as a ThinkPad's, and the wrist rests feel a tad big, forcing you to position your hands farther back on the notebook to reach the keys.

At \$999, however, the Lenovo 3000 C100 is a pretty terrific deal given its solid performance and good features. Just don't look for ThinkPad-like styling and details.

—Kalpana Ettenson

3000 C100

Lenovo

PCW Rating **83** Very Good

Affordable notebook offers good features and great performance.

Street: \$999

find.pcworld.com/52768



**the
DeeTee
Bunch**

**5YEAR
WARRANTY**

Our large family of Flash drives means there's one that's perfect for you.

With a wide range of models, capacities and features, DataTraveler® is the most popular storage family in town. These practical USB Flash drives get the highest ratings for securely storing, carrying and transferring all kinds of data, from reports and presentations to photos of your entire bunch. Backed by a five-year warranty and legendary Kingston® reliability, DataTraveler is the choice of consumers and corporations alike.

To learn more from others who use the versatile DataTraveler, and to meet the whole groovy family, visit kingston.com/dt. We have much more than a hunch you'll find the one for you.

Kingston
TECHNOLOGY
COMMITTED TO MEMORY®



buy.com.
the internet superstore™

mwave.com
"Buy Smart, Buy Now!"

newegg.com

TigerDirect.com

ZipZomfly
.com

*Please note: Some of the listed capacity is used for formatting and other functions and thus is not available for data storage. For more information, please consult Kingston's Flash Memory Guide at kingston.com/Digital_Media_Guide. ©2006 Kingston Technology Company, Inc. 17600 Newhope Street, Fountain Valley, CA 92708 USA. All rights reserved. All trademarks and registered trademarks are the property of their respective owners.

Go to find.pcworld.com/52396



TOP 10 DESKTOP PCs

New Power System Sets Performance Record

TEST CENTER TWO POWER systems and one value model join our chart this month. Xi's MTower 64 AGL-SLI achieved the highest-ever WorldBench 5 mark and Unreal Tournament 2003 graphics scores. Audiophiles will like that it comes with Creative's Sound Blaster X-Fi XtremeMusic card. The other newcomer to the power list is the uniquely designed Aeon-8010 from Aeoncraft, IBuyPower's luxury brand. Its WorldBench 5



AEONCRAFT'S AEON-8010 is a speed demon with a funky design and upgrade limitations.

performance was second only to that of the MTower.

On the value side, Dell's Dimension E310 lands in the number five spot. This computer comes with an interesting \$99 data-protection feature called DataSafe, which combines software backup imaging and RAID 1 mirroring to safeguard your data.

—Narasu Rebbapragada

ONLINE

FOR MORE INFORMATION on the desktop PCs reviewed in this chart, including details on how we tested them, go to find.pcworld.com/52566.

	POWER SYSTEM	PCW Rating	Performance	Features and specifications
1	Polywell Poly 939N4-SLI2 FX60 Best Buy \$4250 find.pcworld.com/51478	85 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 140 WorldBench 5 rating: Superior Overall design: Very Good Graphics: Superior 	<ul style="list-style-type: none"> 2.6-GHz Athlon 64 FX-60 398GB (RAID) drive capacity 19-inch Hyundai L90D+ LCD 512MB EVGA e-GeForce 7800 GTX (two cards)
	▶ Bottom line: Gamers and power users who crave top performance and need easy upgrades will like this system's speed and design.			
2	Aeoncraft Aeon-8010 \$3595 NEW find.pcworld.com/52554	85 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 141 WorldBench 5 rating: Superior Overall design: Very Good Graphics: Superior 	<ul style="list-style-type: none"> 2.6-GHz Athlon 64 X2 FX-60 300GB (RAID) drive capacity 19-inch ViewSonic VX924 LCD 512MB ATI Radeon X1900 XTX
	▶ Bottom line: This high-performance gaming system lacks the superslick looks and free PCI slots of some competitors, but it's also less pricey.			
3	ABS Ultimate M6 Sniper \$4299 find.pcworld.com/51474	84 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 141 WorldBench 5 rating: Superior Overall design: Very Good Graphics: Superior 	<ul style="list-style-type: none"> 2.6-GHz Athlon 64 FX-60 648GB (RAID) drive capacity 19-inch Samsung SyncMaster 915N LCD 256MB EVGA e-GeForce 7800 GTX (two cards)
	▶ Bottom line: Gamers and graphics gurus who want the fastest PC on the block and are willing to pay for it will be drawn to this system.			
4	Xi MTower 64 AGL-SLI \$4199 NEW find.pcworld.com/52552	84 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 142 WorldBench 5 rating: Superior Overall design: Very Good Graphics: Superior 	<ul style="list-style-type: none"> 2.6-GHz Athlon 64 X2 FX-60 300GB (RAID) drive capacity 19-inch ViewSonic VP930B LCD 256MB EVGA e-GeForce 7800 GTX
	▶ Bottom line: This expensive PC earned our best WorldBench 5 and graphics scores to date. Expansion slots are skimpy though.			
5	CyberPower Gamer Ultra XLC \$3499 find.pcworld.com/51476	83 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 123 WorldBench 5 rating: Very Good Overall design: Very Good Graphics: Superior 	<ul style="list-style-type: none"> 2.6-GHz Athlon 64 FX-60 398GB (RAID) drive capacity 19-inch ViewSonic VX924 LCD 512MB EVGA e-GeForce 7800 GTX (two cards)
	▶ Bottom line: Full-featured and fast, this PC will appeal to budget-minded gamers looking for high performance at a reasonable price.			
	VALUE SYSTEM			
1	Cisnet NASCAR PC Best Buy \$868 find.pcworld.com/50490	84 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 83 WorldBench 5 rating: Good Overall design: Good Graphics: Fair 	<ul style="list-style-type: none"> 2-GHz Athlon 64 3200+ 160GB drive capacity 17-inch Cisnet NCA-701 LCD Integrated Radeon Xpress 200
	▶ Bottom line: Kids and die-hard NASCAR fans should enjoy this inexpensive, themed—but otherwise typical—value PC.			
2	HP Pavilion s7220n Slimline Desktop PC \$870 find.pcworld.com/50488	82 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 69 WorldBench 5 rating: Poor Overall design: Very Good Graphics: Fair 	<ul style="list-style-type: none"> 3.2-GHz Pentium 4 640 250GB drive capacity 19-inch Dell E196FP LCD 256MB ATI Radeon X600
	▶ Bottom line: Affordability and a very small footprint make this basic PC attractive for performing modest computing tasks in small spaces.			
3	Dell Dimension E510 \$1074 find.pcworld.com/51398	82 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 89 WorldBench 5 rating: Good Overall design: Good Graphics: Very Good 	<ul style="list-style-type: none"> 1.5-GHz Celeron M 370 200GB drive capacity 17-inch HP vs17 LCD Integrated Intel 915GV
	▶ Bottom line: This well-priced Media Center PC lacks a TV tuner and digital audio ports, but serves nicely as a home or office PC.			
4	CyberPower Media Center Ultra Edition \$1299 find.pcworld.com/50484	80 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 89 WorldBench 5 rating: Good Overall design: Very Good Graphics: Very Good 	<ul style="list-style-type: none"> 3-GHz Pentium D 830 250GB drive capacity 19-inch ViewSonic VX924 LCD 256MB nVidia GeForce 6600
	▶ Bottom line: Strong performance and expandability make this inexpensive console Media Center PC good for a living room or office.			
5	Dell Dimension E310 \$988 NEW find.pcworld.com/52556	79 Good	<ul style="list-style-type: none"> WorldBench 5 score: 78 WorldBench 5 rating: Fair Overall design: Good Graphics: Fair 	<ul style="list-style-type: none"> 2.8-GHz Pentium 4 521 160GB (RAID) drive capacity 17-inch Dell E176FP LCD Integrated Intel 915GV
	▶ Bottom line: Inexpensive Media Center PC with TV tuner lacks power but comes with a RAID drive array that protects your data.			

CHART NOTES: Ratings are as of 3/23/06. Drive space (hard-drive capacity) may represent multiple drives.

The greatest pictures you'll ever take without knowing what the heck you're doing.



© 2006 Nikon Inc. *Suggested street price. Pictured 55-200mm AF-S DX Zoom-Nikkor lens sold separately.

Do Nikon Owners know more about photography? Not necessarily, but they do know the Nikon® D50.™ It's the incredibly easy-to-use, affordable Digital SLR with *Nikon's Exclusive Feature System*. So there's no problem getting sharp, colorful digital pictures, whatever the situation. Plus, the D50 lets you choose from a broad range of AF Nikkor lenses and it's fast enough to capture the most difficult of shots. So taking incredible pictures becomes incredibly easy. The Nikon D50, just \$699.95* with 18-55mm AF Zoom-Nikkor® lens. Visit nikondigital.com.



The New D50 Digital SLR



At the heart of the image™

System Mechanic Bounces Back With Version 6

UTILITY SOFTWARE

ONCE THE MAKER of one of the best PC cleaning and optimization tools on the market, Iolo Technologies had slipped a bit in recent years, turning out mediocre versions of its flagship System Mechanic software. I'm happy to see that the \$50 **System Mechanic 6** is substantially better than the two prior versions.

System Mechanic's original appeal was its promise to make your system run quicker and leaner, with simple, easy-to-use tools. This version answers that promise with an informative interface. Most striking about the shipping version I tested are the colorful audio-volume-style meters that display your computer's



SYSTEM MECHANIC 6 is much improved over prior versions; it can take a slow-to-start computer and speed up its boot time.

overall health and security status at a glance. I also appreciated the app's logical layout, which should provide novices with fast access to the most important tools for cleaning

out junk files, optimizing the Registry, speeding Windows' startup, repairing hard-drive problems, and killing spyware. Drilling down to the more expert tools is intuitive, though most people will probably never get around to them. The basic tools are that good.

Below the meters is a box with six items detailing where your machine is in good, or bad, shape. The first four—Clutter, Speed, Safety, and Fitness—tell you which major repair tools you should run to optimize your system. The two other items are for maintenance: Update indicates whether System Mechanic is fully updated, while Active Care lets you know whether an automated maintenance schedule has been set up.

You can run repair tools directly from within this box or use the Power Tools buttons on the right side of the application's interface.

The first of these buttons is the all-in-one PC TotalCare tool. This is a good place to start if your machine has a lot of problems, because the tool

runs all the most important repair and optimization applications with a single mouse click. But it is slow, slow, slow. So I jumped immediately to the PC Cleanup tool, which quickly found—and eliminated—a gigabyte's worth of Windows temporary files, cookies, and cached Web pages.

The PC Accelerator tool is my favorite part of System Mechanic 6. This tool optimizes your Internet connection settings, removes any unnecessary programs that crank up when Windows starts, defragments your hard drives and system memory, and compacts the Windows Registry. I used the last major tool, PC Repair, to fix broken shortcuts and to delete spyware apps and invalid uninstallers. After I used the tool, System Mechanic declared my PC in tip-top shape, but shortly thereafter a system-tray icon reported that my machine's health and performance could stand improvement. However, when I restarted System Mechanic, it found no problems to fix.

Beyond this modest issue, I didn't run into any problems, which leads me to recommend System Mechanic 6 as a fine addition to any PC optimization arsenal.

—Ramon G. McLeod

System Mechanic 6

Iolo Technologies

PCW Rating **85 Very Good**

PC cleaning and optimization software shapes up your system at a reasonable price.

List: \$50

find.pcworld.com/52806

TECH TREND

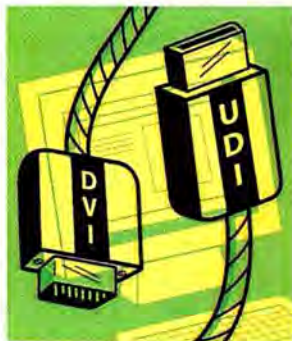
More Monitor Inputs?

TWO NEW HIGH-PERFORMANCE digital inputs will vie for your monitor next year. Silicon Image and Intel are touting the upcoming UDI input standard, planned to be backward-compatible with digital DVI and the popular high-definition consumer electronic input HDMI. Over in the other camp, display-industry association VESA seeks to establish the DisplayPort standard. DisplayPort's impressive roster of supporters includes Dell and HP.

These digital, PCI Express-based inputs may not appear on products until 2007, so it's not yet possible to pick a performance winner. But that doesn't mean you have to forgo a new monitor until the dust settles.

Chris Connery, vice president of desktop monitor market research at DisplaySearch, says, "The industry has shown that compatibility is its top priority, so it's not going to abandon those who have a DVI-based monitor today."

—Laura Blackwell



Mac Mini Gets Ready for the Living Room

DESKTOP

APPLE'S LATEST **Mac Mini** brings a \$100 price jump, a new processor from Intel, and some slick new entertainment features designed to bridge the gap between the home office and the home theater. The \$649 shipping unit I tested included Intel's 1.5-MHz Intel Core Solo processor, 512MB of memory, a 60GB hard drive, and an 8X SuperDrive (DVD+R DL/DVD±RW/

CD-RW). (The standard \$599 configuration has a DVD-ROM/CD-RW combo drive.) Among the machine's new elements are built-in gigabit ethernet, 802.11g Wi-Fi, Bluetooth 2.0, two extra USB 2.0 ports (for a total of four), and optical digital input/output ports; the most significant additions to the system are an infrared remote control and Front Row media software. I was able to connect the unit to my home analog television via a composite/S-Video adapter, and then to my 5.1-channel surround-sound amplifier via a digital optical audio cable. One disappointment: I had to purchase Apple's video adapt-



THE INTEL-POWERED MAC Mini costs a bit more than the prior version but is now much closer to a real media-center machine.

er and optical cables separately (at a total cost of \$49). Unfortunately, the company still doesn't provide an internal TV tuner as an option.

Our friends at *Macworld* ran tests on the single-core Mac Mini and the \$799 dual-core

version (running Intel's 1.66-GHz Core Duo processor). The numbers were unsurprising: The Mac Mini is less powerful than the Intel-based iMac and MacBook Pro, each of which feature faster processors. However, the dual-core version

outperformed the previous top-of-the-line model—the 1.42-GHz G4 Mac Mini—in most tests, and the single-core system did better in about half the tests. That said, most prospective Mac Mini buyers aren't looking for raw power, and as an entry-level home system this newest version shines both in its features and in its bundled applications.

—Chip Taylor

Mac Mini

Apple Computer

PCW Rating **83** Very Good

Entry-level Mac with Intel inside costs a bit more but adds several worthwhile multimedia features.

List: \$649

find.pcworld.com/52798

Epson Scanner Does Gallery-Size Enlargements

SCANNER

IF YOU'RE LOOKING for a scanner that's capable of producing colossal enlargements from your film images, the \$549 Epson **Perfection V700 Photo** is an excellent choice.

Epson's latest model is the first flatbed scanner we've reviewed that offers a maximum optical resolution of 6400 dots per inch, which is a significant advance over the current crop of 4800-dpi scanners. While a scan at 4800-dpi resolution is usually sufficient for producing up to 16-by-20-inch prints, a 6400-dpi scan can deliver a fine-quality, gallery-

style 25-by-40-inch print.

The 14.6-pound V700 is a dual-purpose model that can scan both film and reflective materials (such as photo prints and paper documents). However, the V700's 6400-dpi resolution is available only for

THE EPSON PERFECTION V700 Photo scanner can scan film at up to 6400 dpi—a big increase over most flatbed scanners.

film scanning; the maximum optical resolution for reflective scans is limited to 4800 dpi. In testing a production version of the V700, I scanned a variety of photos and 35mm film originals, at various resolutions. The overall image quality was excellent; the test images displayed fine color balance and saturation, and the 6400-dpi film scans were particularly impressive at capturing and maintaining fine details.

The device's brisk performance (tested via its USB 2.0 connection) stacked up well against the results from other flatbeds *PC World* has reviewed

recently. It scanned a full-page color document (at 300 dpi) in 22 seconds, and did a 35mm slide (at 1200 dpi) in less than a minute—both very good scores compared with those of competing models.

Epson ships the V700 Photo with a capable photo editor and a good optical character recognition application. The result is a solid package that's easy to recommend.

—Richard Jantz



Perfection V700 Photo

Epson

PCW Rating **80** Very Good

This flatbed scanner is worth its premium price only if you need high-resolution film scans.

List: \$549

find.pcworld.com/52764

TOP 5 LCD TVs

LCD TVs: Bargain, Luxe, and Just Right

FOR THIS MONTH'S chart we tested three new LCD television sets: the \$1799 Samsung LN-S3251D, the \$2700 Sony Bravia KDL-V32XBR1, and the \$1000 Vizio L32HDTV. Vizio's bare-bones bargain and Sony's full-featured (and full-priced) model yielded comparable image quality. The big winner, Samsung's LN-S3251D, sailed through our image-quality tests to take home the Best Buy prize.

The LN-S3251D reminded us of the previously evaluated Samsung LN-R328W, our image-quality champion back in February. But the new set did even better, winning the performance triple crown with

excellent scores in our tests of high-definition, standard, and DVD display. It particularly wowed our jury with saturated colors and strong contrast—both of which stood up to our bright-lights test. We would be even more impressed if the set had a CableCard slot; for this image quality, though, it may be worth the hassle of adding a set-top box. The first-rate screen isn't the unit's only claim to beauty, either: Its sleek, shiny black cabinet looks very swanky.

Our test jury cited realistic flesh tones on DVD playback as a high point of the Vizio L32HDTV's performance. On both standard- and high-def



SAMSUNG'S LN-S3251D LOOKS great even under bright lights.

TV content, the Vizio's picture was generally pleasing, although some jurors found it dark at default settings. An intuitive remote and unusually clear and detailed documentation make the unit easy to set up and use. The Vizio forgoes a CableCard slot and offers fewer inputs than other LCD TVs we've tested, and its

plastic finishes lack the elegance of the Sony and Samsung models, but it's by far the least expensive set here.

Sony's Bravia KDL-V32XBR1 demonstrated strength on standard-def TV content and on its ability to retain color and contrast under bright lights. In other image-quality tests, it showed good, but not great, pictures, trailing the Vizio model in most categories. The Sony has its charms, though: Its TruSurround XT sound delivered stirring bass through its built-in speakers, and its remote control has a thumbscrew-secured battery compartment. This handsome model offers a Memory Stick slot, which allows you to browse images or start a slide show from a digital camera or USB device. And unlike the other two newly tested TVs on the chart, the Sony includes a convenient CableCard slot.

—Laura Blackwell

ONLINE

FOR MORE INFORMATION about the high-definition LCD television sets that are reviewed here, including testing details, go to find.pcworld.com/52702.

	32-INCH LCD TVs	PCW Rating	Performance	Features and specifications
1	Samsung LN-S3251D Best Buy \$1799 NEW find.pcworld.com/52686 Bottom line: Bright, high-quality screen and sleek, piano-black cabinet combine for a great living-room centerpiece.	82 Very Good	• HDTV: Very Good • SDTV: Very Good • DVD: Very Good • Overall design: Good	• 1366-by-768-pixel screen • Tuners: 1 NTSC, 1 ATSC • Inputs: 2 HDMI, 1 component • No CableCard slot
2	HP LC3200N \$1700 find.pcworld.com/50572 Bottom line: With a first-rate selection of ports and color controls, this LCD TV is an excellent choice. The cabinet sits on a huge base.	78 Good	• HDTV: Good • SDTV: Fair • DVD: Good • Overall design: Very Good	• 1366-by-768-pixel screen • Tuners: 1 NTSC, 1 ATSC • Inputs: 1 HDMI, 2 component • CableCard slot
3	Vizio L32HDTV \$1000 NEW find.pcworld.com/52690 Bottom line: Readable manuals and well-designed remote make bare-bones unit simple to use; plastic finishes look low-budget.	78 Good	• HDTV: Good • SDTV: Good • DVD: Very Good • Overall design: Very Good	• 1366-by-768-pixel screen • Tuners: 1 NTSC, 1 ATSC • Inputs: 1 HDMI, 2 component • No CableCard slot
4	Sony Bravia KDL-V32XBR1 \$2700 NEW find.pcworld.com/52688 Bottom line: Rich sound, easy-to-understand menus, and a sturdy remote are this premium model's best points.	74 Good	• HDTV: Good • SDTV: Very Good • DVD: Good • Overall design: Very Good	• 1366-by-768-pixel screen • Tuners: 1 NTSC, 1 ATSC • Inputs: 1 HDMI, 3 component • CableCard slot
5	Sharp Aquos LC-32D6U \$2010 find.pcworld.com/50576 Bottom line: Though it shares some components with the HP LC3200N, this set doesn't have as many ports or image controls as the HP.	74 Good	• HDTV: Good • SDTV: Good • DVD: Good • Overall design: Fair	• 1366-by-768-pixel screen • Tuners: 1 NTSC, 1 ATSC • Inputs: 1 HDMI, 2 component • CableCard slot

CHART NOTES: Prices and ratings are as of 4/7/06. NTSC tuners provide analog TV reception; ATSC tuners provide high-definition TV reception (when an HDTV signal is available). HDMI stands for High-Definition Multimedia Interface.



Available at participating
retailers, including:

COMPUSA
We got it. We get it.

BEST BUY
BestBuy.com

circuit city

**electronics
Fry's**



Lights, camera, MAGIX

MAGIX Movie Edit Pro 11 is your all-around video solution: Award winner of 32 tests*, it offers amazing cuts, special effects, 3D transitions, and brilliant surround sound.

It's never been easier to turn your video recordings into movie classics. Experience your movies in top quality on your TV with Double Layer DVD and HD support, and animated menus.

Access to the free **MAGIX Online Photo & Video Album** makes watching and sharing your movies online a reality. MAGIX transforms every PC into a complete film studio. All you have to do is find the stars.

Videomaker Videomaker,
July 2005

*No video editing software has ever offered so many features for so little money, period. "This product will do almost everything a hobbyist video editor would ever want to do." This award refers to the previous version MAGIX Movie Edit Pro 10.

www.magix.com

MAGIX
the multimedia community

Microsoft Adds Tools to Latest Search Service

SEARCH SOFTWARE

GOOGLE CONTINUES to get raves for its stark design and simple search results, but frankly I think the search engine is boring. So I have to give Microsoft credit for offering some interesting new features in its latest crack at Web search: **Windows Live Search**. A few of the changes in this occasionally rough beta version seem a little gimmicky, but others offer easy search customizations that could well make your everyday Web searching more pleasurable.

Of all the new features, I quickly came to appreciate Windows Live Search's ability to scroll through seemingly endless search results. Still, in this beta the scrolling felt



WINDOWS LIVE SEARCH shows promise as a serious competitor to Google. But this beta likely won't tempt you to switch allegiance yet.

herky-jerky, like moving along the notches on a gear, rather than smoothly scrolling down a lengthy Web page.

A new feature of more dubi-

ous value is a slider control on the top right of the Windows Live Search results that lets you view more or less text in each listing. Unfortunately, there's little actual difference among the three settings. The slider control is much more effective when you're viewing images, as you get six thumbnail sizes to choose from. Even better: When you hover over an image, it enlarges slightly, and information about it—including its URL, size, and resolution—appears below it. This info is similar to the data Google provides with its image results (minus the enlargement), but Windows Live Search also lets you send an e-mail to Microsoft and tag the image as inappropriate, copyrighted, or irrelevant. If an image turns out to be copyrighted, the company will remove it.

Another new feature—one that will have to prove its merit—is the search macro. It lets you search with a single click a group of sites you select, but only after you've

logged in to a Microsoft Passport Network account (a step I expect many people will hesitate to take simply to perform a search). Once you're logged in, creating a search macro takes about a minute, after which the macro appears as a button on the right side of the Windows Live Search toolbar. During my tests the service once again displayed its beta nature, offering no way for you to move from the macro-creation page back to your previous search results. You have to return to the main search page and begin the entire process all over again.

In my informal testing I was at least as satisfied with the results that Windows Live Search retrieved as I was with the results of the same searches on Google. It's probably no surprise that Microsoft Web sites dominated the results when I entered "Windows Vista" in both Google and Windows Live Search (a bit more so in the latter), but the results I ended up with when I searched for "Firefox 2.0" were equally relevant—if noticeably different—in both engines. So assuming Microsoft can iron out Windows Live Search's various wrinkles before its official debut later this year, Web users may have reason to rethink their current search strategy.

—Dennis O'Reilly

Windows Live Search

Microsoft

Beta service, not rated

Still rough around the edges, but it has some promising features.

Free

find.pcworld.com/52802

ASK OUR EXPERTS

OEM Copy of Windows?

WILL I HAVE PROBLEMS if I buy an OEM version of Windows XP Pro and install it on my notebook myself, rather than buying the notebook with the operating system installed?

Tony Terry, Midwest City, Oklahoma



Associate Editor Danny Allen responds: We contacted several major vendors—among them Acer, Dell, Fujitsu, Gateway, HP, and Toshiba—for a response. All advised that while it's possible to install an OEM version,

this approach isn't recommended unless you download and install the correct drivers. Vendors' bundled OS installation/recovery discs include the drivers, but OEM Windows discs don't. Dell even said it won't support a non-Dell-installed OS. Your best bet: Check with your vendor first. You should note that even if you own an extra copy of Windows, none of the vendors we spoke to will ship a system without some sort of OS. However, certain vendors (such as Dell) offer Windows alternatives such as Linux or FreeDOS for select systems.

NEED INFORMATION OR advice about a buying decision?
Drop us a line at askourexperts@pcworld.com.

FinePix V10 Offers Big LCD, Average Images

POINT-AND-SHOOT

TEST THE MOST STRIKING feature of the compact Fujifilm **FinePix V10** is its 3-inch LCD, which almost fills the back of the camera. It's handy for framing shots and makes viewing images a pleasure. The \$349 V10 starts up quickly (in less than a second), and shutter lag was generally minimal, though I did sometimes notice it in low light.

The shipping model I tested

felt sturdy, despite its relatively slim profile. Operating the V10 with one hand isn't practical, however: The back-panel buttons run all along the bottom because the LCD leaves little room for controls. A dedicated button on the top of the camera offers ready access to the quality mode, ISO, and color settings menus.

The V10 keeps the features simple, with an assortment of six basic but effective scene modes. In the novel Natural Light and With Flash mode, for example, the camera takes two shots in quick succession: one without and one with flash. Unfortunately, the



FUJIFILM'S FINEPIX V10 has a large LCD, but the camera's battery life is mediocre, and its picture quality didn't impress us.

unit lacks basic manual controls such as aperture-priority and shutter-priority modes.

The V10 does offer impressive performance in low light

because of its high sensitivity. Its top ISO setting of 1600 lets you take photos of dimly lit subjects without using the flash—the photos we took at ISO 1600, however, had a significant amount of digital noise. In our lab tests, the camera's overall score for image quality was about average. Though its exposure accuracy was good, its images scored lower than the output of most point-and-shoots in sharpness.

The V10's battery was a bit weak: It took only 198 shots on a single charge, far fewer than the 267-shot average for point-and-shoot cameras.

—Eric Butterfield

FinePix V10

Fujifilm

PCW Rating **68 Fair**

Its big LCD and high ISO settings are nice, but battery life is limited and image quality is average.

Street: \$349

find.pcworld.com/52774

WordPerfect Office: A Better App Mix, for Less

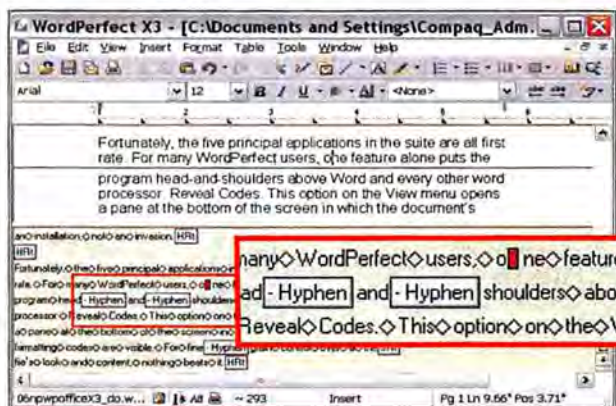
OFFICE SUITE

IF YOU'RE TIRED of waiting for Microsoft's delayed Office 2007, consider this: Feature for feature and dollar for dollar, Corel's \$300 **WordPerfect Office X3 Standard** tops Microsoft's \$400 Office 2003 Standard in every category.

All five of the principal apps—WordPerfect, Quattro Pro, Presentations, Mail, and Presentations Graphics—are

first-rate. Leading the pack is the WordPerfect word processor. For many WordPerfect users, one feature raises the program head-and-shoulders above Word and every other word processor: Reveal Codes. This View menu option opens a pane at the base of the screen showing the document's formatting codes. For fine-grain control over a file's appearance and content, nothing beats it.

Equally notable is WordPerfect's e-mail program, formerly the Bloomba mail client from Stata Labs. The app features a search function that neither Outlook nor any other e-mail program can top. Also new to the suite is Presentations Graphics (formerly a component of Presentations).



NO MORE MYSTERY FORMATTING: WordPerfect X3's Reveal Codes view gives you precise control over your document's format.

Though very basic, it is a nice addition, providing tools for editing images and creating customizable layouts.

The suite does have some annoying elements—for instance, a pesky InstallShield

Update Manager that's always running in the system tray. Such minor irritations aside, I think people who use their PC for business might very well find what they need here.

—Dennis O'Reilly

WordPerfect Office X3 Standard

Corel

PCW Rating **83 Very Good**

For a true upgrade to an office suite, business users will find much to like in Corel's package. Street: \$300 (\$160 upgrade)

find.pcworld.com/52794

TOP 5 DIGITAL CAMERAS

SLRs Offer Innovative Features, Bigger LCDs

TAGGED WITH AN attractively low price, the Olympus EVolt E-500 is our top single-lens reflex model this month, beating out a long-time favorite, Canon's EOS Digital Rebel XT, which drops to second place. The EVolt E-500 feels sturdier than the Rebel, and it has a larger, 2.5-inch LCD. The 8-megapixel Olympus also handles considerable in-camera processing (such as black-and-white filters), has a dust-removal feature, and provides two levels of noise reduction. The E-500 offers 15 scene modes; most digital SLRs we've tested have less than half as many. The exposure lock and autofocus lock

functions are highly customizable. On the down side, the camera responds to its control wheel slowly. The kit that we tested includes a 14–45mm lens (28–90mm film equivalent); a two-lens kit that comes with an additional 40–150mm lens sells for about \$829.

Meanwhile, Canon's EOS 30D debuts at number three, with the same 8.2-megapixel CMOS sensor as the EOS 20D, but packing some additional features. Most important, the 30D adds a spot meter function, which uses a smaller area of the viewfinder (about 3.5 percent) than partial metering mode (roughly 9 percent) to determine exposure. The 30D



THE CANON EOS 30D has intuitive controls, a spot meter, and a durable shutter. And the ISO can be set in one-third-stop increments.

also allows you to save more custom shooting settings than the 20D does, as long as you are taking JPEG-format shots, and it has a more durable shutter. The menu system is simple and intuitive; you can use the control wheel on the back of the camera to navigate the settings quickly. The 30D

has a big LCD, too—with a 2.5-inch diagonal, compared to the 1.8-inch screens on both the 20D and the Rebel XT.

The 10.2-megapixel Nikon D200 (\$1700 for just the body) clearly targets experienced photographers: Beefy and sturdy, this powerful camera offers a wealth of focusing options, and it dispenses with scene modes. The controls are more intuitive than those on previous Nikon models, and the D200 also provides GPS connectivity, a unique feature that allows you to add location information to your photos.

LIVE-VIEW LCD

THE ABILITY TO preview shots on a camera's LCD, a common point-and-shoot feature, has arrived on a digital SLR—the \$1100 Olympus EVolt E-330. But novelty aside, the E-330's low overall design score contributed to the camera's missing the chart.

—Eric Butterfield

ONLINE

TO SEE REVIEWS of all of the digital SLR cameras we have evaluated, go to find.pcworld.com/52728.

	SLR CAMERA	PCW Rating	Performance	Features and specifications
1	Olympus EVolt E-500 Best BUY \$720 find.pcworld.com/50350	84 Very Good	<ul style="list-style-type: none"> Image quality: Very Good Battery life: Superior Overall design: Good 	<ul style="list-style-type: none"> 8.0 megapixels 28mm to 90mm zoom 15 scene modes 30.4 ounces
▶ Bottom line: A large LCD, extensive menus, and a nice price make this camera compelling, but it has a few usability issues.				
2	Canon EOS Digital Rebel XT \$889 find.pcworld.com/48088	83 Very Good	<ul style="list-style-type: none"> Image quality: Superior Battery life: Superior Overall design: Good 	<ul style="list-style-type: none"> 8.0 megapixels 28.8mm to 88mm zoom 6 scene modes 17.1 ounces
▶ Bottom line: Fast action, compact size, and great imaging make the Digital Rebel XT a top pick among inexpensive digital SLRs.				
3	Canon EOS 30D \$1499 NEW find.pcworld.com/52696	81 Very Good	<ul style="list-style-type: none"> Image quality: Superior Battery life: Superior Overall design: Good 	<ul style="list-style-type: none"> 8.2 megapixels 28.8mm to 88mm zoom 5 scene modes 34.8 ounces
▶ Bottom line: This model uses the same CMOS sensor as the 20D, but it has a larger LCD and a spot meter. Controls are intuitive to use.				
4	Nikon D70s \$1200 find.pcworld.com/48518	79 Good	<ul style="list-style-type: none"> Image quality: Good Battery life: Superior Overall design: Very Good 	<ul style="list-style-type: none"> 6.1 megapixels 27mm to 105mm zoom 6 scene modes 21 ounces
▶ Bottom line: Small and lightweight, the D70s offers conveniences that other models don't have, but its image quality lags a bit.				
5	Nikon D200 \$2000 NEW find.pcworld.com/51670	79 Good	<ul style="list-style-type: none"> Image quality: Very Good Battery life: Superior Overall design: Good 	<ul style="list-style-type: none"> 10.2 megapixels 18mm to 70mm zoom 0 scene modes 29 ounces
▶ Bottom line: The D200 is fast, powerful, and beautiful. Menu navigation has improved, and you can add GPS location info to your photos.				

CHART NOTES: Ratings are as of 3/21/06. Zoom range (focal length) is identified as 35mm equivalent; camera weights include batteries. Camera prices include the price of a lens, if the lens is sold separately from the body.

IT ALERT:

72% of businesses
need more mobility.[†]

Ready to get
moving?

Insight

IT For The Way You Work™

YOU CAN MAKE IT HAPPEN WITH INSIGHT

Certified Systems Engineers ▼ Leading Technology ▼ Leasing Programs



SONY® VAIO BX563B Notebook VGN-BX563B

- Intel® Pentium® M 1.73GHz processor, 512MB DDR II SDRAM
- Multi-Function Bay, enabling simple swapping out of powerful peripherals
- Integrated Bluetooth® technology
- Integrated biometrics fingerprint sensor



BrightStor ARCserve Backup for Laptops & Desktops – 10-User Pack

BABLAD10R11100

- Comprehensive data protection
- Easy to install and deploy
- Integrates with BrightStor ARCserve Backup



EDGE™ 4GB USB Flash Drive PE200589

- Lifetime warranty!
- Includes SecureGuard password protection
- High-speed USB 2.0
- Hot-swappable: no need to restart!

insight.com/pcworld ▼ 800.998.8054

[†]The Business Performance Forum Study, 2005.

Source Code: AD022

Insight and the Insight logo are registered trademarks of Insight Direct USA, Inc. IT For The Way You Work is a trademark of Insight Direct USA, Inc. All other trademarks, registered trademarks, photos, logos and illustrations are property of their respective owners. ©2006 Insight Direct USA, Inc. All rights reserved.

SONY®

ca

EDGE™
TECH | CORP

O-yA DeepSearch Delves Into Small Networks

NETWORK SEARCH

SEARCHING STILL HAS a blind spot. If you need to find something on the Internet, Google has you covered. If you want to dig up something on your hard drive, any number of utilities (from Yahoo and others) will locate that. But if you want to find something on your coworker's hard drive or on a shared server on your company's intranet, you may be out of luck.

O-yA's **DeepSearch 100** is designed to fix that problem. This thin, \$2999 tower plugs into a small network, locates the other machines, and indexes their contents. So the next time you need to locate the marketing brochure that Sally worked on last fall, you

GOTCHA!

just plug in a couple of keywords and pull it up.

Is DeepSearch 100 really so simple? Not quite, but the innovative product is a promising start in a soon-to-be-important category that many businesses will welcome.

The uncomplicated case sports little more than an ethernet port, a power button, and the company's goofy logo. You administer the box from another PC on the network via a browser-based interface. (The first versions of the device functioned only on networks based on a workgroup. At this writing, the company is testing a new version that will work on typically larger domain-based networks.)

I found my shipping Deep-

Search 100 unit pretty easy to set up on a small network of Windows notebooks. As happens with any other product that depends on Windows networking, you'll be asked some arcane questions about DNS and proxy servers—and O-yA could have done a better job of explaining those confusing choices. Its documentation is pretty slim.

Once I got it set up, DeepSearch 100 did a good job of finding the Windows, Linux, and Mac systems on my network and identifying the folders that were designated for sharing. When I selected the folders that I wanted it to index, the device took less than half an hour to index more than 8000 documents. It indexes Outlook e-mail messages; Word, WordPerfect, and plain-text documents; Web pages; PowerPoint presentations; Excel spreadsheets; and PDFs. The unit will index up to 100,000 files. If you're looking for images, however, you're out of luck.

NO REFINING RESULTS

SEARCHING FOR A file involves typing search terms into a box on a spare white browser page (sound familiar?). My results came back just a tad slower than they do in a Google search, but the delay wasn't bothersome. Unfortunately, you have few options for narrowing your search in DeepSearch 100. Searches simply look for all documents that contain every keyword you list. You can't search for instances of an exact phrase, and you can't exclude results that have a certain keyword.



DEEPSEARCH 100 SEARCHES the contents of on your network's PCs, and it indexes their public folders to help users find files.

Once you have the opportunity to share your data with coworkers, your next questions, of course, will be "How much of my stuff do I really want them to see?" and "Who should see it?" DeepSearch 100 allows you to set permissions by folder, but I found the system far from intuitive and had to call support to figure out the process.

I think lots of businesses that try DeepSearch 100 will soon find it indispensable. Getting it up and running the first time isn't as easy as it should be, but that's probably not a surprise in a product category as new as this one.

—Edward N. Albro

DeepSearch 100

O-yA

PCW Rating **74 Good**

Small businesses may find this product indispensable once they get past its setup phase.

List: \$2999

find.pcworld.com/52804

Low Bit Rates? No Hi-Fi

IF YOU PAID top dollar for hi-fi speakers for your MP3 player, why do your tunes still sound decidedly lo-fi? It's because the audio output still depends on the quality of the music files you use. The quality of a file is determined by its *bit rate*, the number of kilobits per second used to store the

audio in a digital format. An uncompressed music file from a CD has a native bit rate of 1400 kbps, but most audio programs such as iTunes rip MP3s at a default rate of 128 kbps to keep file sizes small. If you have a discerning ear, you should consider ripping at a higher bit rate such as 160 kbps, 192 kbps, or even lossless. The resulting files will be larger but will sound noticeably better.

And before you spend a small fortune building a legal library of downloaded songs, make sure that the audio quality of your online store of choice is high enough to take advantage of your new digital music speaker system.

—Greg Adler



New nVidia-Based Cards Hit Every Price Range

GRAPHICS BOARDS

TEST NEW VIDEO CARDS
Center based on nVidia's latest crop of chips offer something for just about everyone: an ultra-high-end board for big spenders, an inexpensive power card for serious speed enthusiasts, and a fast mainstream product for generalists. I examined three shipping products using the chips, and got some interesting results.

You receive more than just the oversize two-slot board in PNY Technologies' \$525 **GeForce 7900 GTX Limited Edition** package. The company throws in a handy tool kit, a 500MB flash drive, and a felt-lined metal carrying case (with a too-flimsy plastic lid). The extras are fun—though getting a game or two would have been nice—but the primary reason to buy a graphics board like this is performance, and in that respect the 7900 GTX's results were mixed.

That's not to say that it isn't fast—it is—but in our tests the 512MB board rarely outperformed a previously tested XFX GeForce 7800 GTX XXX Edition; admittedly, however, the new card costs considerably less than the outrageous \$750 commanded by that hard-to-find board. The 7900 GTX did outrun ATI's \$600 Radeon X1900 XTX on most



NVIDIA COVERS THE high-performance bases with this trio (from left): PNY's GeForce 7900 GTX Limited Edition, BFG's GeForce 7900 GT OC, and XFX's GeForce 7600GT XXX Edition.

tasks, though not often by a significant margin. In the end, PNY's card didn't blow by the competition, but the 7900 GTX did earn our top performance rating for the power category.

Specifically, in tests conducted at 1600 by 1200 resolution with antialiasing turned off, the 7900 GTX beat competing boards (frequently by just a few frames per second) on five tests and tied on three other tests with the 7800 GTX. The 7800 GTX won a single test, as did the X1900 XTX. The 7900 GTX's less-than-astounding performance on our tests is not entirely its fault—these high-end cards are so fast that they're starting to outpace the rest of our test

systems in some benchmarks.

One notch below the 7900 GTX is BFG Technologies' \$330 **GeForce 7900 GT OC**, with 256MB of memory. BFG does not offer much in the way of extras (the only included application is GameDrive 9.0); but for the budget-minded performance hound, this card is a solid bet. In our tests it generally outperformed the competing XFX GeForce 7800 GT (\$300) and Asus Radeon EAS X1800 XL (\$380).

KING OF MAINSTREAM

BOTH THE 7900 GTX and the 7900 GT OC are quite fast, but my favorite of this group is XFX's **GeForce 7600GT XXX Edition**. This \$209 card comes

with XFX's excellent manuals and accessories, as well as one slightly dated game (Starship Troopers), but the real draw here is the speedy little single-slot graphics board itself.

The 7600GT sped away with nearly every test that we ran, earning the top performance score possible in our mainstream category. Its performance was notably impressive versus such comparable cards as EVGA's \$179 e-GeForce 6800 GS and PowerColor's Radeon X1600 XT Bravo Edition (\$169). XFX's graphics board was the clear winner at both of our test resolutions (1024 by 768 and 1600 by 1200) and with antialiasing turned on or turned off.

With its most recent product launch, nVidia has rolled out chips to suit just about everyone. If you've waited to buy at the high end, you won't be disappointed by the 7900 cards (7800 owners should skip this upgrade, though). And the 7600GT is a winner, offering top-of-its-class performance at a reasonable price.

—Tom Mainelli

GeForce 7900 GT OC

BFG Technologies

PCW Rating **82** Very Good

Geared toward performance-minded buyers on a budget, this card is light on extras—but the performance won't disappoint. Street: \$330

find.pcworld.com/52706

GeForce 7900 GTX Limited Edition

PNY Technologies

PCW Rating **85** Very Good

Speedy card isn't dramatically faster than its predecessor, but it costs less and is easier to find. Street: \$525

find.pcworld.com/52704

GeForce 7600GT XXX Edition

XFX

PCW Rating **82** Very Good

Excellent performance and a reasonable price make this board a solid choice. Street: \$209

find.pcworld.com/52708

Norton Save & Restore Is an Old Ghost Reborn

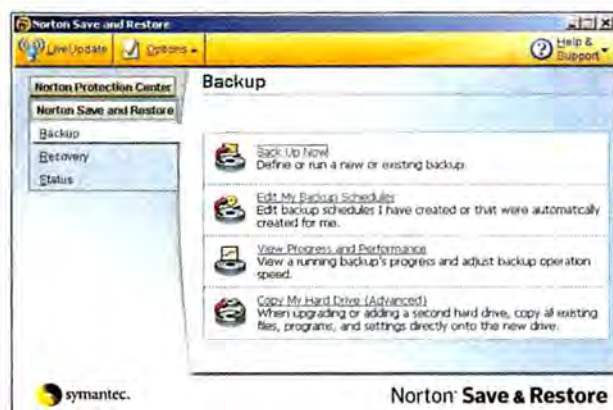
BACKUP SOFTWARE

THE POPULAR NORTON Ghost imaging and backup program is dead. Long live **Norton Save & Restore**—a direct successor that completes the degeekification that Symantec initiated with Ghost 10 a mere six months ago. This move is good news for click-and-pray users, as there's now virtually no way to mess up a backup if you follow the prompts.

Still, aside from the new

name and a few tweaks to the renovation, the only major added feature is the (exceedingly handy) ability to back up files and folders by selection or filter. Ghost 10 imaged only entire partitions, so the new ability can save you a lot of time and space. There's also tighter integration with Symantec's Protection Center, which includes virus protection and will invoke a Save & Restore backup if it detects a serious virus threat.

At \$70, Save & Restore costs \$20 more than its main competitor, True Image 9 from Acronis, but the Symantec product is easier to use, since it automatically takes care of a lot of details. For example, it can determine the most suit-



WITH SAVE & RESTORE, Symantec has finally provided a simple, versatile upgrade to its popular Ghost imaging application.

able backup location, consolidate backups, and reduce disk usage on its own. It also creates and restores images faster than True Image does. Unfortunately, its CD recovery disc works very slowly, and

the disc environment's inability to create new images may be a deal-killer for pros.

That said, Save & Restore is definitely the better fit for the average computer user.

—Jon L. Jacobi

Norton Save & Restore

Symantec

PCW Rating **79 Good**

Symantec's Ghost is reborn as an easier-to-use backup program.

Street: \$70 (\$20 rebate for users of Ghost 10)

find.pcworld.com/52776

GoVault Drive Offers Data Safety, Portability

REMOVABLE STORAGE

THE SUCCESS OF **TEST Center** Omega's Rev drive proves that a niche remains for removable hard disk drives, which are speedier and roomier than CD/DVD products. Quantum's new **GoVault Drive** is a brilliantly simple idea incorporating off-the-shelf technology to create a cartridge system that should be every bit as reliable as a hard drive.

The GoVault dock mounts in any 3.5-inch or 5.25-inch drive bay and accepts a shock-protected, 3.4-ounce, write-protectable and password-securable cartridge roughly the size of a deck of cards. Unlike

previous products, GoVault cartridges contain a sealed 5400-rpm, 2.5-inch SATA hard drive. Most earlier systems introduced external read/write heads into the platter-only cartridge, raising the possibility that contaminants might enter there and wreak havoc.

In our tests of a shipping

QUANTUM'S GOVAULT DRIVE works with proprietary hard-drive-based cartridges to offer safe, dependable backups.



unit, the GoVault's performance was good, though not as fast as most internal hard drives. The product runs only slightly warm—although it's quiet—with cartridges spinning up and appearing quickly as available storage. Since the drive's 300-Mbps SATA interface has plenty of headroom to spare, faster hard drives and firmware updates presumably will improve future cartridge performance.

Now for the bad news: The GoVault Drive system gets expensive quickly. The starter system—consisting of the dock, a 40GB cartridge, and the multi-OS Yosemite Backup software—sells

for \$299, but additional cartridges cost \$120 for a 40GB unit, \$189 for 80GB, and \$319 for 120GB. That makes the cost per gigabyte for media about two times the Rev's.

Nonetheless, the prospective reliability of the GoVault system, evidenced by a three-year warranty, makes it worth a look if you're considering the Rev or tape backup.

—Jon L. Jacobi

GoVault Drive

Quantum

PCW Rating **79 Good**

Expensive but quick and portable storage system should prove to be extremely reliable.

Street: \$299 for a dock and one 40GB cartridge

find.pcworld.com/52778

BUFFALO™

Test Your Limits

NFINITI

Buffalo's AirStation Nfiniti™ wireless solutions deliver ultimate connectivity across your wireless world for the broadest coverage at blazing fast speeds. Designed to stream high-definition (HD) video, music, media and gaming, Nfiniti gives you infinite possibilities to test the limits of your wireless network. Combine 2-in-1 Nfiniti Wireless Router & Access Point WZR-G300N with Nfiniti Wireless Notebook Adapter WLI-CB-G300N or Nfiniti Wireless Desktop PCI Adapter WLI-PCI-G300N and get the ultimate bandwidth, range and reliability for your wireless world!

Best of Both Worlds - Ultimate Range at Blazing Speeds

Built for High-Definition Media Streaming - Wirelessly!

Easy and Secure Setup with AOSS™

Designed to IEEE802.11n Draft Standard Specifications

DRAFT-N



To learn more about Buffalo Nfiniti™ products,
go to www.buffalotech.com/pcworld-nfiniti

Buffalo Technology (USA), Inc. Buffalo Technology, Buffalo logo, AOSS, AirStation and Nfiniti are either trademarks or registered trademarks of Buffalo Technology (Buffalo Inc.). The names and logos of other companies mentioned herein belong to their respective owners.

Go to find.pcworld.com/52446



More Reviews at PCWorld.com

SHORT LIST: DESKTOP CUSTOMIZATION

Your Desktop, Your Way



PEOPLE DON'T WORK the same way or like the same things—why should we all have the same desktop? Customize Windows' form and function to your tastes with these three tools.

—Erik Larkin, Associate Editor



PRODUCTIVITY TOOL

Enable Virtual Desktop, \$20, free 30-day trial
find.pcworld.com/52730

Organize open apps with virtual desktops. Edit your Word docs on one, and browse the Web or read e-mail on another.



CONFIGURATION UTILITY

Microsoft Tweak UI, free
find.pcworld.com/52732

This PowerToy for XP gives you access to a host of Windows configuration changes—some of them well-guarded secrets.



APPEARANCE UTILITY

Stardock WindowBlinds, \$20, free 60-day trial
find.pcworld.com/52734

Pick a skin to give your taskbar and windows a snazzy look, and get window shading, transparency, and other features.

SHORT LIST: MONITORS AND ACCESSORIES

Make More of Your Monitor

THE DISPLAY'S THE thing. Screen-pivoting software or a versatile stand can beef up your beloved monitor. If you want to upgrade from a smaller display, a 20-incher is a good fit.

—Laura Blackwell, Associate Editor



SCREEN-PIVOTING SOFTWARE

Portrait Displays Pivot Pro, \$40, free 30-day trial
find.pcworld.com/52742

A physical pivot function alone won't keep things right-side up; with this software, you can pivot the screen image.



MONITOR STAND

Innovative Office Products Evo, \$250 list
find.pcworld.com/52770

Find your comfort zone and free up desk space with this flexible monitor arm, which clamps onto the edge of your desk.



WIDE-SCREEN MONITOR

Dell UltraSharp 2007WFP, \$529 list
find.pcworld.com/52772

This handsome 20-inch wide screen packs more pixels than a regular-format 19-incher does, and it's really easy to use.

ONLINE EXTRAS

Musical Devices and More

POINT YOUR BROWSER toward PC World's Web site for the latest reviews, including looks at these notable products.

Olive Musica

List: \$1099

find.pcworld.com/52784

This music-streaming device delivers great sound, but it prefers to play with Apple products.



Roku SoundBridge Radio

List: \$400

find.pcworld.com/52780

Wake up to AM, FM, or Internet radio (plus your PC's stored music or streamed music from a service) with this device—but be prepared to invest some serious time tweaking your Wi-Fi network config.



Mvelopes Personal

\$40 per quarter, \$130 per year, \$190 for two years

find.pcworld.com/52782

Track every last dime of your spending with this online budgeting service, and maybe you'll have more than two nickels to rub together.

BEHIND THE RATINGS

99
Superior

ONLINE REVIEWS REINVENTED: Our online product reviews now feature dynamic PCW Ratings that reflect technology changes, features, and price updates. If a product is still under consideration for review, its rating and ranking may move up or down. We've also added deeper Test Reports and powerful new tools that allow you to customize our charts to your tastes. And try out our newest feature: Complete Product Listings. Unlike our Ranked Charts, which are a snapshot of today's best products, our Complete Product Listings contain all the products we've recently reviewed. Even better, you can now use robust sorting and filtering tools to create the chart you want. Check out our revamped reviews at find.pcworld.com/50858.

Best
BUY

BEST BUY AWARDS go to hardware, software, and services in our ranked charts and other product comparisons that deliver outstanding quality and value.

TEST
Center

THE PC WORLD Test Center formally tests all products designated with this icon. For more on how we test specific products, visit find.pcworld.com/49974.

VoIP Phone System Making Waves

Growth-minded Schlitterbahn Waterparks puts AltiGen Communications solution to work

As a highly independent, fast-growing owner of waterparks, Schlitterbahn Waterparks couldn't afford to let antiquated, expensive phone systems get in the way of progress.

The largest waterpark in the United States was expanding into Galveston this spring, with plans to move into Kansas City in the near future. But the IT group at family-owned Schlitterbahn knew its existing phone system was nothing but a bunch of bad connections. Schlitterbahn was plagued with excessive maintenance costs for the proprietary system. Even making small changes meant waiting days for the vendor to show up. And what's worse, Schlitterbahn's reservation system, which was really starting to light up as expansion continued, sorely lacked all the call center capabilities a modern system requires.

Schlitterbahn is a company that designs and builds its own rides, and this do-it-ourselves spirit carried over to the search for a flexible, extensible, and affordable phone system. "We were stuck paying a humongous amount of money every year for a phone system that did very little for us," recalls Leigh Murphy, director of information systems.

So Murphy teamed with Chris Reynolds, IT manager, and Stuart Blythin, the director of resorts in charge of the call center, in search of the perfect phone solution. What they got is what Reynolds calls "a Swiss Army knife of a system." Installed by San Antonio-based TelComTex Communications (www.telcom-tex.net), the AltiGen phone solution has been "nothing short of spectacular," say Reynolds and TelComTex owner Chuck Clark.

ROLLOUT SHORT, SWEET

After rolling out a pilot project of the AltiGen system at a manufacturing site, the Schlitterbahn team developed specifications for a companywide deployment.

"With little or no disruption to our ongoing operations, they installed the new system and rolled it out to 580 extensions at both our hotels and throughout the parks as well as at our corporate center—and they did it all in five days," says Reynolds. "It worked beautifully right out of the box."



For starters, Blythin's reservation group became a bona fide call center overnight. With AltiGen, they are monitoring the calls with customers, and can produce reports on average wait times, calls abandoned, average times to service calls, and all the other features and functions of a super-efficient call center.

Blythin's team also has far better tools for projecting peak calling loads in order to better allocate staff and, more importantly, better serve customers.

Schlitterbahn now has a system that ties all the locations together over IP. Plus, the IT staff can add agents, move extensions, or add features easily—regardless of where they are working that day. With the vast majority of Schlitterbahn's staff working in the field, the new system has been configured to receive voice mail over email, and to automatically ring mobile employees on cell phones and office phones at the same time.

And the anticipated ROI of the AltiGen system? "This will pay for itself in less than two years, and that's not counting all the productivity and improved customer service we are gaining," says Reynolds.



AltiGen's IP 710 Phone

AltiGen Communications, Inc.

AltiGen Communications, Inc. (NASDAQ: ATGN) is a pioneering manufacturer of VoIP business phone systems and call center solutions. Founded in 1994, AltiGen was first to market with self-administration, and recently received *Internet Telephony Magazine's* 2005 Product of the Year for its IP 710 telephone.



www.altigen.com • 877-284-6937 • info@altigen.com

PC WORLD

TECHNOLOGY ADVICE YOU CAN TRUST

Reviews

→ Hardware

→ Software & Web

Search PC World



Browse by topic

Enter find



Print edition

- November issue
- Service & subscriptions
- Try the magazine risk-free

ADVERTISEMENT



Today's Features

Sharp Shooters

Top 10 advanced digital cameras

[Read More](#)

Featured Content

Digital Duo



Video from our irreverent pub show

- Windows Vista: Dr
- CEO Reiterates Palm OS

How to

How to buy gear and

- Gr
- G

A MORE
POWERFUL
SLEEKER
SEXIER

Preview the new PCWorld.com
find.pcworld.com/52710

WORLD

Focus on fun.

Digital entertainment has never been so easy. With Intel® ViiV™ technology in your PV X6000 series, you can navigate your digital media library with a remote control. Download news, movies, music, games and more from your choice of participating Intel® ViiV™ technology service providers. Or choose music or movies from your personal collection. And access is simple and fast, with instant on/off after initial boot, when activated.



ZT recommends Microsoft® Windows® XP

ZT MCE System PV X6012

Intel® ViiV™ Technology
Intel® Pentium® D Processor 930
(2 x 2MB L2 Cache, 3 GHz, 800MHz)
genuine Microsoft® Windows® XP
Media Center Edition 2005

- MCETV Tuner, Remote Controller and IR Receiver
- Intel® D945GPM Chipset Mainboard
- 512MB DDRII 533MHz Memory
- Seagate® 250GB SATA II Hard Drive
- 8 in 1 USB 2.0 Media Reader
- 128MB ATI® Redon X600 Pro Graphic
- 16x Dual-layer DVD-RW Drive
- Intel® 8-ch High Definition Audio Subsystem
- Intel® Gigabit Ethernet Controller and IEEE1394
- Logitech® Keyboard & Optical Mouse
- 3 Year Limited Warranty

\$999

ZT MCE System PV X6013

Intel® ViiV™ Technology
Intel® Pentium® D Processor 950
(2 x 2MB L2 Cache, 3.40 GHz, 800MHz)
genuine Microsoft® Windows® XP
Media Center Edition 2005

- MCETV Tuner, Remote Controller and IR Receiver
- Intel® D945GPM Chipset Mainboard
- 1GB DDRII 533MHz Memory
- 2 x Seagate® 300GB SATAII Hard Drive
(RAID 0, Total 600GB)
- 8 in 1 USB 2.0 Media Reader
- 256MB nVIDIA® GeForce X6600 Graphic
- 16x Dual-layer DVD-RW Drive
- Intel® 8-ch High Definition Audio Subsystem
- Intel® Gigabit Ethernet Controller and IEEE1394
- Logitech® Keyboard & Optical Mouse
- 3 Year Limited Warranty

\$1,299

Share the fun with powerful Dual-core System !



• Shown with optional LCD & Speakers

**Go to
Call**

ztgroup.com/go/pcworld

866-ZTGROUP (866-984-7687)

promote code : pow0606



Purchaser is responsible for all freight costs on all returns of merchandise. Full credit will not be given for incomplete or damaged returns. Absolutely no refunds for merchandise returned after 30 days. All prices and configurations are subject to change without notice and obligation. Opened software is non-refundable. All returns have to be accompanied with an RMA number and must be in re-sellable condition including all original packaging. System's picture may include some equipments and/or 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, Intel logo, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, Pentium, and Pentium III Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Go to find.pcworld.com/52422

Low-Cost, High-Performance Peace of Mind

Grisoft's AVG Anti-Virus solution delivers what users want

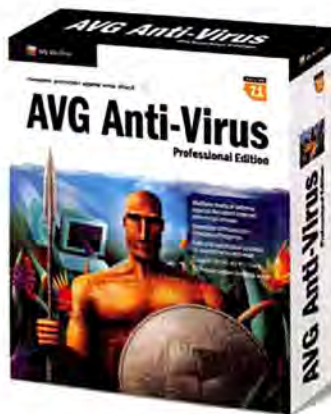
Whether it is a small business or an enterprise-class organization, customers want the same things from their anti-virus solution. With damage due to viruses, worms, and other pests topping \$50 billion per year by some estimates, users want the solution to work with lethal precision. And they want the solution to be easy to install, easy to update, and easy on the wallet.

Customers in business of all sizes get that and more with AVG Anti-Virus from Grisoft (www.grisoft.com). "I get a lot of infected emails, but this software has caught it all," says David Inman, Technology Committee, AARP Tax-Aide. "No viruses have gotten through since I've been using AVG Anti-Virus. I really like it."

AVG Anti-Virus is available in versions tailored to support personal computers, SOHO environments of up to

five computers, and networks of any size; the network edition includes a tool for central administration. But no matter what version is needed, all users get the same value-laden package of benefits with AVG Anti-Virus, which has received numerous independent awards. These benefits and features include:

- Small update file size
- Little drain on system resources so you don't sacrifice performance for protection
- Highly competitive pricing, as low as \$109 to protect five computers for two years
- Free 24/7/365 technical support
- An extended two-year license instead of the usual one-year deal
- Industry-leading rapid response to new viruses to stay a step ahead of the villains



The AVG Anti-Virus product line supports all major operating systems and platforms.

- The peace of mind knowing your anti-virus solution has been developed by a company that has been a leader in PC security for 15 years
- To learn more about AVG Anti-Virus as well as the company's other security solutions, or to discover how to become an AVG reseller, go to www.grisoft.com.

**SPONSORED BY:
Grisoft, Inc.**

www.grisoft.com

Go to find.pcworld.com/52425

Data Recovery Made Easier

R-Studio 3.0 from R-Tools raises the bar on information restoration.

Proving that a good thing can get even better, R-Tools Technology Inc. has released version 3.0 of R-Studio, its family of robust and economical undelete and data recovery software.

Already renowned for its ability to recover mission-critical data lost

to viruses, malicious attacks, hardware failures, or operating system crashes, R-Studio 3.0 has a new file recovery algorithm allowing users to increase the quality of file recovery and recover files not recognized in file system metadata.

In addition, R-Studio 3.0 now supports UFS1 and UFS2 file systems as well as enhanced remote host scanning

procedures that analyze data on the remote host rather than the local host, speeding up

data recovery time. R-Studio 3.0 also includes R-Studio Emergency version free of charge, allowing users to recover data on a computer on which Windows cannot be booted due to system file corruption or deletion. And to make things even more user-friendly, R-Studio and R-Studio Emergency demo versions can be registered on-the-fly.

R-Studio 3.0 joins the growing list of business continuity solutions from R-Tools that includes R-Drive Image 3.0, a powerful utility that effortlessly creates disk image files for backup and duplication. These files are exact copies of a drive partition and are created without interrupting normal business operations.

**SPONSORED BY:
R-Tools Technology Inc.
www.r-tt.com**

R-Drive Image 3.0 can also be utilized for mass system deployments when

configuring multiple computers identically.

In addition, R-Tools offers R-Word to recover damaged Microsoft Word files; R-Excel to reconstruct precious Excel files that have been corrupted or attacked; R-Mail to reconstitute email messages accidentally deleted or damaged .dbx files; and R-Wipe & Clean that automatically keeps disks free and clear of data clutter.

For information on the exciting new features in R-Studio 3.0 or to learn more about how the family of R-Tools solutions can keep your business up and running, visit www.r-tt.com.

**PC WORLD
ADVANTAGE
MARKETING**

Go to find.pcworld.com/52952





GRISOFT AVG Anti-Virus

**The best testimonial
from 30 million users:
They barely realize
they use us!**

With more than 30 million loyal users worldwide, Grisoft is the best choice for people and companies seeking maximum virus protection. With its easy and intuitive interface, Grisoft AVG Anti-Virus software doesn't bog down system resources; instead, it works quickly and seamlessly. Our singular focus on your protection lets YOU work—not worry. Stop worrying and start downloading your

FREE 30-DAY TRIAL...

www.grisoft.com/doc/pcworld

**Tough on viruses,
easy on users.**

**Protect your privacy
against hackers**

AVG Anti-Virus plus Firewall delivers comprehensive anti-virus protection and prevents unauthorized access to your computer from internal and external networks.

Go to find.pcworld.com/52414

FREE 30-DAY TRIAL...www.grisoft.com/doc/pcworld



NEVER CALL TECH SUPPORT AGAIN!

Why suffer though hours on hold when you can solve the problem yourself? Whether your PC won't boot, keeps crashing, is infested with adware, or can't get to the Net, we'll help you fix it.

BY JEFF BERTOLUCCI ♦ ILLUSTRATIONS BY DYNAMIC DUO STUDIOS

BAD THINGS HAPPEN TO GOOD COMPUTERS: Motherboards fry, hard disks die, and spyware and viruses muck up Windows. You'd call tech support, but most of those folks are just reading from a script. You figure you can do better on your own—and you're probably right. To help get you started, we've assembled an expert guide to diagnosing some of the most common, tricky problems that befall a PC owner. And just in case you decide to throw in the towel, we've also interviewed some support technicians to find out what you can do (and, just as important, what you should avoid doing) to help them solve your problem with a minimum of hassle. ►

OH, NO—
MY PC WON'T
EVEN BOOT!

• **Do strange sounds emanate from your PC?** Some sounds can indicate serious problems. If you suspect the hard drive is on its last legs, the safest thing to do is to shut down the PC immediately. To find out if the drive is causing the noise, disconnect the drive's power cable before turning the computer back on.

If the hard drive is the noise source, your next step is to download a utility that can read the SMART (Self-Monitoring Analysis and Reporting Technology) diagnostic codes off the drive; SMART data can tell you precisely what's wrong. Get the one made by your hard drive's manufacturer: Point your browser to find.pcworld.com/52750 for a link to your drive maker's SMART utility download page.

• **Does the noise persist, even with the hard drive disconnected?** Pinning down the problematic component is a bit harder—but at least you can take comfort in the fact that your data isn't about to kick the bucket. One way to troubleshoot is to use the low-tech (yet effective) cardboard tube method: Hold one end of a paper-towel tube to your ear and the other end to various system components, and listen.

• **Is the sound coming from a fan?** If you are concerned about an unusual fan noise, use the free SpeedFan tool (find.pcworld.com/52754) to see if a cooling fan attached to the motherboard is spinning too slowly. Some components will fry themselves if not cooled, and a new fan costs far less than a new CPU or graphics board. Another good (and no-cost) utility for monitoring system heat is CPUCool (find.pcworld.com/48561).

• **Got beeps?** If you hear an unusually long beep (or several beeps) when you first power on the PC, your system is trying to tell you something—and it's not good. While the normal beep before boot-up—a single short tone—is a universal "all okay" signal, the more elaborate diagnostic beep codes aren't standardized; they vary by BIOS manufacturer and are sometimes customized further by motherboard makers. You'll have to look up the meaning of a specific beep pattern. On Dell Dimension XPS Dxxx systems, for instance, one beep followed by a pause and then two more beeps means that the graphics card isn't functioning correctly (maybe it's not seated properly).

Dell) place diagnostic lights on the back of the computer case that give you a more detailed report about what's wrong. Meanings vary by system design, though yellow lights are usually a bad sign. Check your vendor's site for details.

• **Could a hardware problem be the source of your boot-up woes?** If you recently added new internal hardware, such as more memory, it's possible that a component is seated incorrectly in its slot or that you bumped another component or cable, loosening its connection. It's also possible that the new component is either broken or incompatible with the PC.

Start by turning off and unplugging the computer, grounding yourself by touching a metal part on the outside of the PC's case, and then opening the case. Once inside, check that all the internal cables are connected properly. Also, ensure that each internal card and RAM module is properly seated by gently and evenly pressing along the length of the card or DIMM. If it doesn't seem to move when

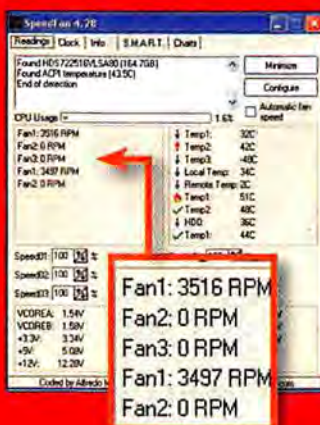
you apply pressure but you still feel uncertain about the seating, remove the card or DIMM entirely, and reseat it again. When you're done, put the PC back together, reattach any disconnected cables, and fire it up.

Even if the RAM modules are seated correctly, the system memory may still be the source of the problem—if the RAM has gone bad. Use the free Memtest86 (www.memtest86.com) utility to create a bootable CD-ROM that checks for memory failures. This tool performs detailed tests (and can catch problems that basic BIOS memory checks often miss).

In rare instances, a computer won't boot because of a hardware conflict between a new component and the rest of the system, or because the new component is simply not working. While this happens most often with older PCs, it can

MONITOR YOUR FAN SPEED

IF YOU SUSPECT that either a system fan or your hard drive is having problems, the free Speedfan utility is for you. In addition to tracking the PC's fan speed (which should, in most systems, range from 1000 to 4000 rpm), it can analyze the hard drive's SMART data, so you can head off a data disaster.



Your PC vendor's support site should have a directory of its BIOS beep patterns, so that's the first place to go. If you can't find the information there, check out BIOS Central (www.bioscentral.com) for an encyclopedic listing of beep codes and their meanings, organized by BIOS manufacturer. In addition, some vendors (including

occur with almost any upgrade. To test this possibility, remove the new part and put the old one back in. If the PC boots up fine, you have a problem component. Get in touch with the component's manufacturer for additional instructions.

Sometimes a computer can get all the way to the normal startup sound that plays when Windows loads your desktop, but you see no image on your monitor. That's a sign of a problem with either your graphics board or your monitor. First check for a loose monitor cable, and for broken or bent connector pins. If everything appears normal, attach the monitor to another PC to test it. If it works, try hooking up a different monitor to the balky system. If you still get no picture, that indicates a loosely connected or bad graphics board, so power down the PC, open the case, and make sure the card is seated properly. (If you have integrated video and it is malfunctioning, you'll probably need a new motherboard.)

• **Does some text appear on screen, after which the PC stops responding?** If your machine's startup screen is reporting an error code—also called a BIOS Power-On Self Test, or POST, code—you can look up its meaning in your motherboard manual or at www.bioscentral.com.

If you see a 'Non-System disk...' boot error message (and no disks are in your floppy drive), unplug any external hard drives and remove any CDs from the tray, and then reboot the computer. If the problem persists, the hard disk's boot sector or partition table may be corrupted. The \$39 Partition Table Doctor 3 (www.ptdd.com) can rebuild the partition table, a remedy that in some cases will restore a faltering PC to a fully working state. The program is available as an ISO file, which you can use (on a working system) to make a bootable CD.

STOP THE BSOD REBOOTS



BOOT INTO SAFE Mode (press F8 right after the BIOS self-test, and then choose Safe Mode from the menu). Right-click My Computer, choose Properties, click the Advanced tab, and then click the Settings button under 'Startup and Recovery'. Clear the check box next to Automatically restart, and then click OK.



• **Does your screen go entirely blue and display a few lines of text at the top?** Congratulations—you're experiencing Windows' notorious Blue Screen of Death. And you're blue, too, because the cryptic error messages (for example, 'STOP: 0x0000021a Fatal System Error') that appear on BSODs aren't very helpful. You can sometimes get useful information about them by performing a Web search

for the message using a working PC. Write down the Stop Error code that appears (ten digits starting with the number zero and the letter x); to decode the message, visit find.pcworld.com/52580. You can also uncover a wealth of info via a search engine.

But what if Windows reboots as soon as the Stop Error pops up? Some genius thought it would be a good idea for Windows XP to automatically reboot whenever it crashed. Obviously, that engineer never conceived of a situation where the crash occurs *during* the boot sequence. For XP users that means the PC enters an endless loop of crashing, rebooting, and then crashing again—and you can never see the error code, which would help you figure out what's going on. Fortunately there's an easy fix (see "Stop the BSOD Reboots").

WHY IS MY PC BEHAVING STRANGELY?

• **Does Windows, or an application, crash frequently?** Your first step should be to determine whether the problem is repeatable, and to make a note of the actions that led to the crash. Write down the sequence of events, and the contents of any error messages or dialog boxes, then head directly to the software maker's Web site. A patch or an update for the program that can solve the problem may

already exist. If one doesn't, you can search for a workaround in the vendor's knowledge base (or conduct a Web search on the product name and symptoms).

Windows' Event Logs record details about many system and application crashes. Right-click *My Computer*, and choose *Manage*. Expand *Event Viewer* in the left pane, and click *Application* (on most Windows XP PCs, the Viewer keeps three logs: *Application*, *Security*, and *System*). Any recent, repetitive log entry that has a red X next to it means that Windows recorded a serious problem.

If you double-click the log entry, an *Event Properties* dialog box with more information will appear, though deducing the meaning of an entry can be hard. If you can't decipher the codes, you could use Microsoft's own Event ID database (find.pcworld.com/52584), but we prefer *EventID.Net*, a Web site where users post their own experiences—and solutions ►

for—locating a problem's source (see "Decoding Event IDs Online"). A three-month subscription, which gives you access to detailed solutions and other useful information, costs only \$9.

• **Does your software seem to have a mind of its own?** If your home page keeps changing, if pop-up ads appear even when the browser is closed, or if icons appear mysteriously on your desktop, odds are good you're infected with some type of malware, such as spyware or a virus. In this case, the diagnosis is the same as the fix. First run a virus scan. If you don't have any antivirus software installed—and shame on you if you don't—try Trend Micro's free Housecall (housecall.trendmicro.com), which scans for both viruses and spyware. If you already have an antivirus tool but want a free spyware buster, download Microsoft Windows Defender (formerly known as Microsoft Windows AntiSpyware; find.pcworld.com/49380).

Once your PC is clean, make sure your Windows security patches and settings are up-to-date. The free Microsoft Baseline Security Analyzer (or MBSA, from find.pcworld.com/40913) will tell you what Windows patches are missing and what settings need to be changed. For more on preventing attacks, read October 2004's *Security Tips*, "Keep Viruses, Worms, and Spyware Off Your PC" (find.pcworld.com/47930).

• **Do your input devices flake out?** If you're having trouble with a wireless keyboard, mouse, or other input device, first check the batteries. If they're rechargeable, give the device some time to juice up, and then reboot the PC.

But what if the device is wired, or if batteries aren't the problem? Use Windows' troubleshooter wizard for input devices: Click *Start*•*Control Panel* (or in Category view click *Start*•*Control Panel*•*Printers and Other Hardware*), and then select either *Mouse* or *Keyboard*; next, click the *Hardware* tab, and then the *Troubleshoot*

button. In addition, the DirectX diagnostic tool can give an input device a pass/fail grade: Click *Start*•*Run*, type **dxdiag**, and then click *OK*. Check the *Input* tab for the test results on all your input devices.

If neither the troubleshooter nor the DirectX tool points to a solution, and you have (or can borrow) a standard PS/2 mouse or keyboard, do so; then head to the manufacturer's Web site and download a new driver set for the balky device.

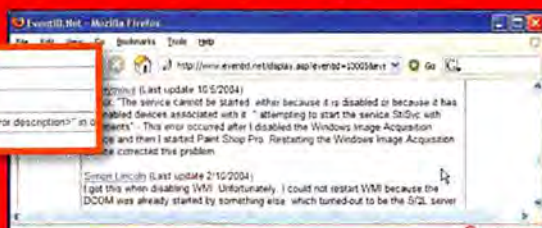
loose or the audio connector bent? If you hear intermittent sound when you jiggle the connector while it's plugged in, the plug on the headphone or speaker cable is probably bad. If the audio jack wiggles when you remove or insert a plug, the actual jack on the back of a PC might be broken; in that case, a new sound card is the only fix. (If you're using integrated sound, that means buying either an add-in card—as long as you have a slot avail-

DECODING EVENT IDS ONLINE



EVENT IDS TELL you what caused a problem noted in Windows' Event Log, but the codes are almost always abstruse. EventID.Net tells you what's really going on. Enter the Event ID (a number) in the site's form. That leads to a page where you can see what other users have posted about that problem, along with suggested solutions.

Event ID: 10005
Source: DCOM
Type: Information
Description: DCOM got error "kernel description" in o
Things to: What is a GUID?

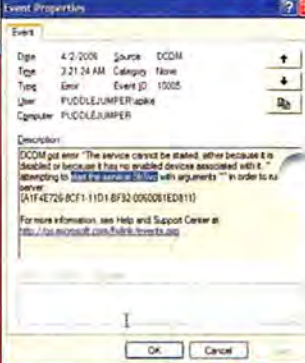


Startup and Recovery

System startup

Default operating system:

Microsoft Windows



• **Has the PC gone silent?** Make sure the computer's speakers are powered on and properly connected. Launch Windows Volume Control (go to *Start*•*All Programs*•*Accessories*•*Entertainment*•*Volume Control*) and determine whether the check boxes labeled Mute are selected. If they are, or if Mute All is filled in, that's your culprit; to fix it, simply uncheck the box. Problem still not solved? Find out if the correct sound source is being called (some computers have more than one audio device). In the Volume Control applet, select *Options*•*Properties* and make sure the item listed in the Mixer Device drop-down menu is your sound source (whether it's integrated or an add-in card).

Some other options to consider: Are your headphones or speakers plugged into the correct port? Is the audio cable

able to install it—or a new motherboard.)

If you installed hardware or software immediately before this problem started occurring, you might need to reload your sound drivers. Check the sound card manufacturer's Web site, or Windows Update (in the *Optional Hardware* section), for updates.

If all else fails, you can try to use System Restore, which comes with Windows XP, to return your machine to a previous, functional configuration. Select *Start*•*All Programs*•*Accessories*•*System Tools*•*System Restore* and choose *Restore my computer to an earlier time*. Windows automatically creates restore points (a minimum of one per day), so if System Restore works (which isn't always the case), you should be able to roll back your computer to a time when it worked properly. ▶

Lenovo recommends Windows® XP Professional



CARRIED BY THOSE WHO CARRY COMPANIES.

The new Lenovo ThinkPad® X60 notebook with Intel® Centrino® Duo Mobile Technology. It's the smallest, lightest ThinkPad you can buy. Because you already have enough weight on your shoulders.

New Thinking. New Thinkpad.™

lenovo™

Lenovo recommends Windows® XP Professional

CARRY YOUR BUSINESS FURTHER.

The new ultraportable ThinkPad® X60 has features no business leader should do without. Select models feature integrated Verizon Wireless WAN¹ — your own portable wireless Internet, anywhere within the Verizon Wireless BroadbandAccess Coverage Area, a full-sized keyboard,² and 7.8-hour battery life.³ Take the pressure off your back and put it on your competition with the ThinkPad X60 and the Lenovo PC lineup.



ThinkPad X60

distinctive innovations

Rescue and Recovery™ — One-button recovery and restore solution

system features

Intel® Centrino® Duo Mobile Technology
Intel® Core™ Processor T2300*
Intel® Pro/Wireless 3495ABG

Microsoft® Windows® XP Professional

12.1" XGA TFT (1024x768)

Travel Weight 3.15 lbs*

512MB* DDR2 memory at 667MHz

60GB* Serial ATA Hard Drive

TopSeller Model

\$1499* PN 170947U

Option

ThinkPad Leather Carrying Case™

\$99 PN 10K0209

Customer Carry-in to 1 yr Onsite Repair
and 1 yr Accidental Coverage††

\$169 PN 40Y9214

ThinkPad Z60m Widescreen

distinctive innovations

ThinkPad Productivity Center — ThinkPad help at your fingertips

system features

Intel® Centrino® Mobile Technology
Intel® Pentium® M Processor 740 (1.73GHz)
Intel® Pro/Wireless 2915ABG

Microsoft® Windows® XP Home Edition

15.4" WXGA Widescreen (1280x800)

512MB DDR2 memory at 533MHz

40GB Serial ATA Hard Drive

CD-RW/DVD Drive

TopSeller Model

\$1149 PN 2529-03U

Option

ThinkPad T60/Z60m 9 Cell Li-Ion Battery

\$179 PN 40Y6797

1 yr Onsite to 3 yr Onsite Repair 9X5
Next Business day

\$132 PN 41C9188



ThinkPad X60 notebook available with
Intel® Centrino® Duo Mobile Technology

ThinkPad Z60m Widescreen

distinctive innovations

ThinkPad Productivity Center — ThinkPad help at your fingertips

system features

Intel® Centrino® Mobile Technology
Intel® Pentium® M Processor 750 (1.86GHz)
Intel® Pro/Wireless 2915ABG

Microsoft® Windows® XP Professional

15.4" WXGA Widescreen (1280x800)

512MB DDR2 memory at 533MHz

80GB Serial ATA Hard Drive

DVD-R Dual Layer

TopSeller Model

\$1499 PN 2529R8U

Option

Canon PIXMA iP90 Portable Printer

\$247 PN 40Y8272

ThinkPad Z60t Widescreen

distinctive innovations

ThinkPad Productivity Center — ThinkPad help at your fingertips

system features

Intel® Centrino® Mobile Technology
Intel® Pentium® M Processor 740 (1.73GHz)
Intel® Pro/Wireless 2915ABG

Microsoft® Windows® XP Professional

14" WXGA Widescreen (1280x768)

512MB DDR2 memory at 533MHz

80GB Serial ATA Hard Drive

DVD-R Dual Layer

TopSeller Model

\$1699 PN 2511-HAU

Option

ThinkPad Advanced Mini Dock

\$219 PN 250410U

ThinkCentre A52 Tower

distinctive innovations

Rescue and Recovery™ — One-button recovery and restore solution

system features

Intel® Celeron® D Processor 331 (2.66GHz)

Microsoft® Windows® XP Professional

256MB memory

40GB Hard Drive, CD-ROM

6 USB 2.0 ports (2 Frontside)

TopSeller Model

\$479 PN 8288A2U

Option

15" ThinkVision® L151p Flat Panel Monitor

\$269 PN 9205HB2

ThinkCentre A52 Tower

distinctive innovations

Rescue and Recovery™ — One-button recovery and restore solution

system features

Intel® Pentium® 4 Processor 521 (2.80GHz)

Microsoft® Windows® XP Professional

512MB memory

80GB Hard Drive, CD-RW/DVD Drive

6 USB 2.0 Ports (2 Frontside)

TopSeller Model

\$649 PN 87823BU

Option

Lexmark X7170 All-In-One Printer

with USB cable
\$149 PN 40Y8260

To shop or locate
your local reseller

Call 1 866 426-6403

Go to lenovo.com/newthinkpad/m544

lenovo™

Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time without notice. Lenovo is not responsible for photographic or typographic errors. *Pricing: prices do not include tax, shipping and handling, or any recycling fees and are subject to change without notice. (Price includes applicable discounts.) Reseller prices may vary. Warranty Information: For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, NC 27709, Attn: Dept. ZPYA/B676. Lenovo makes no representation or warranty regarding third-party products or services. Footnotes: (1) Activating Verizon Wireless Service: Lenovo customers will be contacted after purchase to activate service; requires separate agreement with Verizon Wireless and is subject to the Customer Agreement, Calling Plan and credit approval. Service and airtime charges will apply; \$175 early termination fee. Verizon Wireless, not Lenovo, is solely responsible for service. Service not available in all areas; purchaser is responsible for verifying that service is available for the intended location before purchasing a computer equipped with WAN card. Network details, coverage limitations and maps at <http://www.verizonwireless.com/b2c/mobileoptions/broadband/serviceavailability.jsp?open=b2b>. (2) Full-size keyboard: As defined by ISO/IEC 15412. (3) Battery: These model numbers achieved Battery Run-down Time of at least the time shown during testing. A description of the testing is available at lenovo.com/pc/www/thinkpad/battery/life. Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning and other customer preferences. (4) Mobile Processors: Power management reduces processor speed when in battery mode. (5) Wireless 11a, 11b and 11g: is based on IEEE 802.11a, 802.11b and 802.11g, respectively. An adapter with 11a/b, 11 b/g or 11a/b/g can communicate on either/any or any of these listed formats respectively; the actual connection will be based on the access point to which it connects. (6) Included Software: may differ from its retail version (if available), and may not include user manuals or all program functionality. License agreements may apply. (7) Travel Weight: includes battery and optional travel bezel instead of standard optical drive in Ultrabay bay, if applicable; weight may vary due to vendor components, manufacturing process and options. (8) Memory: For PCs without a separate video card, memory supports both system and video. Accessible system memory is up to 64 MB less than the amount stated, depending on video mode. (9) Hard drive: GB=billion bytes [TB=trillion bytes]. Accessible capacity is less; up to 4 GB is service partition. (10) Certain IBM and ThinkPad logo products: are not manufactured, warranted or supported by IBM or Lenovo; IBM and Lenovo logos and trademarks used under license. Contact Lenovo for details. (11) Limited warranty: support unrelated to a warranty issue may be subject to additional charges. Trademarks: the following are trademarks of Lenovo: Lenovo and the Lenovo Logo, ThinkPad and ThinkCentre, UltraConnect, Access Connections, Rescue and Recovery, ThinkPad Port Replicator II, Active Protection System, ThinkPad dock, ThinkVantage and ThinkVision. IBM and the IBM logo are registered trademarks of IBM and are used under license. Microsoft and Windows are registered trademarks of Microsoft Corporation. Celeron, Celeron Inside, Centrino, Core Inside, Intel, Intel Core, Intel Inside, Intel SpeedStep, Intel Viv, Intel Xeon, Itanium, Itanium Inside, Pentium, Pentium Inside, the Centrino logo, the Intel logo and the Intel Inside logo are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Other company, product and service names may be trademarks or service marks of other companies. ©2008 Lenovo. All rights reserved. Visit www.lenovo.com/safecomputing periodically for the latest information on safe and effective computing.

WHY DOES MY PC RUN SO SLOWLY?

• **Does Windows seem generally more sluggish than usual?** A computer's age isn't the only factor affecting its speed: Your system is probably running more background junk than you're aware of. These stealth programs, or processes—including printer utilities and hard-disk indexers—gobble up CPU cycles and main memory. They can also cause the PC to boot up or shut down much more slowly. Windows' mediocre MSConfig utility (select *Start*•*Run* and type *msconfig* in the *Run* dialog box) lists some applications

that you don't need. (Read "Keep It Simple" at find.pcworld.com/52600, and Steve Bass's *Tips and Tweaks* at find.pcworld.com/30242, for advice.) With some applets, for instance, you just right-click the system tray icon and select *Options* or *Properties*. Then you uncheck a box that reads *Place icon in the taskbar*, or something similar. To see a list of all your currently running programs, click Task Manager's *Processes* tab. A real eye-opener is the amount of memory each process uses. To terminate a program in Task Manager, click its name and then the *End Process* box. Not sure what each program does? Download the free Quick Access InfoBar utility from find.pcworld.com/52758—it puts an icon next to every running program in the Task Manager; click the icon to find out what the program is, and whether it's safe to terminate it.

• **Do you experience graphics problems with games or videos?** First make sure you have the latest driver for your graphics card. This step alone can correct a lot of

hardware tests using the DirectX diagnostics utility (click *Start*•*Run*, type *dxdiag* in the dialog box, and click *OK*). Click the *Display* tab, and then run both the *DirectDraw* and the *Direct3D* tests to determine if you have a driver problem, or if something is installed incorrectly. Let all the tests complete, and then check the results at the bottom of the page.

If the problem persists, use Task Manager (press *<Ctrl>-<Alt>-<Delete>*) to close all other applications and background tasks before playing a game or watching a movie. If that solves the problem, think about adding more RAM to your PC. Also, you should reorganize fragmented files—an essential step for smoother playback of huge video clips—by defragmenting your hard drive. You'll find Windows' Disk Defragmenter at *Start*•*All Programs*•*Accessories*•*System Tools*•*Disk Defragmenter*. See find.pcworld.com/52594 for more tests you can try.

• **Are right-click menus too slow?** The likely culprit isn't malware, but a badly written shell extension, a bit of code that extends Windows' capabilities. (A context-sensitive menu is one type of shell extension.) To root out right-click-menu lag, try NirSoft ShellExView (find.pcworld.com/52586), a free utility that lets you disable shell extensions (see "Clean and Speed Up Context Menus"). Once you disable the bad one, your right-click menus should return to their former, snappy selves.

• **Do your CD and DVD discs burn slowly, or do they stop before finishing?** Your CPU may be overworked. Before starting a burn, load Task Manager and then click the *Performance* tab. Watch the graph to see whether CPU use hits 100 percent during a burn. Try closing some open applications, including antivirus programs and desktop-search indexers from Google, Yahoo, and others. (Make sure you reenforce your antivirus software when you're done, though.) An excellent resource for disc-burning tips is VideoHelp.com, which offers detailed advice on numerous disc and video formats.

CLEAN AND SPEED UP CONTEXT MENUS



SCAN YOUR WINDOWS Registry with ShellExView. When it is finished, sort the list by Type. One

by one, select a context-menu item in the list, and press the *F7* key to disable it. Minimize the program and right-click the desktop to see if the context menu opens faster. If not, try the next one down the list.

DesktopContext Class	No	Context Menu	WIZARD Display Properties Ext
gdi32ShellContextMenu	No	Context Menu	File Shredder Context Menu
Browser Shell Extension	Yes	Context Menu	Browser Shell Extensions
Office File Menu	No	Context Menu	Client Side Caching UI
CDShellExtension	No	Context Menu	CDShell Module
Open With Context Menu Handler	No	Context Menu	Windows Shell Common Di
Encryption Context Menu	No	Context Menu	Windows Shell Common Di
GlanceView Safe T	Yes	Context Menu	
Window Washer Shredding Utility	No	Context Menu	
WVWAB	No	Context Menu	
ShellExView Class	No	Context Menu	
WMP Add To Playlist Launcher	No	Context Menu	
WMP Burn Auto CD Launcher	No	Context Menu	
WMP Play As Playlist Launcher	No	Context Menu	
ChordLineContextMenuItem Class	No	Context Menu	
WIZARD CPL Extension	No	Context Menu	
CryptKey Class	No	Context Menu	
Microsoft SendTo Service	No	Context Menu	
Shell extensions for sharing	No	Context Menu	
Media Library Shell Extension	No	Context Menu	
CDP Extension Copy Hook	No	Context Menu	
Disable Selected Items	F7	Context Menu	
Enable Selected Items	F8	Context Menu	
Open CLSID In RegEdit	F2	Context Menu	

that load at startup, but its list is far from complete.

Instead, run Merijn's free StartupList (find.pcworld.com/52588), which inventories every autostarting program on your PC. And Sysinternals' Autoruns (find.pcworld.com/52590) not only identifies startup apps, it can disable them, too.

To recover your system resources, shut down, delete, or hide system tray applets

video weirdness. You can find the

newest driver at either ATI's or nVidia's site, as appropriate—the driver you'll get from these sites is often fresher than the one your graphics board vendor offers. Laptop drivers are the lone exception to this rule: You're stuck with the driver the notebook manufacturer provides.

You can also run some basic graphics

WHAT'S WRONG WITH MY NETWORK?

• **Can your PC or peripheral see the network?** If your broadband connection isn't working—DSL or cable modems sometimes lose their connection, causing a dead Internet link—power-cycling the modem usually solves the problem. Turn the device off or unplug it from the power outlet, and then turn it back on. Do you have networking hardware, such as a router or hub, that's connected to the modem? If so, power-cycle that device as well—but only after you power-cycle the modem.

• **Is your networked printer not working?** First, make sure you have shared the printer. Go to *Start*•*Control Panel* (or in Category view click *Start*•*Control Panel*•*Printers and Other Hardware*) and select *Printers and Faxes*. Right-click the printer you want to share, then click *Sharing*. On the *Sharing* tab, click *Share Name* and type the printer's name. Another possible explanation: The printer is connected to one network-connected PC, which is turned off. The obvious solution is to leave that computer on at all times. Or reduce your energy bill and buy a print server (\$30 to \$50) that connects the printer directly to the network. See "How Do I Share a Printer on My Small Network?" (find.pcworld.com/47168) for more info.

• **Is your PC's connection to the network balky?** If the network is too slow, or has stopped working altogether, first try run-

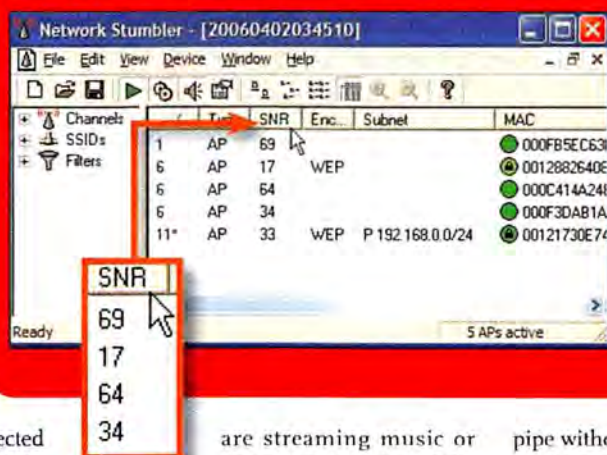
ning the Windows XP network troubleshooting feature. Go to *Start*•*Help and Support*, and under "Pick a Help topic" click *Networking and the Web*, then select *Fixing network or Web problems*, and finally choose *Home and Small Office Networking Troubleshooter*. The troubleshooter asks you a series of questions to help pinpoint the problem, and as you drill deeper the troubleshooter will run a diagnostic program to try to locate the source of the difficulty. Unfortunately, the tool rarely discovers anything you couldn't have figured out yourself, but it's still worthwhile to use as a starting point, just to make sure you haven't overlooked anything obvious.

• **Does your laptop take several attempts to connect to your Wi-Fi router?** First, check to make sure your network isn't clogged with other data. Do you have any devices connected to your network that

could simply be a nearby household appliance such as a microwave oven or a cordless phone. NetStumbler also scans for other wireless LANs in your area, which could be using the same router channel as you. The 2.4-GHz range has three nonconflicting channels—1, 6, and 11—and you'll want to pick the least crowded channel of those three. In addition, check your laptop's wireless signal strength. (Wi-Fi cards typically place an icon depicting signal strength in the system tray.) If possible, move the portable closer to the wireless transmitter for a stronger signal. A weak signal may be the result of obstructions in your home. Lincoln Spector offers more troubleshooting advice in his January *Answer Line* column, at find.pcworld.com/52602.

• **Does your Wi-Fi connection seem slower?** Your neighbors may be piggybacking on your network and using your Internet

TROUBLESHOOT WI-FI WITH NETSTUMBLER



NETSTUMBLER CAN tell you if radio interference is affecting your Wi-Fi gateway. Note the signal-to-noise (SNR) readings. A high level of noise, indicated by a low number in the SNR column, could be caused by another nearby wireless gateway using the same Wi-Fi channel.

are streaming music or video from one part of the house to another? Such activity could cause a delay in your notebook's getting connected, which you can test for by turning off the streaming-media device temporarily. RF (radio frequency) interference might also be to blame; a utility called NetStumbler (find.pcworld.com/51212) can help you diagnose the problem. The software (see "Troubleshoot Wi-Fi With NetStumbler" above) checks for sources of signal interference, which

pipe without your consent. The solution: Activate the Wi-Fi gateway's security. This involves several tasks, including changing the gateway's vendor-supplied default password and enabling WPA Pre-Shared Key encryption. These security steps vary by hardware vendor; you'll find good instructions for most popular gateways at GetNetWise (find.pcworld.com/52604). You might also update the security options available by upgrading the firmware in your wireless devices; see find.pcworld.com/52762 for help.

MP3 Player + USB Flash Drive

Easy to Operate TouchPad



T.sonic™ 310

A high capacity MP3 player with USB flash drive and built-in security system - all in one device that can be charged from any computer with a USB port. Go online today and see the different features that separate the Transcend T.sonic™ line of MP3 players from the rest - www.tsonic.com

T.sonic™ 610 MP3 Player



• TS612MAH610 • TS610A6H610

T.sonic™ 620 MP3 Player



• TS612MAH620 • TS610A6H620

T.sonic™ 510 MP3 Player



• TS512MAH510 • TS510A6H510

T.sonic™ 520 MP3 Player



• TS512MAH520 • TS510A6H520

• **Is your firewall causing conflicts?** Software firewalls sometimes will block a program you want to use to access the Internet. You may have accidentally clicked 'Keep blocking this program' (in Windows Firewall) or 'Block' (if you use the ZoneAlarm software firewall) rather than 'Unblock the program' or 'Allow' the first time the application ran.

To correct this in Windows Firewall, select *Start-Run*, type `wscui.cpl` in the Open dialog box, and click

OK. Click *Windows Firewall*, choose the *Exceptions* tab, and then click *Add Programs*. Select the app you wish to unblock from the list, or click *Browse* to locate it.

To fix the problem in ZoneAlarm, double-click the ZA icon in the system tray, click *Program Control* on the left side of the window, and click the *Programs* tab. Scroll down the list until you see the program you want to use, and if you see any red X icons next to it, click the icon and choose *Allow* from the drop-down menu. ■

Jeff Bertolucci is a freelance writer based in Southern California. Tom Spring is a senior reporter for PC World.

INSIDER INFO

SUPPORT TIPS FROM THE PROS

SOMETIMES YOU JUST can't avoid a call to tech support. You concede defeat, reach for the phone, and hope for the best. But most of us who have resorted to calling can relate our own personal horror stories—times where it felt like tech support was purposely yanking our chain. Tech support is a tough job, no question, and

many technicians sincerely want to help you get to the bottom of an issue, but a few Machiavellian support representatives seem to enjoy making you suffer. Still, when we spoke to ex-support staff to get some tips about the best ways for customers to work with phone support to solve problems, we never expected to hear the types of stories they told us.

"We had one person who didn't like the tone of the customer's voice, so he put the caller on hold, drove 7 miles to pick up a Pepsi at a gas station, came back, and finished the call," says a former employee of Alorica, which handles support calls for Gateway. "Callers just

assume when they're on hold we're looking something up trying fix their PC."

The Alorica employee we spoke with, who asked that we not use her name, says rule number one for calling tech support is, "Do not be rude." When a caller to Business Processing Outsourcing in New Delhi, India, curses three times, says support technician Akanksha Chaand, who fields calls for Hewlett-Packard PCs, the company's policy says she can hang up.

But even with perfect phone etiquette, getting quality tech support can be hard. These tips—provided by actual help desk operators—will help you learn how to avoid the tech support runaround.

support pro with Stream International.

Problem: A tech keeps putting you on hold—more than twice—to "take a look at something" to help you fix your PC.

Tip: The tech probably doesn't know what he or she is doing. How do you get to a higher level of support fast? Alorica requires that customers ask three times for their problem to be escalated before it honors the request. However, a tech support technician can't escalate the problem without gathering basic computer and warranty information.

For more tech support tales of woe, see find.pcworld.com/53054.

—Tom Spring



Problem: You're experiencing an advanced PC problem but the tech keeps asking questions like "Is your computer plugged in?"

Tip: Telephone tech support consists of two, and sometimes three, levels of assistance. Level one handles basic PC questions. If necessary, ask to have your case elevated to the next level, or ask to speak with a supervisor—nicely. "If the technician thinks you're a nice person, they will often give 110 percent to help you," says David Hill, tech

If you think all
wireless connections
are the same, don't worry.
There are places
you can go for help.



Mental note: Certified Wireless USB is the inevitable wireless platform of the future. Like its wired predecessors, it connects up to 127 devices simultaneously. And moves huge amounts of data with speed (up to 480 Mbps),

security and simplicity. Brought to you by the minds behind original and Hi-Speed USB, this technology has been optimized for wireless connectivity. For more mind-bending facts, go to www.usb.org/LookForTheLogo.



FIRST PRODUCTS COMING SOON

Information brought to you by the USB Implementers Forum

All-Star Tech Stores

Who's got the best prices, selection, sales help, and return policies among online and brick-and-mortar stores? We surveyed more than 5000 readers to find the best places to buy tech gear.

BY CHRISTOPHER NULL ▶

**"Now you have
more [buying]
choices.... But
you're making a
more informed
choice."**

—MIKE RADWAY, FINANCIAL SERVICES
CONSULTANT, PORTLAND, OREGON



CHOOSING THE RIGHT product is only part of the headache when you're hunting for new tech gadgets or computer parts. Shoppers these days also face an almost overwhelming number of options in *how* and *where* to make a purchase: Buy the product offline and get it today, or buy it online and wait a few days? Go offline and pay sales tax, or go online and pay for shipping? Will a big store like Wal-Mart treat you worse than the little computer shop down the way? Is Amazon.com more trustworthy than a tiny Web outfit with unbelievable prices?

As experienced tech shopper Mike Radway, a financial services consultant located in Portland, Oregon, puts it, "When your only choices were Coke and Pepsi, it was easy. Now you have more choices, which can make things more difficult. You can spend an endless amount of time obsessing over which product to get and whether you're getting the perfect price. But you're making a more *informed* choice."

To get a picture of how buyers are making those choices and of which Web-based and real-world stores best meet their needs, we surveyed thousands of *PC World* readers and PCWorld.com visitors. We then conducted interviews with some of the surveyed shoppers, performed our own in-person tests at brick-and-mortar stores, and took multiple spins around the most popular online retailers.

So where are the best places to shop? Topping our survey on the online front was NewEgg.com, with TigerDirect.com coming in a close second. Offline, results were more scattered, with Staples and Office Depot nabbing the highest marks from respondents for overall satisfaction and stores such as Fry's (a regional electronics chain) and Costco earning kudos in specific areas such as product selection, prices, and return policies.

Although most of the respondents we interviewed prefer to shop online, some are finding themselves swinging back toward offline retailers for a number of reasons. Shipping rates have been going up, for instance, and some Web vendors are sitting on orders for days before processing them. And many of these consumers simply want to support local businesses, or they don't want to wait a week to get an important part.

By and large, however, online still rules for our respondents. We talked to virtually no one who said they weren't shopping online more today than they were a few years ago. Product selection and price are key, and a lot of people understandably want to avoid the hard-sell tactics of pushier salespeople. Their preference is borne out by sales figures from stores with both an

online and offline presence: Although brick-and-mortar still represents the bulk of sales for retailers such as Circuit City and Costco, those retailers say online sales are growing by 60 to 70 percent annually, while offline sales are growing by about 11 to 12 percent.

Some savvy readers told us that they like to combine online and offline shopping: They compare prices on the Web through shopping engines, then take those prices with them to their local

stores. Although most offline stores don't honor online print-outs as part of their price-matching guarantees, studying Web prices helps buyers determine whether purchasing a product online might be more cost-effective in the end—after all, despite concerns over shipping costs and merchant reliability, saving hundreds or thousands of dollars can be persuasive. The combination approach can also work the other way: You start at a brick-and-mortar retailer so you can try things out and decide what you want, then you go online to find the best deal.

We've taken the information respondents gave us and split our look at popular tech stores into five sections: product selection, price, product information, returns, and store/site design. In each category we've analyzed whether online or offline is doing a better job, and determined which store tops the others. Plus, we've unearthed a wealth of tips, tricks, and secrets to make your shopping experience as painless as possible.

GIVE ME CHOICES

WHEN READERS PICKED their top online stores for product selection, NewEgg came out on top, with TigerDirect and Amazon trailing closely; these stores also scored well on the immediate availability

of products shoppers were looking for. When it came to shopping offline, the marks for product selection were considerably lower all around, but Fry's outpaced the rest of the pack by a mile and had good product availability, too; CompUSA (which also owns The Good Guys stores) and Circuit City took secondary honors in this noticeably weaker field.

Respondents overwhelmingly told us that they consider online retailers the better bet for a wide-ranging selection of goods—satisfaction with online stores' selection was twice that of brick-and-mortar stores. The logic is obvious: Stores in the real world have only so much shelf space, and that space is devoted to the products with the highest profit margins and the biggest customer demand. If you're looking for an obscure part or a lesser-

**34%
of respondents
rate online
sellers'
selection as
excellent,
versus 11% for
offline stores.**

—SOURCE: PC WORLD READER SURVEY

SURVEY RESULTS

BRICK-AND-MORTAR: NO STORE EXCELS IN ALL AREAS

OFFICE DEPOT AND Staples stand out for overall satisfaction in this uneven group, and Staples gets further praise for its store design and its product return experience. Product selection and store design proved to be problem areas for many rated stores.

BRICK-AND-MORTAR STORE	Overall satisfaction	Product selection	Best prices	Product information, buying advice	Return experience	Store design
Office Depot	●	◆	◆	◆	◆	●
Staples	●	■	◆	◆	●	●
Fry's	◆	●	●	◆	■	◆
OfficeMax	◆	◆	◆	◆	◆	●
Circuit City	◆	●	■	◆	◆	◆
Costco	◆	■	●	n/a	●	■
Sam's Club	◆	■	●	n/a	n/a	■
Best Buy	◆	◆	■	◆	■	■
CompUSA/Good Guys	■	●	■	◆	■	◆
Wal-Mart	■	■	●	■	◆	■

● = Above average ◆ = Average ■ = Below average n/a = Not applicable; the store did not receive enough responses to be rated. **CHART NOTES:** Stores are ranked by the overall satisfaction rating, and then by the total number of positive and negative ratings. Source: Survey of 5923 PC World readers and PCWorld.com site visitors from March 2 through March 15, 2006.

known brand, you are more likely to find it on the Internet.

Offline stores have one major benefit over online ones: They let you physically touch the gear you're shopping for. This can be invaluable if you're comparison shopping and don't know exactly what model you want. Says Mike Radway, "If a product is a commodity (like flash memory) or something that's easy to understand, I purchase online. But if I'm trying to decide between one item or another, I always go to the store." (We did not have sufficient responses to rate the product-trial experiences for individual stores, but 88 percent of respondents gave stores positive marks overall.) Another plus for shopping offline is immediate availability. Online stores do generally tell you early on when they can ship a product to you, though: About 47 percent of respondents said they got a shipping estimate either on the product page or when they put an item in the shopping cart. However, 60 percent of CompUSA shoppers said they saw no shipping estimate at all, versus the average of 15 percent.

Of course, online shoppers have the benefit of accessing both general search engines and specialized shopping engines (or "shopping bots") like Froogle and PriceGrabber, which all but guarantee the widest product selection you can find. For uncommon items, such as an obscure camera battery, search engines can turn what might once have been a frustrating trip through the Yellow Pages into a relatively simple point-and-click affair. Many readers told us that they frequently ended up at small retailers for such

hard-to-find items, thanks to the advice of shopping engines, and that in general these one-time purchases turned out just fine.

Another bonus of shopping bots is that such Web sites typically locate several sources for an item and point you to the best available price. Some engines also rate the trustworthiness of listed e-tailers, which can give you more confidence in a significant purchase. For more information on shopping engines, check out "Deal Finders" in our December 2005 issue (find.pcworld.com/52744).

For the occasions when shopping engines don't pan out in the search for an obscure component or accessory, surveyed readers recommended a straightforward solution: Just click over to the equipment vendor's Web site. Most manufacturers include a page on their site that lists retail outlets, both online and offline, where

you can purchase their products. Sometimes the sites offer the information by region, as well: Simply type in your zip code, for example, and a list of nearby stores is revealed.

BARGAIN BUYS

LARGE SITES AND stores scored high on our poll in offering customers the lowest prices. Costco.com, auction site eBay, NewEgg, Buy.com, and TigerDirect had the best online deals while most respondents got offline bargains at Fry's and at megastores like Sam's Club, Costco, and Wal-Mart. (Although eBay is often regarded as an auction site first, many merchants also use it as a base for conventional retail sales; eBay exerts some oversight on its merchants, too, which is why we included it here.)

Online or off, respondents said price was their most important consideration in choosing where to purchase a product. Readers had divergent opinions about how to find the best deal, however. Many said they began online with a Froogle search and then compared those prices with the tags at local stores. Because offline stores hold sales without much notice and on an unpredictable selection of items, many readers said that spending a little time checking a few brick-and-mortar shops was worth their while, particularly when shopping for big-ticket products. (This reporter, a dedicated online purchaser, found an amazing deal on a new PC by scouring the superstores during the course of researching this article, snagging a machine costing several ▶

MORE ONLINE

FOR ADDITIONAL INFORMATION on where best to do research on products before you buy, go to find.pcworld.com/53052.

hundred dollars less than a similarly configured rig online.)

In the absence of a big dads-and-grads sale, though, respondents overall said that online shopping netted slightly better prices. The why for that may simply come down to there being many more retailers fighting it out on the Internet than in the physical realm. Again, some readers we spoke with happened to find the best price on a product at a smaller Web-based retailer, and many noted that, though sometimes frustrating, buying from such out-of-the-way stores was usually worth it.

You do need to approach an unfamiliar online retailer with some caution, they advise, and, as always, you should be on the lookout for prices that appear too good to be true. Also, respondents warn of some shady dealers that tack on exorbitant handling fees or attempt to "upsell" you to more expensive models or accessories you don't need. If anything seems at all suspicious, leaving a lowball Web site and paying a little more money to receive service from another site that you can trust is the best idea.

INFORM ME

RESPONDENTS WEREN'T ALL that impressed with the information they could get about products, either online or off. Online edged ahead a bit with 30 percent of respondents giving the Web

high marks for the buying information available, versus 24 percent of offline shoppers. Most sites and stores earned average ratings, with only NewEgg receiving an above-average score for the product information it put at shoppers' fingertips. On the other hand, several sites and stores disappointed with their

45% rate online sellers' returns as extremely easy versus 40% for offline.

—SOURCE: PC WORLD READER SURVEY

below-average ratings in product information: Costco.com, Wal-Mart, CompUSA.com, BestBuy.com, Staples.com, and eBay.

Salespeople weren't much help in the brick-and-mortar world. Wal-Mart in particular received low scores for the product and category knowledge of its sales staff, and only Fry's managed to garner a high rating from more than 50 percent of its customers on its salespeople's knowledge of product categories.

Reader comments echo these results. Gail Robb, a Boise, Idaho, great-grandmother and the family computer pro, puts it politely, saying sales clerks are "really hit-and-miss. Some are really good

and some don't know all that much." John Dear, an engineer in Mullica Hill, New Jersey, concurs. "Sometimes I feel like the salespeople are more of a hindrance than a help."

Online, a few sites offer easy, convenient ways to contact a customer representative for sales help. NewEgg, TigerDirect, Dell, and HP all had a majority of their shoppers praise the accessibility of live help. NewEgg and TigerDirect customers also awarded those sites high marks for the knowledgeability of the service representative they spoke with.

If you're a rank novice when it comes to a specific product category—say, in choosing among an LCD, plasma, or rear-projection HDTV—most respondents recommend you do research online. Start with trustworthy sources and then branch out to category-specific review sites for additional detail. Many lesser-known sources have loads of information that might be impossible to obtain ▶

SURVEY RESULTS

ONLINE: NEWEGG.COM PROVES A WINNER ACROSS THE BOARD

NEWEGG—OUR TOP OVERALL site—and TigerDirect stand out from the pack, while BestBuy.com earns the dubious distinction of below-average ratings in all categories; CompUSA.com and Staples.com round out the bottom of this group.

ONLINE STORE	Overall satisfaction	Product selection	Best prices	Product information, buying advice	Site design	Shopping cart experience
NewEgg.com	●	●	●	●	●	●
TigerDirect.com	●	●	●	◆	●	◆
Amazon.com	●	●	◆	◆	◆	◆
Buy.com	◆	◆	●	◆	◆	◆
Dell.com	◆	◆	■	◆	◆	◆
HP.com	◆	◆	■	◆	◆	n/a
eBay.com	◆	◆	●	■	■	■
CircuitCity.com	◆	■	■	◆	◆	■
Costco.com	■	■	●	■	■	n/a
CompUSA.com/GoodGuys.com	■	■	■	■	■	n/a
Staples.com	■	■	■	■	■	n/a
BestBuy.com	■	■	■	■	■	■

● = Above average ◆ = Average ■ = Below average n/a = Not applicable; the site did not receive enough responses to be rated.
CHART NOTES: Stores are ranked by the overall satisfaction rating, and then by the total number of positive and negative ratings.
 Source: Survey of 5923 PC World readers and PCWorld.com visitors from March 2 through March 15, 2006.

VersaLASERTM

The Multi-MaterialTM Computer Peripheral!



VersaLaser can transform images or drawings on your computer screen into real items made out of an amazing variety of materials... wood, plastic, fabric, paper, glass, leather, stone, ceramic, rubber... and it's as easy to use as your printer. We invite you to discover the endless possibilities for cutting, marking and etching with a VersaLaser at www.VersaLaser.com.

UNIVERSAL
LASER SYSTEMS INC.

16008 North 81st Street • Scottsdale, AZ 85260

877-866-9802 or 480-315-3600 • Fax: 480-483-5620

Manufactured and protected under one or more of U.S. Patents 5,051,558; 5,661,746; 5,754,575; 5,867,517; 5,881,387; 5,894,493; 5,901,167; 5,982,803; 6,181,719; 6,313,433; 6,342,687; 6,423,925; 6,424,670. Other U.S. and international patents pending.

Go to find.pcworld.com/52890



elsewhere. For example, several readers mentioned Steve's Digicams (www.steves-digicams.com) as an invaluable source for camera details.

If these sources together can't supply the info you want on a product category, it probably doesn't exist. Still, some online retailers do a decent job of providing detailed info for prospective buyers. Top-rated NewEgg, for instance, supplies a plethora of product photographs—often showing every angle of each model—plus complete spec sheets and extensive user-written product reviews. Another nice feature: its "compatible products" link, which lets shoppers find appropriate accessories without a lot of searching.

For buying offline, Mike Radway offers one strategy for success: He prints out professional and user reviews from a variety of online stores, then takes them along with him to brick-and-mortar shops when he wants to make a purchase. This way he can compare what a sales clerk tells him with real-world experiences.

HAPPY RETURNS?

HAVING TO RETURN equipment is never fun, especially if the device is not performing as expected. Fortunately, only about 59 percent of offline shoppers and just 24 percent of online buyers surveyed had to return purchases (we had so few responses for most online sites that we could not rate individual stores). Of those people who did return items, the majority had a positive experience: 58 percent online and 63 percent offline gave their stores good marks on this score. Costco and Staples stood out with above-average ratings for the ease of returns.

In general respondents said that the larger the retailer, the easier returning items was, though online returns did bring extra concerns. Says Radway, "With online the biggest thing to worry about is the hidden fees for returns, or those [sites] that make it impossible to talk to a live human being when I have a problem."

Engineer John Dear has a similar take on returns. "It's a little more of a hassle to deal with returns online," he notes. "You just have to get in a new mindset, like making sure you keep the packaging for a couple of weeks before throwing it out."

Overwhelmingly, when respondents did return products, the



"If I'm shopping for computer components, I don't want to hear stereos blasting."

—LAURA MANNING, LAN ADMINISTRATOR,
SANTA BARBARA, CALIFORNIA

returns were accepted and few people had to pay a restocking fee, even at stores that claimed to charge one. This was one area where NewEgg customers fared worse than those of other online retailers: Nearly 19 percent of NewEgg shoppers we surveyed had to pay a restocking fee, versus the average of 10 percent for online buyers. Brick-and-mortar customers had it even better: Only 3 per-

cent of them said they were required to pay such fees.

While most readers had positive experiences returning merchandise to a retailer, nearly everyone we spoke with had at least one horror story—typically an experience so bad, it turned the reader away from that particular store for good, though it might not have been representative of the store's policies overall.

Radway, for example, says a bad return with eCost.com (not rated on our survey) has kept him from visiting that site much. He says he couldn't return a nonfunctioning thumb drive to ▶

>run a:\smarter job search
>find "only \$100k+ jobs"
C:\RESULTS_

The Ladders®

The Most \$100k+ Jobs

Sign up today for your
FREE membership and get
a bonus career guide.

www.theladders.com/pcworld

USE CODE: PCWO



10% OFF

Inkjets, Toners & More!

**FREE
SHIPPING**

On all US Orders!



PrintPal "Your Printer's Best Friend"



www.printpal.com/pcw

Use above web address to activate!

**100%
SATISFACTION
GUARANTEED**



COUPON

custom **traffic reports** at your fingertips.
accurate, real-time, and **FREE.**

call **1-866-MY-T-R-A-F-C**

 **traffic**.com
your traffic, your way.

www.traffic.com
online, on-the-go.

eCost, nor could he return it directly to the maker—he had to place a new order for the same product and then return the defective drive for credit. During that time, the rebate period for the product expired. “I will still buy from them,” he says, “but I’m much more cautious.”

In contrast, Laura Manning, a LAN administrator in Santa Barbara, California, speaks well of her Buy.com return experiences. A recent camera return “was handled quickly and professionally, via e-mail and phone. Their customer service people were native English speakers, easy to understand, and empowered to take quick action,” she notes.

It’s important to remember that not only can you have a different return experience at different retailers, but your experience may vary among stores within the same chain or even with sales clerks at the same store. Although chain-store policies should be

76% say items were immediately available online versus 58% offline.

—SOURCE: PC WORLD READER SURVEY

Our respondents were happier with Web site design than they were with physical store design by more than a two-to-one margin (47 percent positive versus 18 percent). Staples, OfficeMax, and Office Depot scored above-average marks for their physical store design, while NewEgg and TigerDirect fared best ▶

identical in every location across the country, the helpfulness of the staff at a particular store can have a huge impact on your happiness during a return. This is one slight advantage for online shopping, as you’re likelier to get the same service from a site over the long run.

LAY OF THE (SHOPPING) LAND

WHILE THE READERS we surveyed generally could find their way around stores both online and in the real world, there’s definitely room for improvement, especially over on the brick-and-mortar side.

SHOPPING TIPS

When Buying Used Gear Makes Sense

REFURBISHED, RETURNED, REPAIRED, and discontinued merchandise can be a bonanza if you don’t mind getting slightly older or somewhat beaten-up gear, as long as you remember some caveats.

Many retailers sell used equipment right alongside new products. Best Buy and CompUSA, for example, offer links to “outlet” stores where used gear sells at deep discounts. Amazon even integrates used products, sold by individuals or third-party stores, directly into its regular listings. This gives you an easy way to see the price differential, without wasting a single click.

But should you buy refurbished gear?

The first big mystery in used merchandise is always “What happened to it?” And many retailers don’t disclose whether a product was returned due to damage or simply because the buyer didn’t want it. Offline stores almost always have “as-is” merchandise for sale, too. Typically these are models

that were displayed on the showroom floor. But how much abuse have they suffered over the course of three or more months on the shelf? The bottom line is, you have no way to really know what you’re getting in these cases.

CompUSA president and COO Tony Weiss notes that refurbs at his stores come from one of two sources:

Merchandise returned directly to CompUSA, or merchandise returned to a manufacturer. In both cases, he stresses, the company does not resell items that have been damaged in any way, meaning all items were returned in working order and so did not need repairs before resale.

This leads to the second big issue: the warranty. Many refurbished items are sold sans warranty or with a very short one, often a 90-day guarantee. If at all possible, try to get a refurbished product that includes a manufacturer’s warranty, too. Regardless, recognize that you’re taking a risk—even if it’s a small one—and set expectations accordingly.

Most of the readers in our survey reported that they rarely, if ever, buy used products. Boise, Idaho, resident Gail Robb is typical: She bought used gear only once, a peripheral for a Sony PDA that had been discontinued. Whether they simply enjoy the thrill of being the first to boot up a PC or, like Portland, Oregon, consultant Mike

Radway, they can’t accept the risk of a “mission-critical” device crashing on them, most users tend to avoid buying used gear whenever possible.

Still, says CompUSA’s Weiss, refurbished gear can be a great deal. “Historically, refurbished items are sold at a 10 to 30 percent discount versus new,” he says. “By considering refurbished, something you couldn’t previously afford might now fit in your budget.”

For more information on shopping for used and refurbished equipment, check out Dan Tynan’s “Four Simple Rules for Buying Used Gear” in the March issue (find.pcworld.com/52746).





HP PROLIANT
ML150 G2 SERVER

SAVE
\$200

\$977

- Intel® Xeon® Processor 3GHz/800MHz/2MB L2 cache
- Dual processor capability
- 1GB Total ECC SDRAM (expandable to 8GB)¹
- One 80GB SATA Hard Drive¹
- Optional Lights-Out 100 Remote Management Card delivers essential remote management functionality at a cost-effective price²
- 1-year, next-business-day on-site support³
- New: Free Data Protector Express ProLiant Edition Software for secure backup

TREMENDOUS GROWTH OPPORTUNITY.

HP ProLiant servers offer expandability to better adapt to your business needs. Whether you're just starting out or already on the way, the HP ProLiant ML150 G2 Server, featuring the Intel® Xeon® Processor, is designed to keep pace with the fluctuating demands of your business. With features that give employees simultaneous access to your network, as well as the ability to share and store files effortlessly, productivity gets priority. Plus, with expansion capabilities like room for an additional processor, extra I/O cards and memory slots, ProLiant servers are ready for whatever your business requires. Add the DAT 72 and securely back up your company's important data, affordably. Giving you more reasons than ever to consider HP.

Right now, buy the HP ProLiant ML150 G2 Server and get \$200 off.

SMART ADVICE > SMART TECHNOLOGY > SMART SERVICES



\$699 HP STORAGEWORKS DAT 72
USB INTERNAL TAPE DRIVE

- Easily connects to the ML150 internal USB port
- No more SCSI interface costs or complications
- Same performance, capacity and reliability as DAT 72 SCSI
- Includes HP's exclusive One-Button Disaster Recovery for quick data recovery

Call **1-866-625-3577**

Click **hp.com/go/ML150mag9**

Contact **your local reseller**



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, are good while supplies last and are available from HP Direct and participating HP resellers. All featured offers available in U.S. only. Savings based on HP published list price of configure-to-order equivalent (\$1177 - \$100 instant rebate - \$100 instant savings = SmartBuy price \$977). Certain warranty restrictions and exclusions may apply. For complete warranty details, call 1-800-345-1518 (U.S.). 1. For hard drives, GB=Billion Bytes. Actual formatted capacity is less. 2. Optional Remote Insight Lights-Out Edition II (RiLOE II) sold separately. 3. Service levels and response times for HP Care Packs may vary depending on your geographic location. Restrictions and limitations apply. For details, visit www.hp.com/go/carepack. Intel, the Intel Logo, Xeon and Xeon Inside are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. © 2006 Hewlett-Packard Development Company, L.P.

among the online retailers for the layout of their Web sites.

Every online shopper has a favorite Web site, and certain design decisions draw rabid fans. While many people love the easy navigation of larger sites such as NewEgg and TigerDirect, Gail Robb points to a tiny online outlet called Cost Central (www.costcentral.com), which she likes for its no-nonsense, index-style layout that makes navigation a breeze.

Although the majority of our survey respondents (52 percent) strongly agreed that comparing products on sites was easy, only 32 percent of Costco.com users felt that way, compared with 73 percent of NewEgg customers. NewEgg and Amazon earned the highest marks for the ease of searching for and finding products, while CompUSA.com and BestBuy.com fared the worst.

In navigating your way around online sites, Dear says it all comes down to practice. "It's all about where you get comfortable," he says. "You just have to get used to where things are. Once you know what you're looking for, it's usually not too hard to find anything." Manning agrees; she shops primarily at Dell, Buy.com, and TigerDirect, because she's familiar with the way those particular sites operate. "These ones work for me, so I'm sticking with them!" she says.

Online definitely trumps brick-and-mortar in another aspect: atmosphere. Manning notes that the loud and oppressive noise that fills electronics merchants like Circuit City and Fry's—which are also busy hawking expensive sound systems and television sets—is what sends her to the Web instead: "If I'm shopping for computer components, I don't want to hear stereos blasting."

In our survey noise level and checkout speed came up needing improvement in general. Just 43 percent of readers strongly agreed that checkout lines moved quickly; 57 percent agreed that stores' noise level was not a problem. Best Buy, Wal-Mart, Circuit City, and Fry's had the biggest problems with noise according to our survey respondents; shoppers at Sam's Club and Wal-Mart gave those stores low marks for speedy checkout.

Worse, though, were buyer impressions of store layouts and the signs meant to guide them to the right products. Just 39 percent strongly agreed that store signs made locating products easy, and only 45 percent strongly agreed that store

layout helped them find their way around as they shopped. Costco got the lowest marks for its in-store signs while CompUSA received the worst layout scores.

Overall, technology shopping is improving, both online and offline, and the breadth of choices means that you're likely to find what you want and to get a good price for it. The best advice comes straight from our surveyed readers: Buy things you understand very well online, but consider a local store when you want to see the gear in action before you pull the trigger. And remember: Whether you shop online or off, the deals are out there—all you have to do is hunt them down! ■

Christopher Null is a San Francisco-based technology writer.

UPDATE

Rebates Get Easier to Collect

FREQUENTLY STORES ENTICE you inside with a low advertised price, and then when you're there you realize that the "\$100 off!" promise is actually a mail-in rebate, one that you probably won't receive until you've celebrated another birthday or two.

Historically, retailers have loved rebates, because only a slim proportion of buyers ever bother to file the necessary paperwork to collect their funds. Due to procrastination, forgetfulness, and the effort required, anywhere from 40 to 95 percent of shoppers don't file their rebate forms (the percentage varies depending on the amount of the rebate). You can't blame those consumers: Rebate paperwork can seem as complex as filing your taxes, and once you arrive home with your brand new digital camera, a mere \$20 hardly seems worth the trouble.

There's good news on the rebate front, however. In light of increasing customer frustration with the rebate

process and with deadbeat rebate companies (most vendors outsource rebate processing to a third party), retailers are cleaning up their act. For starters, the miles-long paper trail has finally moved online for many stores, including CompUSA and Costco. Instead of filling out a ream of forms and snail-mailing them to Dubuque with UPC codes dissected from the packaging, now you can simply enter information from your receipt on a section of the company's Web site. Such online services make it simple to track the money you're owed and to determine exactly when you can expect a check.

Other companies are getting out of rebates altogether. Best Buy, for example, no longer offers mail-in rebates on any computer products, and has set a goal of eliminating all rebates throughout the store by 2008. The catch: The policy applies only to Best Buy's own rebate offers, not to those from product vendors.

Still, many stores remain addicted to rebates, and you'll continue to see the offers. If you don't like the idea of your money sitting in limbo for weeks on end, check out no-rebates-allowed deal sites such as AntiRebate.com, which lists genuinely discounted items daily.



No contract. No overages.
No monthly bills.

No problem – just free!*

Free
Internet
calling that
just works

The whole world
can talk for free.
Skype.com

skype™



USR9601



USR9610



USR9620

**MAKING FREE CALLS OVER THE INTERNET JUST GOT EASIER!
IT'S AS SIMPLE AS 1-2-3!**

1. Load Skype software.
2. Install either the USR9601 USB Internet Phone, the USR9610 USB Internet Speakerphone or the USR9620 USB Telephone Adapter (which allows you to use your regular phone for making free Skype phone calls).
3. Dial and talk as long as you want anywhere in the world for free!

Find out how we do it at www.usr.com/talknow

*No fees are required for making Skype to Skype phone calls. Phone/adaptor must be purchased.
Free Skype to Skype phone calling requires a PC with high-speed Internet access.
Skype is a registered trademark of Skype.

USRobotics®

Go to find.pcworld.com/52892

Having a hard time reading your phone?

The Phone Monocle is your simple solution!

Finally the product that gives you the clarity
you need by enlarging the
screen 3X... GUARANTEED

making it much.....

bigger!

Magnifics Inc.

Cell Phone Magnifiers

818-248-2228 / 818-248-1449

www.thephonemonocle.com

- Compatible with numerous cell phone brands
- Variety of colors
- Easy to attach

El Lente Magnificador de Magnifics Inc.

¡Ahora usted también podrá magnificar la pantalla de su teléfono celular hasta 3X's!. ¡Lo único que debe hacer es visitar nuestra pagina de Internet o llamarnos!

Also compatible with: Cell phones • Text messages • Games • Pictures • Video Streaming • Home Phones • Ipods • PDA's • Insulin Pumps

RESTAURANT PRO EXPRESS™

Point of Sale System for Restaurants

More Profit! • More Sales! • More Customers!

Save Time, Reduce Theft, Speed Checkout, Increase Accuracy,
Reduce Costs, Make Better Business Decisions by Computerizing your Restaurant

The #1 Rated Restaurant Point of Sale

- Fine Dining, Table Service
- Quick Service, Fast Food
- Delivery, Takeout, Drive-Thru
- Cafeterias, Hotels, Gift Shops & Retail Stores
- Rated # 1 for Ease of Use
- Rated # 1 for Restaurant Features
- Single or multi-user
- One restaurant or multiple restaurants
- Credit card authorization in 2-3 seconds
- Gift Cards & Loyalty Cards
- Track your inventory and customers
- Detailed Sales Reports
- Rated # 1 in Customer Service
- FAST and EASY order-taking



Cash Drawers \$189
MMF, Indiana, APG, Logic Controls



Pole Displays \$289
Logic Controls

**Systems
start at
\$795**



Touch Screen Monitors \$499
ELO Flat Panel, CRT



All-In-One Terminals \$1899
Posiflex, IBM



Receipt Printers \$299
Epson, Star, Ithaca, Citizen



Table-Side Ordering- \$499
Symbol, HP Palm



Credit & Debit Card Processing \$349
PC Charge
Credit Card Readers, Pin Pads, Signature Pads \$179
Unitech, MagTek, Verifone, Topaz, HHP



Gift Cards and Loyalty Cards



Restaurant Pro Express software for Windows \$ 795

Replace your Cash Register with Restaurant Pro Express in any type of restaurant. With over 1,000 of the most desired restaurant point of sale features, Restaurant Pro Express will help you compete in a difficult restaurant environment by controlling your costs, reducing errors, increasing efficiency, increasing your profits and increasing your sales. Restaurant Pro Express provides faster checkout, table seating, split checks, tip tracking, unlimited menu items and modifiers, and THE FASTEST, MOST EFFICIENT WAY TO SERVICE YOUR CUSTOMERS.

Specializing in Point of Sale since 1985

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 10965

Go to find.pcworld.com/52420



New

Legal-size scan bed

4800 x 9600 dpi optical

Removes dust and scratches

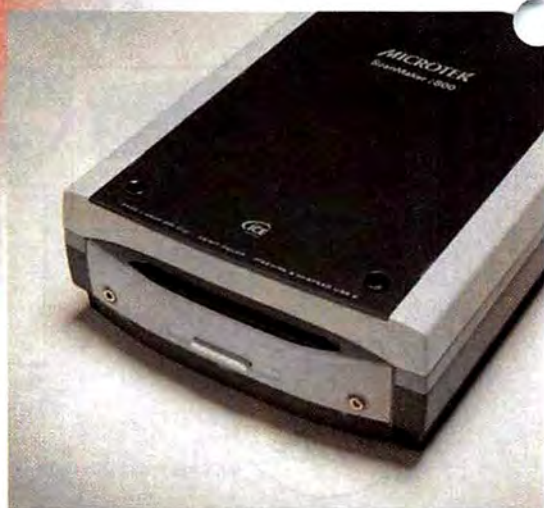
4.0 max. optical density 

Includes SilverFast Ai and
IT8 Calibration Targets

KEEPS FILM FLAT.

ScanMaker i800 Pro Takes film scanning to the next level.

The i800 Pro scanner from Microtek offers a lot of great features that make it a class leader, but what really makes it stand out from the pack is its new EZ-Lock™ film carriers featuring spring-actuated tension grips. This carrier design keeps your film flat, for scans that are sharp from edge to edge. A full set of bundled software including SilverFast Ai and Digital ICE technology for photos and film makes the i800 Pro hard to overlook.



ScanMaker i800 Pro Includes EZ-Lock™ Film Templates Medium Format



4 x 5



35 mm strip



35 mm slide



6 cm x 22 cm

MICROTEK
www.microtekusa.com

Go to find.pcworld.com/52428

Desktop Killers



ALIENWARE'S
Aurora M7700 has
a desktop CPU.

**Best
BUY** TOSHIBA'S
Qosmio G35-
AV600 audiovisual
Media Center notebook
and remote (below).

With dual-core processors, speedy hard drives, and wide-screen displays, the latest notebooks are powerful enough to make your desktop PC unnecessary. Our PC World Test Center report will point you toward the best replacement for your tower.

GO ON, ADMIT IT. You've been thinking about ditching your desktop in favor of a laptop. You're not alone—many people have already made the switch and now revel in the ability to pick up their computer and go. Thanks to dual-core processors, dual hard drives, multiformat DVD burners, powerful graphics, and brilliant 17-inch wide-aspect screens, the latest crop of high-performance portables stand ready to replace your desktop PC. Who wouldn't be tempted? ►



BY CARLA THORNTON

To help you decide whether to opt for a big, powerful laptop instead of a desktop PC, we looked at seven notebooks. Four of these were entertainment-focused: Alienware's Aurora m7700, Dell's Inspiron E1705, HP's Pavilion dv8000z, and Toshiba's Qosmio G35-AV600. We also tried two big business-minded laptops—the Gateway M-685E and the HP Compaq nx9420. The final model in our test group, Acer's TravelMate 8200, possesses

both entertainment and business appeal.

To gauge how these notebooks stacked up against desktop PCs, we tested each model using our WorldBench 5 benchmark, conducted our regular battery life and graphics tests, and completed a thorough series of hands-on evaluations.

Ultimately, we determined that two notebooks—HP's Pavilion dv8000z and Toshiba's Qosmio G35-AV600—deserved Best Buy awards. The dv8000z offers the

best balance of speed, usability, and features, for a reasonable \$2200, while the \$2548 Toshiba Qosmio is the best audiovisual notebook on the market today.

Of the others, we liked the HP Compaq nx9420's 7.4-pound weight and the Acer TravelMate 8200's built-in Webcam. The pricey Alienware Aurora m7700 offers the option of dual hard drives and dual optical drives, while the Gateway M685-E is a good all-around small-business desk-

FEATURES COMPARISON

TEST
Center

DUAL CORE BOOSTS DESKTOP REPLACEMENTS

WHILE THE HP Pavilion dv8000z, our first-place Best Buy, excels at providing a good balance of speed and features for the price, the number two Toshiba Qosmio G35-AV600 lets you turn on the TV without having to power up the notebook.

	DESKTOP REPLACEMENT	PCW Rating	Performance and battery life ¹	Features and specifications	Graphics chip and performance (fps) ²
1	HP Pavilion dv8000z Best Buy \$2200 find.pcworld.com/52714	85 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 95 Superior Overall design: Very Good Tested eight-cell battery life: 3:09 	<ul style="list-style-type: none"> 2.2-GHz Turion 64 ML-40 17-inch wide screen 9.2 pounds DVD±R DL/DVD±RW 	<ul style="list-style-type: none"> 128MB ATI Radeon Xpress 200M Doom 3: 10 Far Cry: 23
	▶ Bottom line: The sleek dv8000z offers strong battery life, a built-in TV tuner, and solid performance in everything but gaming.				
2	Toshiba Qosmio G35-AV600 Best Buy \$2548 find.pcworld.com/52716	85 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 92 Very Good Overall design: Superior Tested nine-cell battery life: 3:52 	<ul style="list-style-type: none"> 1.83-GHz Core Duo T2400 17-inch wide screen 10.1 pounds DVD±R DL/DVD±RW/-RAM 	<ul style="list-style-type: none"> 256MB nVidia GeForce Go 7300 Doom 3: 27 Far Cry: 44
	▶ Bottom line: The hefty G35-AV600 has one-touch TV, a nice display, and terrific sound and battery life, but disappointing gaming performance.				
3	HP Compaq nx9420 \$2399 find.pcworld.com/52718	83 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 101 Superior Overall design: Good Tested eight-cell battery life: 3:34 	<ul style="list-style-type: none"> 2.16-GHz Core Duo T2600 17-inch wide screen 7.4 pounds DVD±R DL/DVD±RW 	<ul style="list-style-type: none"> 256MB ATI Mobility Radeon X1600 Doom 3: 44 Far Cry: 92
	▶ Bottom line: This mobile workstation offers top performance and better-than-average battery life.				
4	Acer TravelMate 8200 \$2299 find.pcworld.com/52720	81 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 100 Superior Overall design: Good Tested eight-cell battery life: 2:48 	<ul style="list-style-type: none"> 2-GHz Core Duo T2500 15.4-inch wide screen 6.7 pounds DVD±R DL/DVD±RW 	<ul style="list-style-type: none"> 256MB ATI Mobility Radeon X1600 Doom 3: 56 Far Cry: 101
	▶ Bottom line: The 8200 delivered strong overall performance and has a versatile built-in Webcam, but its battery life was so-so.				
5	Alienware Aurora m7700 \$4006 find.pcworld.com/52722	81 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 106 Superior Overall design: Good Tested twelve-cell battery life: 1:36 	<ul style="list-style-type: none"> 2.4-GHz Athlon 64 X2 4800+ (dual-core desktop CPU) 17-inch wide screen 12.8 pounds DVD±R DL/DVD±RW 	<ul style="list-style-type: none"> 256MB nVidia GeForce Go 7800 GTX Doom 3: 87 Far Cry: 106
	▶ Bottom line: This beefy and feature-packed notebook offers a dual-core desktop CPU driving top-notch performance offset by poor battery life.				
6	Gateway M685-E \$2389 find.pcworld.com/52724	80 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 97 Superior Overall design: Good Tested eight-cell battery life: 2:21 	<ul style="list-style-type: none"> 2-GHz Core Duo T2500 17-inch wide screen 8.3 pounds DVD±R DL/DVD±RW 	<ul style="list-style-type: none"> 256MB nVidia GeForce Go 7800 Doom 3: 102 Far Cry: 117
	▶ Bottom line: The business-oriented M685-E is ideal for corporate graphics work and has a dedicated numberpad; battery life is just average.				
7	Dell Inspiron E1705 \$2949 find.pcworld.com/52870	79 Good	<ul style="list-style-type: none"> WorldBench 5 score: 97 Superior Overall design: Good Tested nine-cell battery life: 3:04 	<ul style="list-style-type: none"> 2-GHz Core Duo T2500 17-inch wide screen 8.2 pounds DVD±R DL/DVD±RW 	<ul style="list-style-type: none"> 256MB nVidia GeForce Go 7900 GS Doom 3: 98 Far Cry: 120
	▶ Bottom line: This solid-performing multimedia entertainment notebook turned in some of the best mobile graphics results we've seen.				

CHART NOTES: Prices and ratings are as of 3/27/06. All notebooks were tested at 1024 by 768 resolution and 32-bit color with antialiasing turned off. See find.pcworld.com/44974 for testing details. **FOOTNOTES:** ¹ Battery life is in hours:minutes. ² Game performance times are in frames per second; higher numbers are better.

top replacement for graphics pros. The Dell Inspiron E1705's superb graphics results will entice gamers.

While the entry point for ownership is now remarkably similar for desktops and laptops—about \$500—feature for feature, you'll still pay about 40 percent more for a notebook. You might spend \$2400 on a portable with a dual-core CPU and a 17-inch screen, or you could invest \$1400 in a faster desktop and a 20-inch flat-screen panel—and save \$1000.

Desktops continue to have the edge in expandability, too, because of their size and the easy access to internal components they afford. Though you can replace a notebook's hard drive and upgrade its RAM, in most cases you can't swap out the graphics card yourself or add another internal hard drive or a second optical drive. Finally, desktops are usually the first to incorporate new technologies—whether a line of new processors, an improved drive interface, or bigger and faster hard drives. But notebooks also have an edge: Most now offer the added convenience of built-in Wi-Fi, and some support mobile broadband services, so you can work wirelessly almost anywhere.

THE PERFORMANCE DIVIDE

POWERFUL AMD ATHLON CPUs are giving desktops the biggest speed advantage over notebooks we've seen in years. The average WorldBench 5 score for the four top power desktops on this month's *Top 10 Desktops* chart (see page 66)—all of them equipped with either a single- or dual-core 2.6-GHz Athlon 64 FX-60 CPU and 2GB of RAM—is 141. That's more than 40 percent higher than the score of 100 turned in by Acer's TravelMate 8200, arguably the best-equipped notebook in this roundup, with a 2-GHz Core Duo T2500 dual processor and 2GB of RAM.

This could translate into extra seconds or perhaps minutes required to complete various tasks on a notebook, particularly heavy-duty processing such as editing graphics or recalculating a large spreadsheet. Still, any notebook here should be equal to any task set before them.



THE HP Compaq nx9420.

The performance of the HP Pavilion dv8000z, the only notebook in the group to use a single-core processor, helps illustrate the advantage of dual-core notebooks. Though it was a strong performer overall, with a WorldBench 5 score of 95, the dv8000z fell behind in our multitasking testing (in which a PC browses the Internet while converting a sound file), taking almost 12 minutes to finish, compared with the group average of a little over 8 minutes, a 30 percent difference. The Alienware m7700's dual-core CPU,

which is designed for desktops, provided about a 10 percent performance boost over the notebooks with Intel Core Duo processors in our multitasking tests.

Desktop PCs with the latest graphics card technologies remain the clear winners in graphics performance, but many notebooks can hold their own. The Dell Inspiron E1705, featuring nVidia's new GeForce Go 7900 GS chip with 256MB of video memory (an option Dell says it will offer by next month), won all of our graphics performance tests except Doom 3 run at a resolution of 1024 by 768 and 32-bit color with antialiasing turned off. In that test, the Gateway M685-E achieved 102 frames per second versus the E1705's 98 fps. The Toshiba Qosmio couldn't support high-end games due to its underpowered graphics; and the HP Pavilion dv8000z's integrated graphics make it a poor choice for gaming.

The average battery life of the notebooks we looked at was a shade less ▶

NEW DEVELOPMENTS

What's Next?

IN THE PAST few years, notebooks have grown bigger and more powerful, and more changes are imminent. One source of these changes is likely to be the battle between CPU rivals Intel and AMD, the latter having stated its intention to market its own dual-core (and likely 64-bit) mobile Turion processors by midyear.

Meanwhile, the latest step in mobile graphics for work or play is here. Alienware, Eurocom, VoodooPC, and WidowPC are selling notebooks with mammoth 19-inch displays and nVidia SLI graphics—two tech specs previously unavailable on notebooks. VoodooPC's Envy U909 gaming laptop, for instance, features a 19-inch display (with 1680 by 1050 resolution) driven by dual 256MB nVidia GeForce Go 800 GTX graphics chips. Dell (which recently purchased Alienware) previewed its new XPS concept notebook with an adjustable 20.1-inch wide-screen display at the Consumer Electronics Show earlier this year. The entertainment-focused unit (above) also featured a detachable Bluetooth keyboard, a slot-loading DVD drive, and eight built-in speakers. As of press time, however, Dell had yet to confirm when—or if—the unit would ship.

A NEW BREED: Dell's 20.1-inch desktop replacement concept.



—Danny Allen

than 3 hours. We were pleasantly surprised that the Toshiba Qosmio G35-AV600 came out on top, lasting 3 hours, 52 minutes. Next best was HP's Compaq nx9420 at 3 hours, 34 minutes, followed by the single-core HP Pavilion dv8000z at 3 hours, 9 minutes, and the Dell Inspiron E1705 at 3 hours, 4 minutes. The remaining three—including the Alienware Aurora m7700 at 1 hour, 36 minutes—ran for less than 3 hours each. The m7700's mark was predictable, given the power drain exacted by desktop processors.

When it comes to storage, it's now pos-

sible to obtain up to four 500GB hard drives—2 terabytes—in one tower. Many desktops also come with drives in a RAID 0 or RAID 1 configuration. This means that the system distributes the data between two identical hard drives to enhance speed or to mirror the content for fault tolerance. Notebook hard drives have only recently broken the 200GB barrier, and few come with RAID capability. The exception here is Alienware's Aurora m7700. Though our model came with a single 160GB drive, you can choose instead to have two

7200-rpm SATA 160GB hard drives in a RAID configuration. One of our two Best Buys, the HP Pavilion dv8000z, had the greatest amount of storage, with dual 120GB hard drives for a total of 240GB.

AFTER-HOURS APPEAL

THREE OF THE notebooks we looked at used the Windows Media Center Edition 2005 operating system, remote controls, and TV tuners. The Qosmio had a built-in TV tuner, the HP Pavilion dv8000z relied on a PC Card tuner, ▶

ACCESSORIES

Add-Ons Mimic Your Desktop

SO YOUR NEW DESKTOP IS A NOTEBOOK? If you're using a notebook but yearning for desktop functionality, it's worth checking out some of the myriad USB, Bluetooth, PC Card, and ExpressCard/54 notebook add-ons—not to mention sampling the scads of ergonomic accessories that are available—for the most comfortable and rewarding desktop experience possible.

Basic third-party USB port replicators and screen stands are available from many vendors including APC, Belkin, Kensington, and Targus; but if your notebook company makes custom accessories, start there. Logitech and Microsoft are good places to begin looking for keyboard and mouse accessories.

Then there are products such as HP's xb2000 Notebook Expansion Base. Compatible with any HP notebook that includes an Expansion Port 2 (such as our Best Buy, the HP Pavilion dv8000z), the xb2000 provides a screen stand for docking the notebook; it comes with a wireless keyboard and a wireless optical mouse. Built into the \$500 base are an additional



Best BUY THE HP Pavilion dv8000z, with HP's xb2000 expansion base.



DELL's Inspiron E1705 with Ergotron's LX desk stand.

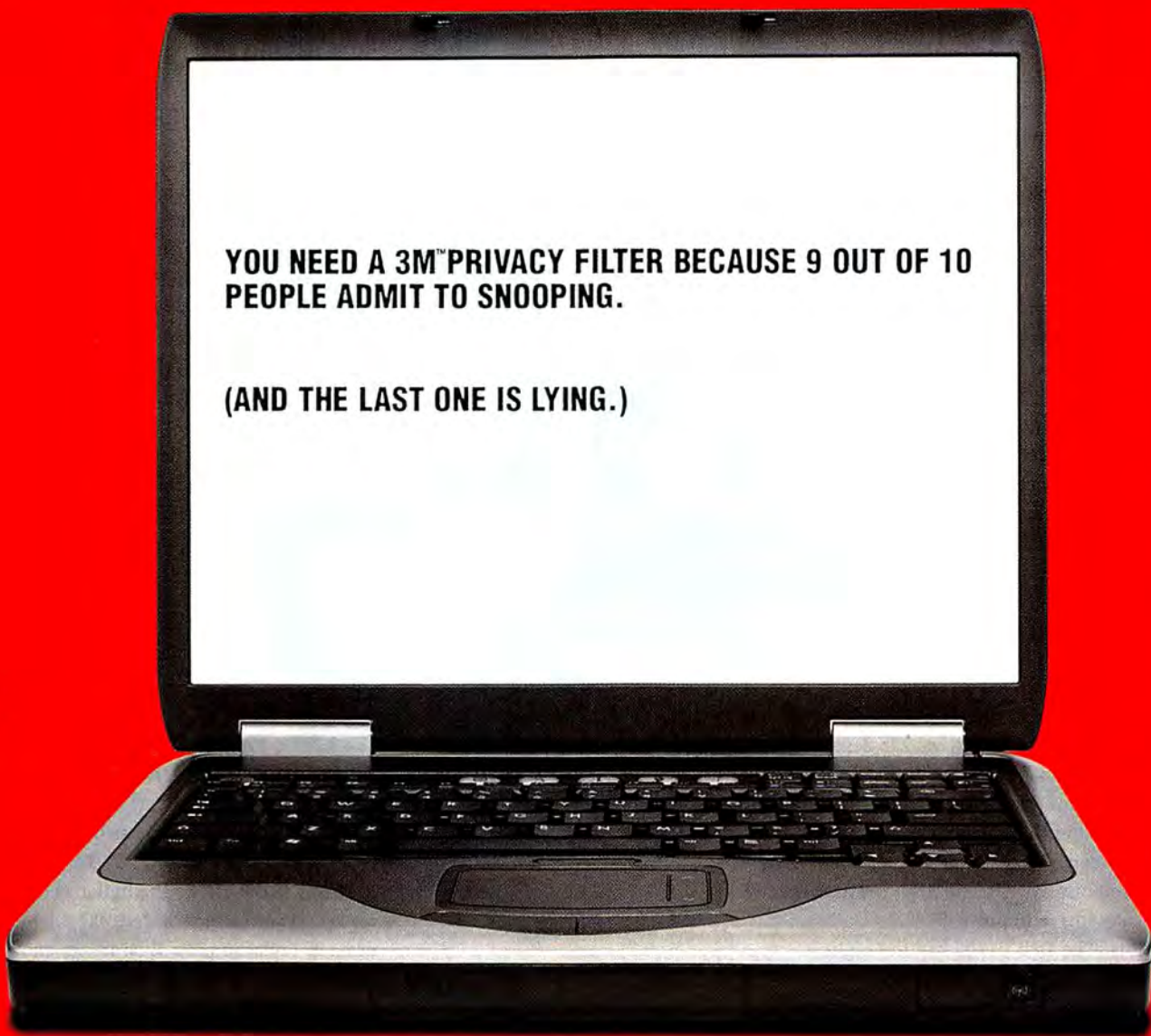
250GB hard drive and a pair of Harman/Kardon speakers.

Another type of stand to consider is a desk-mounted arm such as the \$99 Ergotron LX. Adjustable arms enable you to free up your work space by lifting the notebook completely off the desk. As a quick fix for poor notebook audio, you can add surround sound by using Creative Labs' \$99 Sound Blaster Audigy2 ZS PC Card sound card; it provides an S/PDIF output for connecting to external speakers. Accustomed to working with multiple monitors? You don't have to give up this workflow when you switch to a notebook, thanks to external graphics products like Matrox's DualHead2Go. This \$169 palm-size box connects to any PC's VGA port and displays the output on two side-by-side external monitors at a double-width resolution of 2560 by 1024 pixels. You can view output as a single wide picture across two monitors or on three displays, including the notebook's screen. You can surf the Internet on one, check e-mail on another, and edit a photo on the third. Matrox also recently launched a TripleHead2Go priced at \$299.

—Carla Thornton

**YOU NEED A 3M™ PRIVACY FILTER BECAUSE 9 OUT OF 10
PEOPLE ADMIT TO SNOOPING.**

(AND THE LAST ONE IS LYING.)



You get your work done. The wandering eyes beside you see only a dark screen. Reassuring 3M™ Privacy Filters. Made of slim, protective, rigid-yet-flexible polymer. Easy to attach and remove. Available for laptops in many sizes. Uncanny 3M microlouver technology blocks out side views while you see your screen clearly as ever.

You have to not see it to believe it. Available only at online retailers. **1-888-PRIVACY 3MPrivacyFilter.com**



3M
Privacy Filters

and the Dell carried a USB add-on tuner.

Dell's E1705 offers a unique one-touch MediaDirect button, which lets you access music and video files from your hard disk or even a media card without turning the unit on. The Toshiba Qosmio uses two instant-on buttons: one for TV, and the other for CDs and DVDs.

Most notebooks' audio can't compare with the output of desktop PC speakers, but Qosmio's G35-AV600 is the first computer to carry a 1-bit digital amplifier (found in many high-end home stereos). Combined with built-in bass-reflex Harman/Kardon speakers and subwoofer-emulating bottom air pockets, it bests cheaper desktop speakers with its loud, clear tones.

Two models in our roundup had 1.3-megapixel Webcams built in. But the one accompanying the Alienware Aurora m7700 was basic, compared with the Acer Travelmate 8200's, which could swivel 225 degrees to capture images at front and back.

Aside from the 15.4-inch Acer, all of the notebooks featured 17-inch wide-screen displays with glossy treatments to improve visibility. The Dell E1705 had the highest native resolution, at 1920 by 1200; but among the models we tested, 1440 by 900 was a far more common native setting.

CREATURE COMFORTS

ALL SEVEN DESKTOP replacements are luggable, but they vary widely in weight. The lightest was the 6.7-pound Acer TravelMate 8200 (which has a smaller screen), and the lightest 17-inch model was the 7.4-pound HP Compaq nx9420. Alienware's m7700 weighed in at 12.8 pounds, the heaviest in our review.

We found the Alienware's keyboard a tad uncomfortable because the laptop itself is so tall and the Page Up and Page Down keys are awkwardly positioned. Similarly, we recommend trying the

Acer TravelMate 8200's special ergonomic keyboard (which has a 5-degree curve) before buying it. The best desktop-like typing is supported by the two HP notebooks and the Gateway M685-E; they all felt comfortable, and each comes with a dedicated numerical keypad. The Toshiba Qosmio G35-AV600 lacks a numberpad, but it has a dual-mode touchpad for controlling volume and for launching applications with the swipe of a finger.

For security, smart card readers are



ACER'S 15.4-inch, 6.7-pound TravelMate 8200.

THE GATEWAY M685-E includes a numberpad.



built into Acer's TravelMate 8200 and HP's Compaq nx9420. The latter has a biometric fingerprint reader option—a feature built into the Toshiba Qosmio.

Desktops still offer more legacy connections than notebooks (only the Alienware had serial and parallel ports), and they usually have more audio ports as well. While you might get a couple more USB ports on a desktop, notebooks have effectively caught up: The Dell Inspiron E1705 provides six, and all the others in this group offer four. Though some high-end desktops now accommodate every possible flavor of flash memory card, each notebook here has a built-in media card reader, but the Alienware reader supported the most types. The Qosmio

comes closest to matching a desktop's range of A/V ports, including composite-in and both S-Video-in (to record from a VCR, for example) and S-Video-out.

WHAT TO CHOOSE?

BECAUSE OF THEIR wide-ranging differences in features, no single notebook will be perfect for every user. The HP Pavilion dv8000z, which comes with a TV tuner, neatly balances price, features, and performance—except for gaming. Our other Best Buy, the Toshiba Qosmio G35-AV600, would be a nice match for anyone seeking an audiovisual unit with style.

Our number-three choice, the HP Compaq nx9420, is the only unit here that's light and comfortable

enough to use on your lap despite having a 17-inch screen. With its 15.4-inch screen, the Acer TravelMate 8200 is the lightest model in our group, yet still performed up to speed. The desktop-CPU-equipped Alienware m7700 had the shortest battery life but performed well, and its ability to use dual optical drives and two SATA hard

drives in a RAID configuration could convert even the most ardent skeptic of desktop replacements. Businesses and graphics pros may appreciate that the Gateway M685-E has a 12-month life cycle and can share accessories with other Gateway notebooks, but it lacks some desirable extras such as a DVI connection. Finally, we also liked the Dell Inspiron E1705 for its bundled TV tuner, record mobile gaming performance, and one-touch media playback features.

Desktop replacements may be pricier than most desktop PCs, but you should consider their upside carefully—these desktop killers will handle most tasks you throw at them, and then some.

Contributing Editor Carla Thornton has covered notebooks for PC World since 1998, and Danny Allen is an associate editor.

NEW!

INTRODUCING

Noteables™ BY TRIPP LITE.

The full line of accessories for those whose lifestyle centers around their notebook computer!

- Cases, backpacks • Keyboards, mice, keypads • Cameras, lights, locks, alarms, stands
- Hubs, adapters, cables • Portable power sources, power protection

Tripp Lite's new NOTEABLES are essential accessories for today's notebook computer user! Perfect for business professionals and students, NOTEABLES will power, protect, connect and transport your notebook, maximizing its functionality and increasing productivity.

Every product in this line offers handsome, contemporary styling. Rugged construction and compact size provide easy portability. Best of all, NOTEABLES' superior features and premium performance ensure you get the most out of your notebook computer!

Win a New NOTEABLES Product!

Go to www.triplite.com/pcworld for a chance to be one of two winners of a notebook peripheral kit (network cable, mouse and hub)!

Tripp Lite NOTEABLES, along with a full line of UPS systems, surge suppressors, KVM switches, cables and connectivity products, are available through your favorite computer source. See Tripp Lite's website for complete product information.

TRIPP·LITE



ISO 9001
CERTIFIED QUALITY SYSTEMS



Unleash THE POWER

CYBERPOWER RECOMMENDS WINDOWS® XP



CyberPOWER Inc.

Order Toll Free 800-707-0393

www.cyberpowerpc.com

GAMER ULTRA 9900 PRO



AMD
Athlon™ 64 X2
4800+ CPU \$ 1769
4400+ CPU \$ 1595
4200+ CPU \$ 1489
3800+ CPU \$ 1425
AMD Athlon™ 64
FX-60 CPU \$ 2259

NVIDIA nForce-4 SLI Chipset MB w/ Dual 16X PCI-E
Genuine Windows® XP Media Center Edition 2005 w/SP2
Corsair 1024 MB PC3200 DDR400 MEMORY
250 GB SATA II 5.0 7200 RPM HD 16mb Cache
NVIDIA GeForce 7600 GS 256MB DDR 16X PCI-E w/TV out
19" Widescreen VA902P Xtreme BMS Gaming LCD Display
LG 16X DVD-ROM & LG 16X DVD+-RW Drive
nForce-4 7.1 3-D Surround Sound
Creative Cambridge Inspire P7800 7.1 Surround
Sound System
Logitech Office 104 Keyboard
Microsoft® Optical Intelli Explorer Mouse
Aluminum CoolerMaster ProSeries 730
Midtower Case 420W
Xtreme Liquid Cooling System
Free 802.11G Wireless PCI Network Adaptor

GAMER ULTRA 8000 DREAM



AMD Athlon™ 64 X2
4800+ CPU \$ 1769
4400+ CPU \$ 1578
4200+ CPU \$ 1495
3800+ CPU \$ 1425
AMD Athlon™ 64
FX-60 CPU \$ 2259

NVIDIA nForce-4 SLI Chipset MB w/ Dual 16X PCI-E
Genuine Windows® XP Media Center Edition 2005 w/SP2
Corsair 1024 MB PC3200 DDR400 MEMORY
250 GB SATA II 5.0 7200 RPM HD 16mb Cache
NVIDIA GeForce 7600 GS 256MB DDR 16X PCI-E w/TV out
Powered By XMDIA
LG 16X DVD-ROM
LG 16X DVD+-RW Drive
nForce-4 7.1 3-D Surround Sound
600 Watts Subwoofer Speaker System
Logitech Office 104 Keyboard and Logitech Optical
Wheel mouse
Raidmax Sagitta Mid Tower w/
MOD See Through Windows
Free 802.11G Wireless PCI Network Adaptor



• The AMD Athlon™ 64 X2 dual-core processor enables everyone to do more in less time by delivering exceptional multi-tasking capabilities and increased performance on digital media.

• Dual-core technology is like having one processor responsible for running programs in the background while a second runs the applications you want to work on. The AMD Athlon™ 64 X2 dual-core processor brings true parallel processing to the desktop and can increase computing performance by up to 80%.

\$1,425

\$779

GAMER ULTRA SLI PRO



AMD Athlon™ 64 X2
4800+ CPU \$2095
4200+ CPU \$1799
3800+ CPU \$1745
AMD Athlon™ 64
FX-60 CPU \$2569
3500+ CPU \$1645

NVIDIA nForce 4 SLI Chipset MB w/
Dual 16X PCI-E
Genuine Windows® XP Media Center Edition
2005 w/ SP2
Corsair 2048 MB PC3200 DDR400 Memory
300 GB SATA II 3.0 7200 RPM HD 16mb Cache
(2) NVIDIA GeForce 7900 GT 256MB DDR
30% performance gain over single video
card solution
LG 16X DVD+-RW Drive & 16X DVD-ROM
NVIDIA nForce-4 3D 7.1 Surround Sound
Creative Cambridge Inspire P7800 7.1
Surround Sound System
Logitech Office 104 Keyboard
Microsoft® Optical Intelli Explorer Mouse
Asus Vento 3600 Xtreme Gaming Case w/
500 Watt Power Supply
Xtreme Liquid Cooling System
Free 802.11G Wireless PCI Network Adaptor

\$1,645

GAMER ULTRA SLI ELITE



AMD Athlon™ 64 X2
4800+ CPU \$1625
4400+ CPU \$1445
4200+ CPU \$1339
3800+ CPU \$1275
AMD Athlon™ 64
4800+ CPU \$1289
3500+ CPU \$1175
3200+ CPU \$1155

NVIDIA nForce 4 SLI Chipset MB
with Dual 16X PCI-E
Genuine Windows® XP Media Center Edition
2005 w/ SP2
Corsair 1024 MB PC3200 DDR400 MEMORY
250GB SATA II 3.0 7200 RPM HD 16mb Cache
(2) NVIDIA GeForce 7600 GT 256MB DDR3
Powered By XMDIA. Over 80% Performance
Gain over single video card solution
LG 16X DVD+-RW Drive & 16X DVD-ROM
nForce-4 7.1 Surround Sound
600 Watt Subwoofer Speaker System
Logitech Office 104 Keyboard & Logitech
Optical Wheel mouse
Turbo X-Cruiser Case 420 Watt
with See Through Windows.
Xtreme Liquid Cooling System
6 Cool Custom Colors to Choose From
Free 802.11G Wireless PCI Network Adaptor

\$1,135

GAMER ULTRA SLI BASIC



AMD Athlon™ 64 X2
4800+ CPU \$1299
4400+ CPU \$1215
4200+ CPU \$1099
3800+ CPU \$999
AMD Athlon™ 64
FX-60 CPU \$1859
3500+ CPU \$945
3200+ CPU \$899

NVIDIA nForce 4 SLI Chipset MB
with Dual 16X PCI-E
Genuine Windows® XP Media Center Edition
2005 w/ SP2
Corsair 512 MB PC3200 DDR400 Memory
250 GB SATA II 3.0 7200 RPM HD 8mb Cache
(2) NVIDIA GeForce 7600GS 256MB DDR
16X PCI-E w/TV out. Over 80%
Performance Gain over single video
card solution
LG 16X DVD+-RW Drive
NVIDIA nForce-4 3D 7.1 Surround Sound
600 Watt Subwoofer Speaker System
Logitech Office 104 Keyboard and
Logitech Optical Wheel mouse
Xtreme Liquid Cooling System
Next Nemesis Tower Case 425W w/
MOD See Through Windows

\$899

GAMER ULTRA CROSSFIRE 9000



AMD Athlon™ 64 X2
4400+ CPU \$1325
4200+ CPU \$1215
3800+ CPU \$1165
AMD Athlon™ 64
FX-60 CPU \$1969
3500+ CPU \$1065
3200+ CPU \$1015

Asus A8R-MVP Radeon Xpress200 CrossFire
Chipset Motherboard
Genuine Windows® XP Media Center Edition
2005 w/SP2
Corsair 1024 MB PC3200 DDR400 Memory
250 GB SATA II 3.0 7200 RPM HD 16mb Cache
(2) 16X PCI-Express ATI Radeon X1600 PRO
256MB Video Card w/TV out & DVI
Powered by PowerColor Running in
CrossFire Mode
LG 16X DVD-ROM & LG 16X DVD+-RW Drive
NVIDIA nForce-4 3D 7.1 Surround Sound
600 Watt Subwoofer Speaker System
Logitech Deluxe 104 Keyboard and
Logitech Optical Wheel Mouse
Aluminum CoolerMaster Praetorian 730
Midtower Case 420W.
Xtreme Liquid Cooling System
6 Cool Custom Colors to Choose From
Free 802.11G Wireless PCI Network Adaptor

\$1,015

MEDIA CENTER PC 5000



AMD Athlon™ 64 X2
4400+ CPU \$985
4200+ CPU \$879
3800+ CPU \$819
AMD Athlon™ 64
FX-60 CPU \$1415
3500+ CPU \$719
3200+ CPU \$679

Nvidia nForce 6100 Athlon 64 Motherboard
Genuine Windows® XP Media Center Edition
2005 W/SP2
Corsair 512 MB PC400 Dual Channel Memory
250GB 7200 RPM SATA II 3.0 HD 8MB Cache
16X PCI EXPRESS NVIDIA GeForce 6100
Video Onboard
LG 16X DVD+-RW Drive & 16X DVD-ROM
7.1 3D Wave Surround Sound System
600 Watts Subwoofer Speaker System
6 IN 1 Digital Media Reader
Logitech Office 104 Keyboard and
Logitech Optical Wheel mouse
Philip Remote Control
Build in TV-Tuner w/ FM Radio +
Media Center Remote Control
Turbo X-Opact Portable Case 400 Watt w/
See Through Windows
5 Cool Custom Colors to Choose From

\$679

GAMER ULTRA 7500 SE



AMD Athlon™ 64 X2
4400+ CPU \$1299
4200+ CPU \$1199
3800+ CPU \$1159
AMD Athlon™ 64
FX-60 CPU \$1929
3500+ CPU \$1045
3200+ CPU \$999

PC World Best Buy
NVIDIA nForce-4 Chipset MB with 16X PCI Express
Genuine Windows® XP Media Center Edition
2005 W/SP2
Geil 1024 MB PC3200 DDR400 MEMORY
250 GB SATA II 3.0 7200 RPM HD 8mb Cache
NVIDIA GeForce 7300 GS 256MB DDR with TV out
LG 16X DVD-ROM
LG 16X DVD+-RW DRIVE
nForce-4 3D 7.1 Surround Sound
19" Super Slim LCD DISPLAY
Logitech X530 5.1 Subwoofer speakers
6 IN 1 Digital Media Reader
Logitech Office 104 Keyboard and
Logitech Optical Wheel mouse
Turbo X-Cruiser Case 420 Watt with
See Through Windows

\$999



- Provides leading-edge 32-bit performance for music, video and games and is ready for future 64-bit software
- Improves security against certain types of viruses, with Enhanced Virus Protection for Microsoft® Windows® XP SP2.
- Conserves power and operates quietly with AMD Cool'n'Quiet™ technology.
- Features HyperTransport™ technology for improved multitasking performance

Free Shipping!! All Notebooks.

GAMER XPLOER-64 9700



AMD Turion™ 64
Mobile Technology
MT-40 \$1579
MT-37 \$1345
MT-34 \$1299
MT-32 \$1275
MT-30 \$1265

AMD Turion 64 Mobile Technology
-AMD PowerNow! Technology
-HyperTransport Technology
-Enhanced Virus Protection
Genuine Windows® XP Media Center Edition
2005 W/SP2
1024MB PC3200 DDR400 MEMORY
60 GB Ultra ATA100 Hard Drive
Mobile ATI X700 16X PCI-Express 128MB Video
15.4" WXGA Wide-Screen TFT
Display 1280x800 Pixels
8X DVD+-RW Rewritable Drive
10/100 Network Card & 56K V.92 Modem
Wireless 802.11G 54Mbps Networking
3-in-1 Built-in Media Reader
1 Firewire IEEE 1394 & 4 USB 2.0 Ports
Weight only 6.39 lbs
7 Custom Colors to Choose from

\$1,265

GAMER XPLOER-64 8700



AMD Turion™ 64
Mobile Technology
MT-40 \$1519
MT-37 \$1279
MT-34 \$1245
MT-32 \$1215
MT-30 \$1199

AMD Turion 64 Mobile Technology
-AMD PowerNow! Technology
-HyperTransport Technology
-Enhanced Virus Protection
Genuine Windows® XP Media Center Edition
2005 W/SP2
512MB PC3200 DDR400 MEMORY
40 GB Ultra ATA100 Hard Drive
Mobile ATI X700 16X PCI-Express 128MB Video
15.4" WXGA Wide-Screen TFT
Display 1280x800 Pixels
8X DVD+-RW Rewritable Drive
10/100 Network Card & 56K V.92 Modem
Wireless 802.11G 54Mbps Networking
3-in-1 Built-in Media Reader
1 Firewire IEEE 1394 & 4 USB 2.0 Ports
Weight only 6.39 lbs
7 Custom Colors to Choose from

\$1,199

GAMER XPLOER-64 8000



AMD Mobile
Athlon™ 64
3700+ \$1119
3400+ \$1045
3200+ \$1035
3000+ \$989

SIS Athlon 64 Chipset Motherboard
Genuine Windows® XP Media Center Edition
2005 W/SP2
512 PC3200 DDR400 Memory
40 GB Ultra ATA100 Hard Drive
Mobile ATI Radeon 9700 PRO 128MB Video
15.4" WXGA Wide-Screen
TFT Display 1280x800 Pixels
8X DVD+-RW Rewritable Drive
10/100 Network Card & 56K V.92 Modem
Wireless 802.11G 54Mbps Networking
3-in-1 Built-in Media Reader
1 Firewire IEEE 1394 & 3 USB 2.0 Ports
1 PCMCIA Type II Slot
Weight only 6.39 lbs
Free Carrying Case
5 Custom Colors to Choose From

\$989

Order Toll Free 800-707-0393 www.cyberpowerpc.com

4802 Littlejohn Street, Baldwin Park, CA 91706 T: 626.813.7730 F: 626.813.3810 Technical Support: 877.876.4965 Hour: M-F 8:30am - 6:00pm Sat 9:30am - 3:00pm

Go to find.pcworld.com/52914

CyberPower PCs are genuine Microsoft® Windows® • www.cyberpowerpc.com



FailSafe Storage

Terabyte+ Capacity
RAID 5, 1+0, 1, 0
Masterpiece RAID DST
Reliable Hardware Design

All-In-One

Storage, Backup and Secure Networking
with VPN Router/Firewall/Switch



Auto Backup

Set It & Forget It Multi PC Solution
EMC Retrospect Full Image & File Backup

Remote Access

File, Network & Application Access
Secure Virtual Private Network

Your digital life. Your digital server. Meet the Yellow Machine.

Your digital life is about much more than work now. It's about the photos you take, the movies you make, and the music and video you've bought in digital form. You need a way to safely store, and easily share, all that precious data. Meet the Yellow Machine, a **FailSafe Terabyte Storage Appliance** for your home that:

- Delivers up to **2TB of storage capacity** in an affordable, compact appliance.
- Includes **RAID Disk Scrubbing Technology for FailSafe storage** and automated backup.
- Integrates the security and networking features you need to create a simple, convenient home network with **Automated Backup**.
- Consolidates all your files in one safe place, accessible anytime, anywhere with **Remote Access**.

It's not just about storage, it's FailSafe Storage. Learn more about the ultimate digital server for your home at www.YellowMachine.com/go/PCWorld or call us at 1-877-936-5600.

TO LEARN MORE ABOUT THE YELLOW MACHINE, GO TO www.YellowMachine.com/go/PCWorld

Yellow Machine™

by Anthology Solutions

©2006 Anthology Solutions, Inc. All rights reserved. Anthology Solutions, Yellow Machine and the Yellow Machine logo are trademarks of Anthology Solutions, Inc. All other trademarks are the property of their respective owners. Product information subject to change without notice.

Available at retailers including:



DESIGNOMATIC



PICK THE PERFECT Cell Phone

Most cell phones today specialize—they handle e-mail, surf the Web, take sharp snapshots or play music. We tested 17 popular phones to find the best for every task. **BY GRACE AQUINO**

BEST BUYS (on preceding page): The T-Mobile SDA (left) and Palm Treo 650 topped our cell phone charts.

FEW GADGETS ARE AS ubiquitous as cell phones. And with so many to choose from, separating the junk from the jewels is increasingly difficult. We tested a broad range of cordless phones, including PDA hybrids, to help you find the perfect device. We evaluated various models offered by the four biggest nationwide carriers—Cingular, Sprint Nextel, T-Mobile, and Verizon Wireless—and the PC World Test

FEATURES COMPARISON

TEST Center HOW THE CELL PHONES STACK UP

BUILT-IN WI-FI HELPS make T-Mobile's SDA our top standard phone, while the venerable Palm Treo 650 is the top PDA hybrid.

	STANDARD PHONE	PCW Rating	Performance	Features and specifications	Bottom line
1	T-Mobile SDA Best \$300 BUY find.pcworld.com/52650	82 Very Good	<ul style="list-style-type: none"> Battery life (hours:minutes): 10:00 Battery life score: Superior Overall design: Good 	<ul style="list-style-type: none"> Carrier: T-Mobile Style: Candy bar Weight: 3.7 ounces Camera resolution: 1.3 megapixels 	This bulky handset offers built-in Wi-Fi, so you can browse the Web and send e-mail and instant messages quickly and easily.
2	Sony Ericsson W600i \$300 find.pcworld.com/52644	81 Very Good	<ul style="list-style-type: none"> Battery life (hours:minutes): 10:00 Battery life score: Superior Overall design: Very Good 	<ul style="list-style-type: none"> Carrier: Cingular Style: Swivel Weight: 4.2 ounces Camera resolution: 1.3 megapixels 	Bright orange and sporty looking, the W600i is fun to use and ideal for music fans and casual shutterbugs.
3	Motorola Razr V3c \$200 find.pcworld.com/52634	76 Good	<ul style="list-style-type: none"> Battery life (hours:minutes): 3:52 Battery life score: Poor Overall design: Very Good 	<ul style="list-style-type: none"> Carrier: Verizon Wireless Style: Clamshell Weight: 3.5 ounces Camera resolution: 1.3 megapixels 	A striking design makes the Razr V3c the supermodel of cell phones; too bad its battery performance is also lightweight.
4	Nokia N90 \$600 find.pcworld.com/52640	75 Good	<ul style="list-style-type: none"> Battery life (hours:minutes): 6:53 Battery life score: Good Overall design: Very Good 	<ul style="list-style-type: none"> Carrier: T-Mobile Style: Swivel Weight: 6.1 ounces Camera resolution: 2.0 megapixels 	It's expensive for a phone, but the N90 is an acceptable substitute for your digital camera and camcorder.
5	Samsung SGH-ZX10 \$150 find.pcworld.com/52666	75 Good	<ul style="list-style-type: none"> Battery life (hours:minutes): 4:08 Battery life score: Poor Overall design: Very Good 	<ul style="list-style-type: none"> Carrier: Cingular Style: Clamshell Weight: 3.7 ounces Camera resolution: 1.3 megapixels 	Good call quality, fast Web access, and a compact clamshell design all help make the SGH-ZX10 a solid contender.
PDA HYBRID					
1	Palm Treo 650 Best \$500 BUY find.pcworld.com/52662	81 Very Good	<ul style="list-style-type: none"> Battery life (hours:minutes): 5:32 Battery life score: Fair Overall design: Superior 	<ul style="list-style-type: none"> Carrier: Sprint Nextel Style: Candy bar Weight: 6.3 ounces Camera resolution: 0.3 megapixel 	The Treo successfully combines PDA functions with solid phone features to make one powerful hybrid.
2	T-Mobile MDA \$400 find.pcworld.com/52652	80 Very Good	<ul style="list-style-type: none"> Battery life (hours:minutes): 10:00 Battery life score: Superior Overall design: Good 	<ul style="list-style-type: none"> Carrier: T-Mobile Style: Slide Weight: 5.3 ounces Camera resolution: 1.3 megapixels 	This slick hybrid lets you easily hop on to Wi-Fi hotspots to do e-mailing, Web browsing, and instant messaging.
3	Palm Treo 700w \$500 find.pcworld.com/51418	79 Good	<ul style="list-style-type: none"> Battery life (hours:minutes): 5:27 Battery life score: Fair Overall design: Very Good 	<ul style="list-style-type: none"> Carrier: Verizon Wireless Style: Candy bar Weight: 6.4 ounces Camera resolution: 1.3 megapixels 	If you like the feel of the Treo but want the Windows Mobile OS (and access to a fast network), then the 700w is for you.
4	RIM BlackBerry 8700c \$350 find.pcworld.com/52636	76 Good	<ul style="list-style-type: none"> Battery life (hours:minutes): 8:40 Battery life score: Very Good Overall design: Good 	<ul style="list-style-type: none"> Carrier: Cingular Style: Candy bar Weight: 4.7 ounces Camera resolution: n/a 	This strictly business hybrid leaves off the camera, but offers great tools for e-mail and Web browsing.
5	Nokia 9300 \$299 find.pcworld.com/52654	76 Good	<ul style="list-style-type: none"> Battery life (hours:minutes): 10:00 Battery life score: Superior Overall design: Fair 	<ul style="list-style-type: none"> Carrier: Cingular Style: Clamshell Weight: 5.9 ounces Camera resolution: n/a 	Designed like a tiny laptop, the 9300 offers a decent keyboard and a mix of useful apps for working on the road.

CHART NOTES: All ratings and rankings are as of 4/7/2006. Battery tests were capped at 10 hours of talk time. For more information about how we test and for in-depth reviews of all the products ranked in this chart, see find.pcworld.com/53058. All prices include a two-year service agreement, but don't include any rebates. n/a = not applicable.

Center gauged each phone's talk-time battery life.

For our chart we separated the standard cell phones from the PDA hybrid models based on the individual units' operating system, display, and inclusion (or not) of a QWERTY keyboard.

The rankings are only part of the story, of course. When picking a cell phone, you want to know what it will do (beyond making calls, that is). Are you looking for a unit that takes quality pictures? How about an easy way to send e-mail? Do you need speedy access to the Web? Are you looking for a handset that can double as an MP3 player? While some models aim to be all things to all people, we found that most of them perform one or two tasks exceptionally well. The following pages highlight which phones do which of these jobs the best.

Note: The prices in this story are for a two-year service agreement (before any rebates). Many of the phones are available from multiple carriers, but we list only the company serving our test unit.

E-MAIL AND MESSAGING



E-MAIL AND INSTANT messaging have changed the way many people use their phones. If your job requires you to be constantly connected, a PDA phone with a full keyboard and e-mail and IM software is a must. The best tools for these uses: Palm's Treo handhelds and Research In Motion's BlackBerry devices.

Among Treos, your choices include the Windows Mobile-based **700w** (\$500 from Verizon Wireless) and the chart-topping **650** (we tested Sprint's \$500 unit). As both phones and PDAs, Treos work very well. Palm deftly integrates its call-management software, on-screen dialpad, and numeric keypad, which makes sending and receiving calls a snap. The 700w and the 650 also provide easy-to-use keyboard and control buttons, a good-size screen, and support for Microsoft Exchange, IMAP, and POP3 e-mail protocols.

Though the Treos do well with e-mail, BlackBerry units do even better. We tested Cingular's \$350 **8700c** (number four on our PDA hybrid chart) and Verizon Wireless's \$350 **7130e** (which failed to make our standard-phones chart). Both carry a large screen that makes reading messages easy on the eyes, and both offer the "push e-mail" service—forwarding messages to your handheld—that BlackBerry devices are known for. They aggregate up to ten e-mail accounts and are compatible with IMAP, Lotus Notes, Microsoft Exchange, and POP3. Typing messages on the 8700c is quicker

and easier than it is on the 7130e because of the 8700c's QWERTY keyboard. The 7130e supports RIM's SureType word-recognition technology, which suggests words based on the letters you type, possibly saving you from having to type the entire word. As phones, however, the wide BlackBerry devices can be a bit uncomfortable to hold.

Another option is a device that runs on either the Danger or the Symbian platform. Danger's OS is available only on T-Mobile's \$350 **Sidekick II**, which failed to make our PDA hybrid chart. The Sidekick is fun to use, especially for instant messaging, but too few programs are available for it.

For an alternative OS with a better selection of apps, consider a Symbian-based device such as our number five PDA hybrid phone, the **Nokia 9300** (\$299 from Cingular). Closed, it looks like a thick, candy-bar-style unit. It opens horizontally like a laptop; inside are a screen and a slippery QWERTY keyboard. The five-point joystick is convenient for navigating menus and programs, and you get some useful apps, including a spreadsheet, a word processor, and a presentation tool.

A pricey PDA hybrid phone is not your only option for a messaging device. LG's **F9200** (\$150 from Cingular) lets you send and receive e-mail via AOL, Hotmail, and Yahoo accounts, and send instant messages via AIM, ICQ, Yahoo Messenger, or Cingular Wireless. The candy-bar-style model didn't make our standard-phones chart, but many users will appreciate its QWERTY keyboard, which they can slide underneath the handset.

FASTER WEB ACCESS



MOST OF TODAY'S cell phones let you surf the Web—though in many cases access is rudimentary at best, and data transfer speeds make dial-up seem lightning-fast. But more cell phones are adding features that permit swifter Web access via built-in Wi-Fi capabilities or support for new 3G (third-generation) networks.

Wi-Fi not only provides a potentially faster connection to the Internet, it also uses no data minutes. Of the phones we tested, Cingular's \$350 **8125** (which missed the chart), T-Mobile's \$400 **MDA** (number two on our PDA hybrid list), and T-Mobile's \$300 **SDA** (our number one standard phone) support 802.11b wireless networks.

Each unit has a dedicated button on the side that triggers an on-screen menu for switching the connection type: phone, Wi-Fi, Bluetooth, or (PC) Sync. Each device connected smoothly to our home-



PALM TREO 700w



BLACKBERRY 8700c



NOKIA 9300



T-MOBILE MDA



MOTOROLA RAZR V3c



SAMSUNG SGH-ZX10

Wi-Fi network. The MDA also had no problem connecting to PC World's Wi-Fi network, which is secured with a 128-bit WEP encryption key.

Web browsing over Wi-Fi on the MDA was delightful, and pages looked impressive on its sharp 320-by-480-pixel display—when viewed indoors. In bright sunlight, however, the screen looked washed out. The SDA's screen is smaller than the MDA's, but it provides the same high resolution, making for a crisp, clear picture.

For easy data entry, the 8125 and MDA devices offer a slide-out QWERTY keyboard; of the two, we preferred the MDA's roomier version. Both phones are a bit hefty—almost an inch thick—but that's a fair trade-off, since you get a keyboard and a large screen. Also, the 8125, the MDA, and the SDA all run on the Windows Mobile 5 operating system, so you can use mobile versions of familiar applications such as Outlook and Internet Explorer.

For an even faster Internet connection, consider a 3G cell phone. Cingular, Sprint Nextel, and Veri-

zon Wireless are offering 3G networks in select U.S. cities, including San Francisco (our test area).

We looked at 3G phones from each of those three providers, beginning with Cingular's \$150 **Samsung SGH-ZX10**, which landed in fifth place on our chart of standard phones. The ZX10 looks like a typical clamshell phone, but it's equipped with a chip and an antenna that support Cingular's UMTS network. In our informal tests, video playback on the ZX10's small screen was smooth, as long as the UMTS signal remained strong.

Samsung's **MM-A900** didn't make our chart of standard phones, but video looked good on its color-rich screen. It supports Sprint's EvDO network and lets you view shows from Sprint's TV service. The clamshell-style, \$350 A900 has music playback, Bluetooth, and a 1.3-megapixel camera.

If you would prefer a full-featured PDA phone with broadband speed, consider the Treo 700w, which works with Verizon's EvDO network and focuses on office tasks like e-mail. If you don't ►

CALLING PLANS

HOW TO SELECT YOUR CELL SERVICE

YOUR CELL PHONE is only as good as the service that goes with it. So you'll need to choose a plan that matches your usage and your budget. Here are a few things to consider before you sign on the dotted line.

1 Use the trial period: A lot of carriers offer you a trial period with your new phone and service that lasts up to 30 days, so take advantage of it. This allows you to test the service and the handset before committing to a contract. Make sure that the service will work throughout your house, in your office, on travel routes, and in places you regularly visit. If you aren't satisfied with the service or the phone, try another.

2 Check the carrier's coverage: In addition to looking at a carrier's

coverage map, visit independent sites such as DeadCell-Zones (find.pcworld.com/52736), which tracks and logs user complaints about places that have poor or no coverage. Consult your friends, coworkers, and neighbors to find out about the quality and reliability of their wireless service.

3 Comparison-shop: Compare carriers' features and prices. Check prices and plans at a carrier's store and at third-party retailers. In some cases, third-party stores offer better deals than the carriers, or vice versa. The specifics of plans may differ as well. For example, one carrier's definition of "anytime" minutes may not be the same as another's. Also, ask the vendor about the monthly bottom-line price with taxes and surcharges.

4 Take your calling area into account: If you travel around the country, sign up for a nationwide plan, which will allow you to send and receive calls from almost anywhere the carrier provides service without roaming fees. Local and regional plans limit your calling area to the city or region the carrier specifies. If you plan on using your phone overseas, you'll need to make sure your handset and your calling plan are equipped for international use.

5 Consider data usage: Plan to browse the Web, download ring tones and games, and exchange photographs, text messages, IMs, and e-mail? Then subscribe to a data plan that accommodates your needs. Sign up for unlimited data service if appropriate.

LINKSYS®

A Division of Cisco Systems, Inc.



Wireless-N

The Freedom to Do It All!

Internet. Voice. Entertainment - All at Once. Anywhere.



WRT300N Wireless-N Broadband Router

Surf the web, enjoy high definition video, listen to your digital music collection, and make Internet phone calls - all at the same time. With whole-home coverage that virtually eliminates dead spots, Wireless-N delivers the freedom to work and play everywhere, without the hassle of running new wires.

- Up to 4X the range for whole-home coverage that virtually eliminates dead spots.
- Up to 12X the speed of the older Wireless-G standard.
- Compatible with existing Wireless-G and -B products.
- Easy to install and easy to use. Set it and forget it.

Linksys. Nobody makes networking easier!

For more information on the new Linksys Wireless-N products, visit www.Linksys.com, or call 1-800-737-7201.



OfficeMax



that was easy.

Linksys is a registered trademark or trademark of Cisco Systems, Inc. and/or its affiliates in the U.S. and certain other countries. Wireless-N The Speed of Life Logo is a trademark of Linksys. Copyright © 2006 Cisco Systems, Inc. All rights reserved.

CISCO SYSTEMS





NOKIA N90



SONY ERICSSON W600I

ONLINE

FOR IN-DEPTH reviews of all the cell phones mentioned throughout the story and in our chart, and for more information about how we rated the phones, head to find.pcworld.com/53058.

For a more general collection of buying advice, see "How to Buy a Cell Phone" at find.pcworld.com/52740.

want to spend \$500 for a Treo but still long to use Verizon's EvDO network, consider the \$300 BlackBerry 7130e (the first EvDO-capable BlackBerry on the market) or the third-ranked **Motorola Razr V3c** (\$200 from Verizon Wireless).

Another inexpensive EvDO-capable handset is the \$99 **Amp'd Mobile Angel** from Kyocera. It's available from Mobile Virtual Network Operator (MVNO) Amp'd Mobile, which leases Verizon's EvDO network. Although the slide-style Angel didn't make our chart, it is the only model we looked at that has push-to-talk capability for walkie-talkie-style communication. Bundled extras include a MicroSD card slot, MPEG-4 video recording, and a VGA camera. We liked the Angel's good-size screen, too, but not its flimsy plastic exterior.

CAMERA FRIENDLY



WITH CAMERA phones now more common than noncamera models, you'd think manufacturers would stick better cameras in their handsets. Alas, poor picture quality plagues many phones—but the situation is improving. Take two of the standard units in our top five: Nokia's pricey **N90** (\$600 from T-Mobile) and Sony Ericsson's sporty-looking **W600i** (\$300 from Cingular). Both handsets are designed to make picture-taking fun and simple, and both produced better-than-average photos in our tests.

The bulky, swivel-style N90 offers 2-megapixel resolution (the highest among the phones we looked at for this story), an MPEG-4 video recorder, and a MultiMediaCard slot (a memory card is not included, however). The photos we took looked decent, and we liked the phone's unique swiveling screen, which rotates perpendicularly to the phone's keypad, reminiscent of some camcorders.

For a more affordable model, go with Sony Ericsson's swivel-style **W600i**. It has a 1.3-megapixel camera and a flash. To take a picture on the W600i, you close the phone and hold it in landscape mode with the shutter button facing up—it's like taking pictures with a standard point-and-shoot camera.

LET THE MUSIC PLAY



THE POPULARITY of iPods has helped trigger a flood of music phones, and nearly all the models we looked at can play music. But a few of them—including Sony Ericsson's **W600i** and Motorola's **Slvr L7**—are better equipped to do so than the others.

While these phones won't replace an iPod, they

do a few things right. Overall, we enjoyed using the **W600i**: It combines adequate sound quality (through both the speakers and the included earbuds) and a simple music player. Its speakers and volume level beat the others' hands down: Though none of the music phones delivers perfect sound quality, the **W600i** has a bit more depth. To get music on this phone, you rip and transfer tunes from your PC via the included cable and software. (Cingular doesn't offer over-the-air music downloads.)

The Motorola **Slvr L7** (\$200 from Verizon Wireless) integrates iPod functionality into a sleek cell phone; you connect it to your PC and use iTunes to manage your music collection, just as you would with an iPod. But to our ears, the **Slvr's** audio quality was not comparable to that of a music player, and the phone failed to make our chart.

If you want to download music over the air, go with the Samsung **MM-A900** or the Amp'd Mobile Angel from Kyocera. The **MM-A900** is nicely integrated with Sprint's Music Store, and the Angel accepts downloads from Amp'd Mobile's music store.

SLIM AND STYLISH



MANY PHONES try to make a fashion statement, but few succeed. The coolest-looking handsets are also the skinniest: Motorola's **Razr V3c** and Samsung's **MM-A900**.

Some people might argue that the Razr is passé, but its popularity and its rave reviews—including a spot in *PC World's* "The 50 Greatest Gadgets of the Past 50 Years" (see find.pcworld.com/52738) justify its inclusion here. Simply put, the Razr is both functional and very attractive. The clamshell-style handset works well for voice calls, offers a vibrant internal LCD, features a 1.3-megapixel camera, and overall is a pleasure to use.

Samsung designed its **MM-A900** with a svelte look almost identical to the Razr's. Though it did not make our standard-phone chart, this model has some excellent features, including a fast EvDO connection (provided by Sprint), a vibrant and roomy internal LCD, and a 1.3-megapixel camera.

Whether you want a phone to let you stay connected to e-mail and the Web, snap impromptu photos, or enjoy a little music on the go, options abound. Armed with a solid idea about what you want your phone to do well, you're more likely to end up with a model that makes you happy. Your perfect phone is out there—you make the call.

Grace Aquino is a contributing editor for PC World.

SUMMER GEAR & GIFTS FOR GRADS

Wowwee Robotics™
INTRODUCES

Robosapien™ V2



Wowwee Robotics™ introduces Robosapien™ V2, it's most human-like robot to date. With a feisty personality, speech capabilities and more, Robosapien V2 is the first affordable consumer robot to see, hear, feel and interact with you and his surrounding environment.

www.robosapienv2online.com

NAVMAN



**Navigate
by Pictures!**

**WORLD
EXCLUSIVE**



The iCN750 with NavPix™ GPS & built-in camera geo-references pictures you snap, share or download from our world Travel Center. Hi-res preloaded USA/CDN maps and free GPS service, proves a picture is worth a thousand words.

www.navman.com

or call

866-9NAVMAN



LITEON®



EZ-DUB™
2 Buttons
2 Solutions

Lite-On 16X external Double Layer Rewritable drive with **EZ-DUB™** feature transfers complicated process into two simple buttons: DUB & FILE. Simply press DUB for disc-to-disc copies, and press FILE for backup. *It is that simple!*
EZ DUB...Simply Amazing!

Product available at:

COMPUSA
We got it. We got it.



WAL-MART
Always low prices.

www.liteonamericas.com

**High speed lighted
glass mouse pad**



**Free pad
cleaning kit
included**



The ultimate gaming mouse pad for the serious PC user. Our super slick pad provides extreme speed and accuracy. Can be customized with your logo and text. Six fluorescent colors to choose from. Better than LED-ultra bright lights.

www.turbofragpad.com

**Indulge Those
GAMING CRAVINGS**



**The V Machine
Blazing Hot
Lightning Fast**

The V Machine's **Vex2** is unwrapped and running wild!!

Vex2's Dual Core processor and raw power of SLI Dual GeForce PCI graphics scream GAMING!!

For the extreme gamer in all of us.

www.thevmachine.com

ecost.com®

Your Online Discount SuperStore™

**Stylus 720SW 7.1MP Ultra Slim Digital
Camera with 3x Optical Zoom**



**Great Gift
for Grad
or Dad!**

OLYMPUS

Less than 0.8" thick, 7.1 Megapixel, 2.5" LCD Viewscreen, 3x Optical/5x digital zoom, movie mode, automatic focus adjustment, 19.1 XD Picturecard slot. Shock Proof (5 ft.), Waterproof (10 ft.).

www.ecost.com
877.888.2678

HERE'S HOW

EDITED BY ERIC DAHL AND DENNIS O'REILLY



WINDOWS TIPS

SCOTT DUNN

Security Is Up to You: Perfect Your Passwords

DUNN'S THIRD LAW of PC security states: The older the password, the less secure the system. (The first two laws are "Never assume your data is safe" and "If it's from Microsoft, it has holes.") The simplest and cheapest way to safeguard your information is to put a little thought into your passwords, keep them fresh, and use them always.

For the basics on Windows passwords, go to find.pcworld.com/52088 to read my column from September 2002, and

visit find.pcworld.com/52090 for Scott Spanbauer's take on effective passwords from his October 2003 *Internet Tips*. The following tips enforce best password practices, though some of them don't apply to PCs on networks whose administrators use their own password policies.

ENFORCE STRONG PASSWORDS

FOR BETTER OR for worse—usually worse—Windows 2000 and XP let you create passwords using pretty much any

set of characters. Worse still, both allow you to do without passwords altogether. Fortunately, you can make Windows XP require that all user accounts implement more-secure password habits via the Local Security Settings policy tool. Click *Start*•*Control Panel*•(*Performance and Maintenance* in Category view)•*Administrative Tools*•*Local Security Settings* to open this Control Panel applet (the steps vary slightly from system to system; if you're on a company network, the option may be 'Local Security Policy'•*Security Settings*'). In the left pane of the Local Security Settings window, click the plus sign (+) next to Account Policies and select the *Password Policy* icon nested beneath (see **FIGURE 1**). Now you're ready to make Windows play password cop.

Mandate minimums: To require that all users choose a hack-resistant password, double-click *Minimum password length* in the right pane (if you don't see it, make sure that Password Policy is selected in the left pane). Specify the number of characters that will be in your password. This can be any number from 1 to 14, but to meet Microsoft's recommendations, the password should be at least 6 characters long. Then click OK.

Compel complexity: Next, double-click *Password must meet complexity requirements*. Select *Enabled* and click OK. This mandates that passwords contain characters from at least three of the following categories: uppercase letters, lowercase letters, numbers, and symbols (such as punctuation marks). Also, the password must not contain your user account name. Don't use all or part of your e-mail address in your password, either (though the tool won't keep you from doing so).

You need to make the password hard to

132 WINDOWS TIPS

Improve Windows' security by enforcing safe password practices; a free utility makes Windows safer.

136 ANSWER LINE

The safest way yet to install new software on your PC; the perils of using a neighbor's Wi-Fi network.

138 INTERNET TIPS

Add video clips to your blog in just minutes with Windows Movie Maker; more details on IP address ranges.

140 HARDWARE TIPS

Choose the right RAID level for your storage needs; Microsoft's ergonomic keyboard; a colorful PC vacuum.

142 VOIP TIPS

Improve the reception and reliability of your Voice-over-IP phone calls; add emergency numbers to your VoIP phone until E911 services are available.



140



FIGURE 1: LOCAL SECURITY POLICY forces users to craft stronger, safer passwords.

guess, but you must also make it easy to remember. One way is to abbreviate a phrase—for example, **PCWIS#12me** ("PC World is number 1 to me").

Expect expirations: To prevent passwords from getting stale, double-click *Maximum password age* and specify the number of days after which Windows will require users to change their passwords (see FIGURE 2). The default figure of 42 should be adequate in most cases. After you've entered the new value, click OK.

Enforce freshness: To keep people from simply toggling between the same two passwords each time they have to switch, double-click *Enforce password history* and enter the number of passwords that Windows should track. For example, if you enter 8, users won't be able to reuse any of their last eight passwords when they create a new one. Click OK when you're done. You can also set a minimum number of days that the new password must be used, just in case somebody decides to try changing their password several times in one day until the number in 'Enforce password history' is satisfied so they can go back to their original password. To do so, double-click *Minimum password age*, enter a number of days, and click OK.

Refuse reversible encryption: You may be

tempted by the final option in the Password Policy window, 'Store passwords using reversible encryption'. This setting instructs Windows to save a plain-text version of your password. However, reversible encryption works only with applications that require your Windows password. Unless you have such an application, your system will be more secure if you leave reversible encryption disabled, which is the default setting.

Live with lockouts: By default, anyone trying to log on to your account can enter password variations ad infinitum until they succeed. This so-called brute-force approach to password cracking is of particular concern if your system is set for remote access. One way to stymie such attacks is to limit the number of attempts before the system refuses to accept any more passwords (correct or not). To do that, click the *Account Lockout Policy* icon in the left pane (just below Password Policy). In the right pane, double-click *Account Lockout Threshold*. Type the number of wrong password-entry attempts that the system will permit before it locks up—something in the vicinity of 3 to 5 seems fair enough, depending on how sloppy a typist you are. When you change

this setting, Windows automatically resets the other two Account Lockout Policy settings to 30 minutes each: 'Account lockout duration' controls how long everyone is locked out from making password attempts, and 'Reset account lockout counter after' determines how long the system waits before it starts counting new attempts from zero. To change either of these, double-click it, enter the desired number of minutes, and click OK.



FIGURE 2: THIS OPTION WILL require users to change passwords at the interval you set.

Make an exception to expirations: If you maintain a seldom-used administrator account that you need only for emergencies, you may not want its password to expire. To make an exception to the policies detailed in the previous tips, choose *Start>Run*, type **lusrmgr.msc**, and press <Enter>. In either pane, double-click the *Users* icon. Then double-click the account whose password doesn't need an expiration date. In the Properties dialog box for that account, check *Password never expires* and end by clicking OK (see FIGURE 3).

Render a reminder: You can warn users of a password's impending expiration ▶



FIGURE 3: MAKE A PASSWORD unexpirable in Windows' Local Users and Groups tool.

via an edit of the Windows Registry. Any change to the Registry risks problems, so be sure to back it up first; Stan Miastkowski shows how in "Care and Feeding of

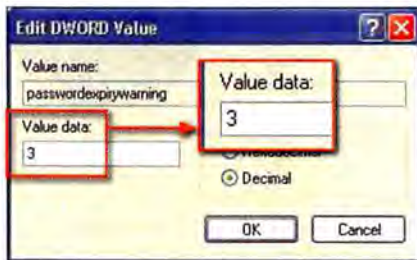


FIGURE 4: GIVE USERS A friendly reset reminder by editing the Windows Registry.

the Windows Registry" (find.pcworld.com/51280). With your backup in place, choose **Start**•**Run**, type **regedit**, and press **<Enter>** to open the Registry Editor. In the left pane, navigate to and select **HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Winlogon**. In the right pane, double-click **passwordexpirywarning** (if it isn't there, right-click in the pane, pick **New**•**DWORD Value**, and type the name in the text box). Click the **Decimal** option. For 'Value data', type the number of days before expiration that you want the system to remind users to change their password (see **FIGURE 4**).

XP'S PASSWORD MANAGER

WHEN YOU ACCESS a server on your network or visit a secure site, you'll likely be prompted for a name and password. If



FIGURE 5: PICK AN icon for your password manager shortcut so you can spot it quickly.

you access many servers, you may have to remember several name-and-password combinations. Windows XP offers to remember your ID and password the first time you log on (check the *Remember my password* box), but what if you want to change or delete your IDs and passwords? Open the User Accounts applet in Control Panel: Choose **Start**•**Run**, type **control userpasswords**, and press **<Enter>**. If you are connected to a network domain, select the desired user on the Users tab, and click **Advanced**•**Manage Passwords**. If your PC is not part of a network domain, select the desired account at the bottom of the User Accounts window. In the Related Tasks box on the left, click **Manage my network passwords** to open the Stored User Names and Passwords window.

Now select a Web site or network location and click **Remove** to delete the saved name and password; or click **Properties** to edit the server path or Web location, user name, or password. To add a new entry, click **Add** to open the Login Information Properties dialog box (naturally). However, you need to know the proper format for the information you enter. In the Server box, enter the URL or server path: For network shares, you can use the standard Universal Naming Condition (UNC) paths, such as **\\server\share**. The asterisk wild-card character—for example, in ***.pcworld.com**—is also permitted if you have multiple IDs for a single Web site. Next, fill in the 'User name' box in either of two formats: **server\user** for network servers (for example, **STORAGE\John**), or **user@domain.com** for Web sites (for example, **John@pcworld.com**). Finally, fill in the Password box and click **OK**.

A MANAGEMENT SHORTCUT

IF YOU MUST return to Windows XP's password manager repeatedly, you don't have to navigate through the Control Panel to open it each time. Instead, you can create a menu or desktop shortcut that launches it directly. Right-click in an empty area of the desktop, or in the menu you want to add the shortcut to, and click **New**•**Shortcut**. In the location box of the Create Shortcut wizard, type **rundll32.exe keymgr.dll, KRShowKeyMgr** and click **Next**.

WINDOWS TOOLBOX

Put Passwords in Their Place With Access Manager

IF YOU FIND Windows' own password manager too limited or too confusing, consider upgrading to the Access Manager utility from Citi-Software. The program not only stores Web site and server passwords securely but also tracks your credit card and bank account information, e-mail passwords, home alarm codes, and more. You can organize passwords by a set of predefined types (Web site, PIN, or document access, for example) or devise your own type. When it's time to create a new password, Access Manager can generate one for you that will meet standard complexity requirements. On-screen buttons let you copy your name or password for pasting into Web sites and other forms (a tactic that thwarts keylogging programs). Even easier, you can drag your account name into a form to copy your password to the Windows Clipboard, so you have to move between windows only once (you drag to one box and then paste into the other). My sole complaint regarding the program is that it requires Microsoft's free .Net Framework version 1.1. Access Manager is free for noncommercial use, but for more features (such as the ability to encrypt individual files on your computer), you must purchase the \$25 professional version. Browse to find.pcworld.com/52118 for the download.

Type a name for the shortcut, and click **Finish**. To make its desktop icon more meaningful, right-click it and choose **Properties**. In the Shortcut tab, click **Change Icon**. Type the path to a file with the icon you want, or click **Browse** to find one in a folder such as **shell32.dll** or **moricons.dll** (see **FIGURE 5**). Select an icon from the list and click **OK** twice. ■

Send Windows-related questions and tips to scott_dunn@pcworld.com. We pay \$50 for published items. Browse to find.pcworld.com/31607 for more Windows Tips. Scott Dunn is a contributing editor for PC World.

BUILDING THE NEW PC EXPERIENCE

IT'S ABOUT PERFORMANCE, VALUE, AND SUPPORT

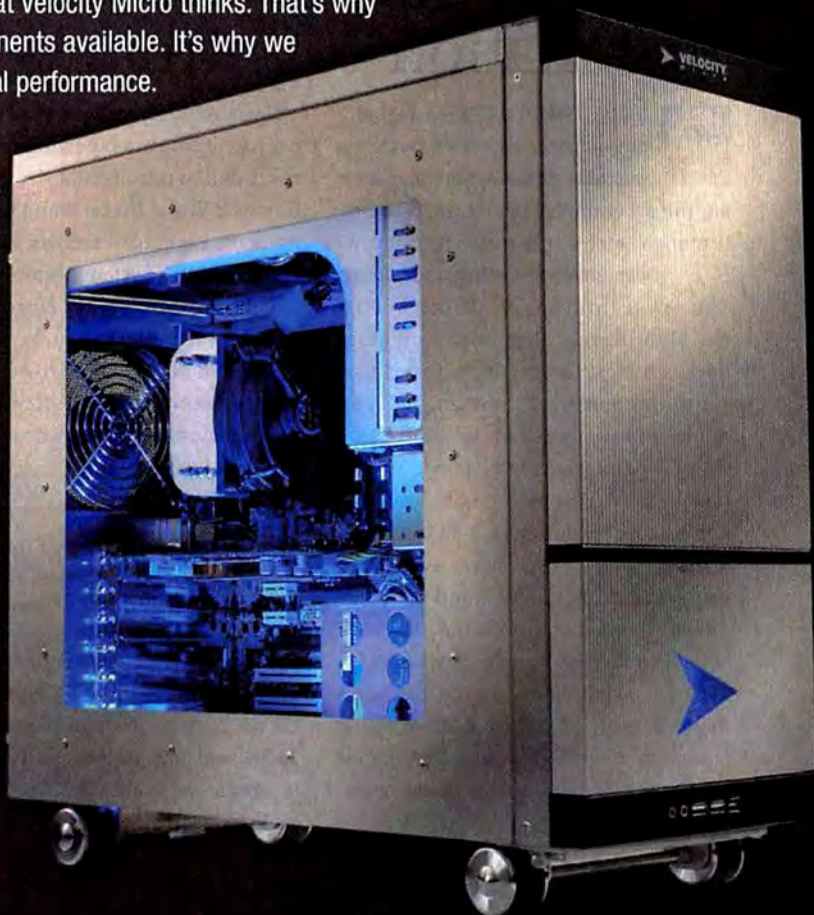
You deserve a better PC experience. At least that's what Velocity Micro thinks. That's why we build all our systems by hand with the best components available. It's why we spend days tweaking and tuning your system for optimal performance.

And it's why we offer you the best tech support in the industry – 24/7, US based expert support. And that's why we keep winning awards. Get the PC experience you deserve with Velocity Micro.

GAMERS' EDGE™ DUALX™

- >> AMD® Athlon™ 64 X2 3800+ Processor
- >> 2x512MB Mushkin™ DDR400 PC3200 memory
- >> 256MB eVGA™ NVIDIA® GeForce™ 7900 GT Video
- >> 200GB Western Digital™ 7200rpm Hard Drive

\$1795



FIND OUR ULTIMATE GAMING
MACHINES AT BEST BUY
STORES AND BESTBUY.COM



OBSESSED WITH BUILDING THE PERFECT COMPUTER EXPERIENCE



Click velocitymicro.com



Call 800-303-7866



VISIT BEST BUY STORES

BUY DIRECT FROM VELOCITY MICRO >> GAMING • DIGITAL MEDIA • HOME OFFICE



Please visit www.velocitymicro.com today to configure your own system today. © 2006 Velocity Micro Inc., Richmond, VA. Velocity Micro, Gamer's Edge and ProMagix, are trademarks of Velocity Micro, Inc. All other trademarks are the property of their respective owners and are hereby acknowledged. © 2006 Intel Corporation. All rights reserved. Intel, the Intel logo, Intel Inside, the Intel Inside logo, Intel Centrino, the Intel Centrino logo, Intel Xeon, Celeron, Itanium, Pentium and Pentium II Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

ANSWER LINE

LINCOLN SPECTOR

Protect Against Software Installation Nightmares

? SOMETIMES AFTER I install a new application my PC becomes unstable and slow, and uninstalling the program doesn't fix the problem. Is there a safer way to install software?

Deborah Norling, Milpitas, California

TOO MANY SOFTWARE installation utilities significantly alter important Windows settings, increasing the odds that something will break. And uninstall programs almost never fix this. These steps will safeguard your installations:

Choose carefully: Before installing any application, read reviews, talk to friends who know the product, and search usenet groups (groups.google.com) for comments. Then ask yourself if the program's benefits outweigh its potential dangers.

Don't install a new application or a major upgrade until it has been available for several months. This gives the vendor time to iron out most of the major bugs.

A SAFER SAFE

IN LAST DECEMBER'S column, I recommended Cryptainer and Cryptainer PE for creating encrypted "safes" on your PC (see "Protect Files and Folders" at find.pcworld.com/52240). But Walt Farrell of Woodstock, New York, told me about a better (and free) alternative: TrueCrypt. This open-source program can create safes that are as large as Windows and your hard drive will allow. It offers a selection of encryption algorithms, including AES, Blowfish, and Triple DES. You can even encrypt a partition or drive as a single unit. Visit find.pcworld.com/52242 to download a copy of TrueCrypt.

Don't assume that a program is safe just because it's from a big-name vendor. The most damaging installs I've seen were products from Microsoft and Symantec.

Prepare: Back up Windows settings beforehand. XP's System Restore makes a restore point before starting each installation, but to be extra safe, click *Start•All Programs•Accessories•System Tools•System Restore•Create a restore point•Next*, and follow the prompts.

Most damage at installation is done to the Registry; a good third-party Registry backup program such as the Emergency Recovery Utility NT (aka ERUNT; find.pcworld.com/52208) will help protect you. The program is simple, efficient, and free. For more Registry tweaks, see Scott Dunn's "Registry Remedies" from last April's "Windows Hacks" (find.pcworld.com/52210).

Assess the damage: After the installation, check your system tray for new icons. The program has probably added something unnecessary—and potentially harmful—to the ever-growing list of apps that load automatically when Windows starts. For advice on winnowing your autostart list, read "Slim Down Your System Tray" from my February 2002 column (find.pcworld.com/52216).

Don't install any other programs for a few days (a few weeks is even better) to give problems caused by the new program time to surface. Which brings us to the last resort of software installations.

If necessary, retreat: If the program sim-

ply doesn't pass muster, try to remove it with its own uninstall option (often found under its listing on your Start•All Programs menu). If the program has no uninstall option in its All Programs listing, select *Start•Control Panel•Add or Remove Programs* (*Start•Settings•Control Panel•Add/Remove Programs* in non-XP versions of Windows), choose the unwanted app from the resulting list, and click *Remove* to launch the program's uninstaller (see **FIGURE 1**). Contrary to myth, Add/Remove Programs and the Start menu shortcut are just two different points of entry to load the app's own uninstaller.

If Windows' Add or Remove Programs applet doesn't wipe out the unwanted software, launch System Restore and re-

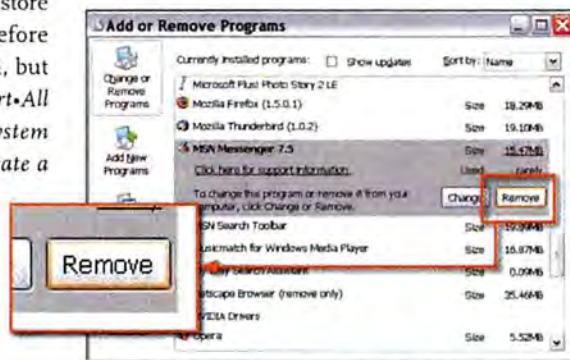


FIGURE 1: UNINSTALL SOFTWARE via the 'Remove' option in Windows' Add or Remove Programs applet.

store Windows to the point you created before installing the program. If that doesn't work, use the uninstall options in the ERUNT utility described above.

A caveat: Restoring the Registry from an old backup may cause you to lose a few settings, and it may disable any programs you installed after creating that backup. This is another reason to wait a decent interval between program installations.

For more on uninstall aftereffects, see my November 2004 column, "Clean Up What a Messy Uninstall Leaves Behind" (find.pcworld.com/52218).

Send your questions to answer@pcworld.com. Answer Line pays \$50 for published items. See find.pcworld.com/31577 for past columns. You'll find Contributing Editor Lincoln Spector's humorous and other writings at www.thelinkinspector.com.

It just gets better.



How do you improve on perfection? The new, high speed, high resolution, Smart Label Printer® from Seiko Instruments does just that. Simply

plug the SLP 450 into your PC, via the built-in USB or Serial port, and you're ready to print labels quickly, easily, one at a time. Just like you want them, when you want them. As fast as 1 label per second, at full 300 dpi. And best of all there is no ink, toner, or complicated software to mess with. So stop wasting time feeding label sheets to your standard printer. Choose one of three great SLP models and you'll have everything you need.

See all the Smart Label Printers at www.siibusinessproducts.com or at our authorized resellers. The sooner the better!

Buy.com • CDW • CompUSA • Fry's Electronics • Micro Center



Seiko Instruments USA Inc.

INTERNET TIPS

SCOTT SPANBAUER

Put Your Videos on the Web in Near-Real Time

IT HAS NEVER been easier to create and share videos. If you're a would-be movie mogul, that's the good news. But unfortunately for potential viewers, it's also the bad news. (Read about free Web video-sharing services in February's "New, Improved Web," find.pcworld.com/52132.) You might expect modesty and/or a lack of skills to prevent people from sharing

FireWire, an account at a video publishing site, and, optionally, a blog where you can advertise your ego-massaging opus. Follow the instructions that came with your video camera to attach it to your PC. Once you've connected it, choose **Start•All Programs•Accessories•Entertainment•Windows Movie Maker** to launch Microsoft's lightweight digital video editor (the program's shortcut may be directly under All Programs or under Accessories). I prefer 2.1, the app's most recent version, which Windows XP users can obtain through Microsoft's Windows Update site; go to find.pcworld.com/52134 for download instructions.

If you struggle with the program's video capture and editing, press <F1> to open its help guide. You can also consult Microsoft's Windows Movie Maker tutorial (find.pcworld.com/52138).

When your masterpiece is ready for viewing, click **Save to my Computer** in the Movie Tasks pane. (Don't click "Send to the Web", which works with only a few video

publishers and with none of the coolest free Web-video services.) In the Save Movie Wizard dialog box, enter a name, change the default "My Videos" folder under "Choose a place to save your movie" (if you wish), click **Next**, choose **Show more choices**, and select **Other settings** to enable the drop-down menu of video-resolution options (see **FIGURE 1**).

If you choose a low transfer speed, the playback may be small and choppy—why post something that no one will enjoy watching? Selecting a high transfer rate,

though, increases your clip's resolution but may foist interminable downloads on viewers. Choose **Video for Broadband (340 kbps)** if you think your viewers are likely to have a high-speed connection—the resulting 320-by-240-pixel, 30-frames-per-second clip will probably do justice to the subject. For modem-equipped viewers, pick the 160-by-120-pixel, 15-frames-per-second menu option, **Video for dial-up access (38 kbps)**. Or create files at each bit rate, and then upload both.

Once you've made your format selection, click **Next** to create the file.

The final step is to upload your file. See last January's *Digital Video Tips* column (find.pcworld.com/52140; scroll to "Play It on the Web") by Richard Baguley for instructions and links to several free video-sharing sites. However, Richard doesn't mention my favorite: Blip.tv. This site lets you simultaneously upload your video and post it to your Blogger blog (many video-sharing sites provide links to other popular blogging services). If your viewers subscribe to the blog, they will receive an e-mail notifying them of the new content as soon as you post it.

Talk about an ego boost. ■

Send your questions and tips to nettips@spanbauer.com. We pay \$50 for published items. Go to find.pcworld.com/31523 for more Internet Tips. Scott Spanbauer is a contributing editor for PC World.

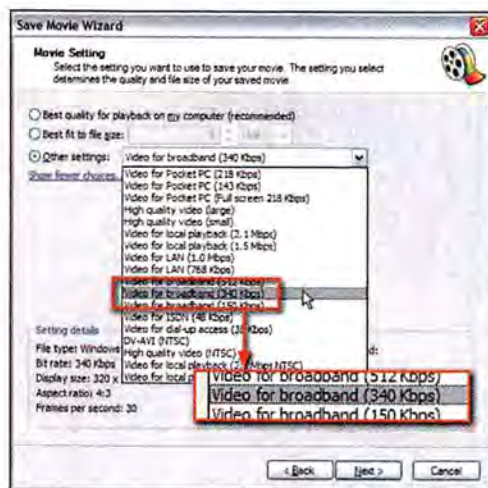


FIGURE 1: SHRINK YOUR VIDEO for easier viewing on the Web in Windows XP's Windows Movie Maker.

all the mundane moments of their life with the world. But try telling that to my son, whose collection of realistic-looking lightsabers screamed to be filmed in the backyard at night for far-flung relatives and fellow 8-year-olds to behold.

WEB VIDEO ON THE CHEAP!

THE RESULTING MINI-EPIC is crude but satisfying, and it took about an hour to film, edit, and post online. All you need is Windows XP, a video camera that connects to your computer via USB 2.0 or

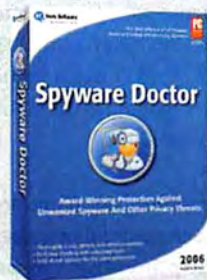
WRONG AGAIN, SCOTT

SEVERAL KIND READERS wrote in to say that I blew it when I described private IP address ranges last February (find.pcworld.com/52142). The private address ranges handed out by DHCP servers (and available for configuring network addresses manually) are 10.0.0.0 through 10.255.255.255, 172.16.0.0 through 172.31.255.255 (which I omitted), and 192.168.0.0 through 192.168.255.255. Addresses starting with 169.254 are not private, as I stated, but are assigned automatically when the operating system can't find a network hub, wireless router, or other DHCP server.

Do you have the right protection?



When it comes to your protection against spyware, choose the solution that has as much bite as it has bark!



Best of the Year 2005

PC Magazine
Best Anti-Spyware Software

Editors' Choice Award

PC Magazine February 21, 2006
PC Answers April 2006
PC Advisor December 2005

Free scan using multi award-winning Spyware Doctor at www.pctools.com

HARDWARE TIPS

KIRK STEERS

Make Your Hard Drives Faster and Safer With RAID

ADDING EXTRA HARD drives doesn't just increase your storage; it also speeds your PC and helps you recover from hard-drive failure. Drives configured as RAID deliver more than the sum of their parts.

move lots of data on and off drives, you'll notice a performance boost from a RAID 0 array; but if you mainly do standard PC tasks, you won't realize much speed gain. Backing up is critical, since RAID 0 doubles

your chances of losing your data: If one drive fails, you lose the data on both drives.

RAID 1: Unlike RAID 0, RAID 1 provides no improvement in performance. Instead, this level offers bulletproof fault tolerance by generating an exact copy, or mirror, of your hard drive in real time. If either drive goes belly up, you can just use

the other one until you have replaced the failed drive and rebuilt your mirrored copy. RAID 1 does not free you from the need to back up, however: Any data corruption, viral infection, or accidental deletion will affect both drives identically.

RAID 1+S (mirrored sparing): Certain RAID controllers support this technology for installing a third hard drive that lies dormant until the boot drive fails. At that point it automatically replaces the failed drive, repairing the array and protecting the data without your having to lift a finger. The downside of both RAID 1 and RAID 1+S, of course, is that you can't use the mirror drive to store data.

RAID 0+1 (aka 01) and RAID 1+0 (or 10): The former mirrors striped drives (creating a mirrored backup of data that has been placed on several different drives to improve reliability), and the latter stripes

mirrored drives (moves mirrored backups onto several drives to improve performance). Both configurations require at least four hard drives. RAID 0+1 stores data on a pair of striped drives and mirrors them with a second pair of drives. RAID 1+0 places the mirrored pairs together and then stripes the two sets.

RAID 5: This level also provides striping and data protection, but it safeguards data far more efficiently than RAID 1. Instead of mirroring one drive with another, RAID 5 stripes data and parity information across three or more drives. The parity information helps to recover a failed drive, using data on the surviving drives. The downside: You need at least three hard drives for each array, and RAID 5 controllers cost more than their counterparts for other RAID levels. However, the RAID controllers built into many motherboards today—even some fairly low-cost models—support RAID 5.

Browse to find.pcworld.com/52692 for more on planning your RAID setup.

A KEYBOARD WITH SWOOSH

TYPING ON A standard keyboard irritates my hands and wrists, but I just don't have the time to relearn typing on an ergonomic or "split" keyboard. Is there anything else I can do to avoid repetitive stress injury?

Peter Walker, Toledo, Ohio

EXERCISES, PROPER BODY positioning, and rest can reduce wrist strain; be sure to read "Essential Ergonomics" (find.pcworld.com/52180) by Aoife McEvoy and Linda Grubbs for more on healthy computing. In my experience, even a slightly curved keyboard can help keep your hands and arms pain-free. Microsoft's \$25 Comfort Curve Keyboard 2000 (find.pcworld.com/52182) has a gentle arc that offers relief without challenging your typing style (see **FIGURE 1**). ■

Go to find.pcworld.com/31511 for past Hardware Tips columns. Send your tips and questions to kirk_steers@pcworld.com. We pay \$50 for published items. PC World Contributing Editor Kirk Steers is author of PC Upgrading and Troubleshooting Quicksteps from McGraw Hill/Osborne Press.



FIGURE 1: MICROSOFT'S COMFORT Curve Keyboard 2000 has a wavelike design that won't cramp your typing style—or your wrists.

Every RAID level balances performance and fault tolerance differently.

RAID 0: This level spreads—or stripes—data across two or more drives, which speeds data transfers. If you frequently

BUST YOUR PC'S DUST

ADMIT IT: CLEANING your PC's innards is right up there on your list of priorities next to cleaning behind the stove. But you can make the job a little easier by keeping a ready-to-use handheld vacuum cleaner within easy reach. Lava World's \$10 Lava USB Vacuum (find.pcworld.com/52184) resembles a tiny Lava lamp, but it replaces the colorful bubbling ooze with enough vacuum suction to keep your system's keyboard, case, and other difficult-to-clean components debris-free.



Xtreme Gear

XTREME GEAR RECOMMENDS WINDOWS® XP



XG Xion 9000 AMD Athlon 64 X2 4800+

CoolerMaster Mini Aquagate Liquid Cooling System
Genuine Windows® XP Home Edition W/SP2
NVIDIA® nForce™ 4 SLI Dual x16 PCI-E Mainboard
Corsair 2048 MB Dual Channel DDR 400
300GB Serial ATA 150 7200 RPM 8MB Hard Drive
Dual (2) NVIDIA® 7900GT 512MB 16X PCI-Express Video
16X DVD+-RW w/Lightscribe Technology
Sony 16X DVD ROM Drive
7.1 nForce 3D Audio
Logitech X530 5.1 Subwoofer Speakers
Gigabit Network Card
PCI 802.11G 54 Mbps Wireless Network Card
XG Discover Case 500 Watt Power

\$2,295

XG Xion 7000 AMD Athlon 64 X2 3800+

CoolerMaster Mini Aquagate Liquid Cooling System
Genuine Windows® XP Home Edition W/SP2
NVIDIA® nForce™ 4 SLI Dual x16 PCI-E Mainboard
Corsair 1024 MB Dual Channel DDR 400
250GB Serial ATA 150 7200 RPM 8MB Hard Drive
Dual (2) NVIDIA® 7600GS 256MB 16X
PCI-Express Video
Sony 16X DVD Rom Drive
7.1 nForce 3D Audio
Logitech S100 Stereo Speakers
Gigabit Network Card
PCI 802.11G 54 Mbps Wireless Network Card
XG Xion II Case 420 Watt Power



\$999

XG Action 6000 AMD Turion 64 MT-32

AMD Turion 64 Mobile Technology
-AMD PowerNow! Technology
-HyperTransport Technology
-Enhanced Virus Protection Technology
Genuine Windows® XP Home Edition W/SP2
15.4" WXGA Wide-Screen TFT Display 1280x800 Pixels
Corsair 1024 MB Dual Channel DDR 400
80GB 5400 RPM SuperSlim Notebook Drive
Mobile ATI X700 x16 PCI-E 128MB Video
8X DVD+-RW Drive
802.11G 54 Mbps Wireless Network,
10/100 NIC and 56K V.92 Modem

\$1,155

FREE SHIPPING!



- Provides leading-edge 32-bit performance for music, video and games and is ready for future 64-bit software
- Improves security against certain types of viruses, with Enhanced Virus Protection for Microsoft® Windows® XP SP2

- Conserves power and operates quietly with AMD Cool n'Quiet™ technology.
- Features HyperTransport™ technology for improved multitasking performance

Toll Free 1-888-937-5580
www.buyxg.com

Go to find.pcworld.com/52916

VoIP TIPS

AOIFE M. McEVY

Get Your Net Phone to Come in Loud and Clear

AT THEIR BEST, Internet phones provide affordable long-distance and international rates, all-you-can-talk monthly calling plans, online voice messages and other Web-based features that a landline company just can't offer, and—most important—reliable service.

At their worst, however, Voice-over-IP lines can be rife with glitches; stuttered sentences, echoes, and dropped calls top the list. While there's not much you can do to remedy subpar service, you can take steps to nip VoIP hassles in the bud.

If you have a hardware-based Internet phone setup consisting of a VoIP adapter linked to your broadband modem or router

on one end and attached to a standard telephone on the other, these tips will help you minimize your Net-phone woes.

HARDWARE MATTERS

AVOID PUTTING THE VoIP adapter on the floor, or anywhere it could be pounced on by your pets or children—or yourself, for that matter. Most adapters are rather lightweight, and I have lost calls more than once due to accidental kicking.

you'll be on a call with a terrible echo (you may have gotten caught in your ISP's network congestion). Whenever this happens, hang up, wait a minute or so, and then try your call again.

If you experience more than just the occasional reception problem, however, don't be surprised if your VoIP provider attributes those issues to your ISP. Before you take their word for it, do everything possible to rule out other potential trouble spots. TestYourVoIP.com offers a Web-based call simulator that tests your broadband connection and indicates how the quality measures up (see **FIGURE 1**). If your link is consistently poor, check your router vendor's site to make sure you're using the latest version of its firmware, and consider replacing your modem or router. If call quality is unacceptable over a long period and it's not due to a problem with your equipment, ask your provider for help. Heck, ask for some credit to your account while you're at it.

Another gotcha involves electricity: If a power outage hits your home or office, your Net phone

911 AND NET PHONES

IN MAY 2005, the Federal Communications Commission ordered Internet phone companies to provide their customers with enhanced 911 service. E911 ensures that the emergency dispatcher can determine your street address automatically. The FCC's deadline for compliance was November 28, 2005, but many providers failed to meet that date and filed extension requests. If your area is not yet covered by E911, add the telephone numbers for your local police and fire departments to your VoIP phone's speed-dial options, if possible. (It's a good idea to store these numbers in your cell phone as well, along with your state's highway patrol number.) When E911 is available to you, register your address with your provider as soon as you can, and be sure to update the address if you move.

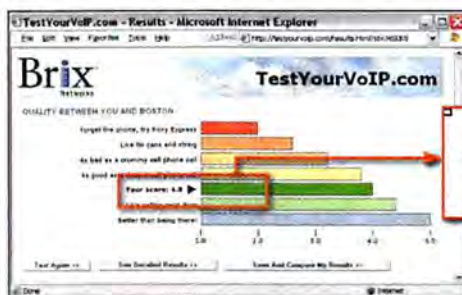


FIGURE 1: HOW FAST IS your VoIP link? Find out by using the free speed test at TestYourVoIP.com.

All VoIP setups employ one or two power cords, a phone cord, and an ethernet cable. Stan Miestkowski's April 2004 *Step-by-Step* column, "Conquering Multimedia Cable Clutter" (find.pcworld.com/52120), offers untangling strategies.

Of course, wherever your modem or router is perched, your VoIP phone will be tethered to it. That's why a cordless phone is a godsend for VoIP, whether you're using it as a landline replacement or as a backup to a standard phone.

BOUNCE BAD CALLS

IF YOU'RE LUCKY, your voice and that of the person you're calling will both be as clear as a bell. But once in a blue moon,

service dies with it. If you have an uninterruptible power supply for your system, connect your router, modem, phone, and adapter to it.

In any case, if your Internet connection goes on the blink, you can't use the phone. Be sure to take advantage of your provider's call-forwarding option, if available, to redirect unanswered calls to a landline or cell phone so that you don't miss any incoming calls.

Finally, if you're completely fed up with your Internet phone, read the fine print carefully before canceling your service. Providers' cancellation policies, money-back guarantee periods, and penalties vary. When you shop for a service, check out the user postings at BroadbandReports.com (find.pcworld.com/52122). ■

Aoife M. McEvoy is a contributing editor for PC World based in California.

Toolbar Review

There has never been a better time to use a toolbar with your Internet browser. Toolbars can provide users with numerous features such as Pop-up Blocking, Driving Directions, Adult Content Filtering, Security Features, Spyware Detection, Games and more. Toolbars are a convenient and powerful addition to your browser, making it easier than ever to navigate the Internet.

The comparison chart below will help you decide which toolbar is right for you.

Toolbar Comparison Chart				
Toolbar Features:	Advanced Toolbar	Google	YAHOO!	msn
Search Engines	100+	1	1	1
Search Tabs	✓			
Blocks Pop-Up Ads	✓	✓	✓	✓
Calendar Application	✓			
RSS News Reader w/Ticker	✓			
Auto Form Filler	✓	✓		✓
Adult Content Blocker	✓			
Spyware Remover	✓		✓	
Homepage Protector	✓			
Browser Tracks Eraser/Cleaner	✓			
File Shredder	✓			
Add Buttons for Software	✓			
Add Buttons for Webpages	✓	✓	✓	
Screensaver Launcher	✓			
Games Links	70	0	10	10
E-mail Provider Links	52	0	1	1
News Provider Links	88	0	1	0

With its vast array of features and incredible ease of use, the Advanced Toolbar stands out from the competition. It's a powerful web tool that allows you to choose from over 100 search engines, 80 plus news sources, 50 plus email providers and can be completely customized to meet your needs. The Advanced Toolbar does not record any user data, has a very straight forward privacy policy and is totally spyware and adware free. You can get a free copy of the Advanced Toolbar at <http://www.advancedtoolbar.com> and take advantage of everything this incredible toolbar has to offer.



You can get a free copy of the Advanced Toolbar at:

<http://www.advancedtoolbar.com>

IT Automation

WinBatch Automates Windows PC's Fast

- Swift scripting software
- 800+ practical examples
- 2,500 case studies
- 30 special purpose libraries and extenders

WinBatch gives you the power that only top notch C++ or VB developers can enjoy, but takes away the complexity.

KH - Network Services Manager

Free Evaluation Copy

www.winbatch.com
90-day unconditional money-back guarantee

sales@winbatch.com
1-800-762-8383
Wilson WindowWare, Inc.

Guaranteed • Supported • Complete

FIND.PCWORLD.COM/52392

NEW LOW PRICE!



\$888 (Wow!) Qty 2+

Qty 1: \$10.88
Remanufactured HP 51645a
(No. 45) ink cartridge.

More great deals at...

1-800-INKFARM

inkfarm.com
the ink & toner supersite.™

FIND.PCWORLD.COM/52376

MY **projector**
STORE.COM

CALL: (866) 848-4076

SANYO HOME THEATER

PLV-Z4 \$ 1,995 CALL

NATIVE 16:9

WXGA (1,280 x 720P)

7,000:1 ULTRA HIGH CONTRAST



SANYO BUSINESS/ HOME THEATER

PLC-XU73 \$ 995 CALL

2,000 LUMENS

XGA (1,024 x 768)

5.3 LBS.



SANYO BUSINESS/ HOME THEATER

PLV-XU48 \$ 1,695 CALL

3,000 LUMENS

XGA (1,024 x 768)

5.9 LBS.



WWW.MYPROJECTORSTORE.COM

SALES@MYPROJECTORSTORE.COM

FIND.PCWORLD.COM/52379

RAID 5 SATA!

New Aluminum SATA II RAID Storage Systems
are ultra fast 600MB/s, cool, and affordable



4 Terabyte RAID 5
Drive System \$4349.00

The new Granite Aluminum 4.0 Terabyte Hot-Swap RAID System is fast and affordable. This system incorporates ultra fast SATA drive technology while supporting hardware RAID 0, 1, 5, 10 and 50 for guaranteed data security. It also supports Hot-Swap which allows the system to have virtually unlimited storage capabilities. So no matter which OS you are running the Granite Hot-Swap RAID System will fill the need... reliably and affordably.

Our RAID / JBOD Systems can be configured with any size drives and are truly Hot-Swappable. Now no matter what your storage or backup needs entail Granite Digital has the affordable solution that fits the bill.



Granite
D.I.G.I.T.A.L

Providing Data Storage Integrity

SATA Hot-Swap!

Hot-Swap Disk-to-Disk Backup Systems provide high
speed and unlimited storage



SATA 2 Hot-Swap
Drive System \$159.00



Extra Removable
Drive Trays only \$19.95

Granite Gold Cables, Adapters, SCSI Terminators, and
Components offer the ultimate in quality and reliability



SCSI
Cables



FireWire
Cables



Adapters



Host
Adapters

Get our catalog online at www.granitedigital.com

Granite Digital • 3101 Whipple Rd., Union City, CA. 94587 • 510-471-6442-tel • 510-471-6267-fax

FIND.PCWORLD.COM/52372

SILVERSATA™ SERIES

Advanced eSATA Storage
with Interchangeable Trays



II
RAID 0 for speed
RAID 1 for reliability

I
Easy to remove
hard drive

V
5 Big drives
with one
eSATA connection

WibeTECH SilverSATA II, PC World May 2006

"Blazing performance, quick-swap drives and front panel access to RAID 0 and RAID 1..."

PC WORLD

82

Very Good

wibeteCH
www.wibeteCH.com 866-744-8722 (toll free)

PC Connection JCArell
cove? mac's world

© WibeTech 2006. SilverSATA is a trademark of WibeTech LLC.

FIND.PCWORLD.COM/52390

Pro/ENGINEER WILDFIRE 2.0

STUDENT EDITION



Available to Students
and Educators at:

199⁹⁸

Pro/ENGINEER Wildfire is the one solution for engineers that don't want to choose between price and power, ease of use and robust process functionality. Pro/ENGINEER Wildfire 2.0 Personal Edition is the perfect solution for professionals and students who desire this software for personal use.

ProE Reference Books also available!

ATTENTION FACULTY MEMBERS: Request a box of ProE brochures and a poster to let your students know about this great offer.

JourneyEd
Education Marketing

www.JourneyEd.com

1-800-974-9001

FIND.PCWORLD.COM/52380

Software Savings for Students, Teachers, and Schools!

Get up to 85% off retail software prices on the brands you know and use...



Adobe®
Creative Suite 2
Save! 67%
Order Today!
Get the Best for Less!



Macromedia®
Studio 8
Save! \$710
Only! \$289.⁹⁵
Brand New Version!



Quark®
QuarkXpress 6.5
Save! \$756
Only! \$189.⁹⁵
The Industry-Standard!



Microsoft®
Office 2003 Pro
Save! 66%
Order Today!
4 Programs - 1 Price!

We carry thousands of industry-leading software and hardware products at huge discounts for students, teachers and schools. These special prices are ONLY for the academic community. And our prices are typically \$10-\$20 lower than most college bookstores! Visit us today and start saving!

Adobe®
Acrobat Pro 7.....**Save 69%**
Photoshop CS 2.....**Save 53%**
Video Collection.....**Save 55%**
Alias®
Maya 7 Complete Student.....\$289
SketchBook Pro 2 Student.....\$89
Corel®
Painter IX.....\$89

Macromedia®
Dreamweaver 8.....\$189
Flash Professional 8.....\$239
Microsoft®
Windows XP Pro Upg....**Save 58%**
Sony Media Software®
ACID Pro 5.....\$149
SoundForge 8.....\$149
Vegas+DVD.....\$299

Hey Parents!

You are eligible to buy for your
students at home or away at college!

FREE SHIPPING!
when you order online

Prices subject to change at any time.

Give us a call anytime! 1-800-580-9237

PW.AcademicSuperstore.com

**ACADEMIC™
SUPERSTORE**

FIND.PCWORLD.COM/52354

Big Screen Center

Professional and Home Solutions

like never before.

WE HAVE IT!



Eiki EIP-3500

- Excellent picture for demanding presentations
- 3500 ANSI Lumens
- 1024x768 Resolution
- 2000:1 contrast ratio
- Weight 9.3lbs (4.2kg)

Advertised price ~~\$2799.99~~
(call for pricing)



InFocus IN26

- Built for demanding business presentations
- 1700 max ANSI Lumens
- XGA 1024x768 Resolution
- Contrast Ratio 2000 : 1 Full On/Full Off
- Weight 5.95 lbs/2.7 kg

Advertised price ~~\$999.00~~
(call for pricing)



Draper Silhouette/series M

- Great home theater or conference room manual screen
- Sleek curved case for wall or ceiling mount
- Available in sizes through 96"x96"
- Comes in standard dove grey casing

Starting at **\$210.99**



Da-Lite Cinema Contour

- Easy-to-install for home theater
- Beautiful fixed frame solution
- Available from 60" to 240" diagonal
- Optional velvet frame covering available
- Stylish 3" bevelled frame

Starting at **\$370.99**



Universal Articulating Wall Arm

- VESA Mounting Standards: 75 x 75 mm; 100 x 100 mm
- Full tilt and swivel; Extends 13" from wall
- Cantilever arm mount for installing and viewing LCD displays
- Weight Capacity: 30lbs.

Our price **\$129.99**



Sanus Triple Wide 3 Shelf

- Contemporary design combines with unique features
- Available in cherry
- Dimensions 65.75 x 23.75 x 22

List price **\$1099.99**



Sanus Flat Panel TV Stand

- Ideal for home theater, meeting rooms and tradeshow exhibits
- The stand enhances the appearance of any 30"-50" plasma display
- Dimensions 43.25 x 23.25 x 48.75

List price **\$529.99**



Projector Lamp Center

- Need a new ANSI Bulb, Projector Lamp, or TV Lamp? Give Projector Lamp Center a call at 1.800.296.8420 or go online today at www.projectorlampcenter.com

1.877.835.1431

www.BigScreenCenter.com/PCworld

InFocus® DATALITE® DRAPER® EIKI® BENQ® CHIEF® Ranier®

*pricing at time of printing - call for latest pricing & discounts

FIND.PCWORLD.COM/52944

JUNE 2006 / WWW.PCWORLD.COM 147

Get a web site
with your own
web address
and watch your
business grow.



ValueWeb provides **EVERYTHING** you need to get started.

- Free custom web address with 50 email accounts
- Free easy-to-use web site design software
- Free advertising on Google™, Yahoo!® and AOL Search™ (\$25 credit)
- Detailed visitor web site reports from Google™ (\$595 value)
- 5GB Disk Space & 100GB of Bandwidth

ValueWeb/Affinity Partners:



Call or sign up online today & mention this ad to receive this special offer
866-932-1112 valuenweb.com/specialoffer

ValueWeb
by affinity™

FIND.PCWORLD.COM/52356

CyberLock® The Lock on Intelligence

Complete Access Control in Every Lock Cylinder

Who!	Where!	When!	What!
Key Name	Lock Name	Date/Time	Status
Joe Wilson	East Entrance	03/20/2004 06:14:22 AM	Denied
Abby Chaney	West Entrance	03/20/2004 07:28:03 AM	Key Authorized
Pete Susman	Records Room	03/20/2004 07:59:15 AM	Out of Schedule
John Michaels	Computer Room	03/20/2004 08:00:03 AM	Key Authorized
Evelyn Leller	West Entrance	03/20/2004 08:12:16 AM	Key Authorized
Juanita Banks	Computer Room	03/20/2004 08:18:52 AM	Key Authorized
Andy Dunsmore	Computer Room	03/20/2004 08:27:12 AM	Key Authorized

Install CyberLock cylinders
— without wiring —
in doors, safes, padlocks,
and cabinets!

- Schedule access times
- Record all openings and attempts
- Replace mechanical cores with CyberLocks
- Update user permissions remotely
- Eliminate key control problems



Replace standard door lock cylinders
with CyberLock cylinders in minutes.



Secure storage units and file
cabinets and get an access history.



www.videx.com/lock29
541-758-0521 • sales@videx.com

FIND.PCWORLD.COM/52388

BOLDATA'S POWERFUL ALL-IN-ONE COMPUTER FEATURING THE AMD ATHLON™ 64 PROCESSOR



Key Features

- Stylish and highly compact design
- Choice of processors:
 - AMD Athlon™ 64 processor
 - AMD Sempron™ processor
- Up to 2 GB of DDR400 Memory; 2 sockets
- Up to 300GB 3.5-inch Serial ATA Hard Drive
- Choice of Optical Drives:
 - 8x Multi Dual-Layer DVD Burner; DVD-RAM; DVD+-RW; slot-based
 - 8x Dual Dual-Layer DVD; DVD+-RW; tray based
- External 150W; Auto-Switching AC Adapter
- Internal wireless 802.11b/g WLAN and Bluetooth
- Internal, optional CMOS webCam
- 4 Built-in speakers and built-in Subwoofer
- "Multimedia Center Ready" with optional internal TV Tuner
- Ports: 6x USB2.0; 1x FireWire (IEEE1394a); 1x Headphone; 1x Mic-in; 1x S/PDIF out; 1x S-Video jack for Video Input; 1x RGB jack for Analog Video input; 1x DVI-IN jack for digital video input; 1x CIR; 1x TV antenna jack

BOLData's all-in-one small footprint entertainment and computing LCD PC is built with the AMD Athlon™ 64 processor with HyperTransport™ technology for increased bandwidth and reduced bottlenecks for increased performance and better multi-tasking. With a 17-inch widescreen flat LCD TV display, built-in 6 speakers and up to 2 GB memory, 300 GB hard drive, 8x multi dual-layer DVD burner, Wi-Fi, internal webcam for video conferencing and all standard ports, this is the ultimate system for business computing and personal entertainment. For powerful space saving systems that deliver all the bells and whistles, call us today.

Configure your system today at

1-800-923-BOLD

BOLData®
S Y S T E M S



Custom configure and buy on-line at
www.boldata.com

The **Only** Microsoft® Windows®-compatible
64-bit PC processor.

4 8 3 6 3 F r e m o n t B l v d . • F r e m o n t • C A • 9 4 5 3 8

Copyright © 2005, BOLData Systems Inc. BOLData, the BOLData logo are registered trademarks of BOLData Systems. AMD, the AMD Arrow logo, AMD Athlon™, AMD Sempron™ and combinations thereof are trademarks of Advanced Micro Devices, Inc. All other product and company names are the trademarks or registered trademarks of their respective owners. See AMD website at <http://www.amd.com> for details and independently audited benchmark results.

PCWORLD

TECHNOLOGY ADVICE YOU CAN TRUST®

Supercharge Your Search: Use PC World's Find-It-Service

Don't waste your valuable time searching for the information you want. Use *PC World's* Find-It service. Find quality information quickly and browse more efficiently with *PCWorld's* innovative Find-It service.

HOW IT WORKS

Enter a Find-IT URL (for example, find.pcworld.com/46300) in your browser or click the button on any [USE FIND.PCWORLD.COM](http://USE.FIND.PCWORLD.COM) PCWorld.com page and enter the five-digit Find-It number.

PRODUCT INFORMATION

Find-It URLs are also specific to each ad, for a fast and easy way to get to the product information you want.

"[STOPzilla]...
blocked all
the spyware in
our testing!"
DOWNLOAD.COM*



SAFE!
SECURE!

STOPzilla!

- ✓ Destroy Spyware
- ✓ Eliminate Adware
- ✓ Kill Pop-ups
- ✓ Stop ID Theft
- ✓ Clear Cookies
- ✓ Erase History
- ✓ Live Support 24/7

Download a **FREE** trial at www.STOPzilla.com
or call **877.877.9944**

* CNET logo used with permission from CNET Networks, Inc. Copyright © 1995-2005 CNET Networks, Inc. All Rights Reserved.



FIND.PCWORLD.COM/52384

The fastest way
to learn a language.
Guaranteed.™



Award-winning software successfully used by U.S. State Department diplomats, Fortune 500® executives and millions of people worldwide.

Finally, a different approach that has millions of people talking. Using the award-winning Dynamic Immersion™ method, our interactive software teaches without translation, memorization or grammar drills. Combining thousands of real-life images and the voices of native speakers in a step-by-step immersion process, our programs successfully replicate the experience of learning your first language. Guaranteed to teach faster and easier than any other language product or your money back. No questions asked.

Rosetta Stone is available for learning:

Arabic • Chinese • Danish • Dutch • English • Farsi • French • German • Greek • Hebrew • Hindi
Indonesian • Italian • Japanese • Korean • Latin • Pashto • Polish • Portuguese • Russian • Spanish
Swahili • Swedish • Tagalog • Thai • Turkish • Vietnamese • Welsh

"...your program is the absolute best, bar none. I am shocked at how quickly I learn."
Michael Murphy - Texas, USA

"Stupendous...the juxtaposition of text, sound and picture was masterful. The quality of both sound and graphics was first rate."
The Boston Globe



**SAVE
10%**

Your Price

Level 1 CD-ROM ~~\$195~~ **\$175.50**

Level 2 CD-ROM ~~\$225~~ **\$202.50**

BEST VALUE!

Level 1 & 2 Set ~~\$329~~ **\$296.10**

Personal Edition. Solutions for organizations also available.

Call today or buy online
for a 10% discount.

RosettaStone.com/pws066
1-800-399-6162

Use promotional code pws066 when ordering.

RosettaStone®
Language Learning Success



FIND.PCWORLD.COM/52370

PCWORLD**Best
BUY**

Enough said.

BitDefender® is an award-winning producer of anti-virus and data security software. We deliver superior threat management to over 41 million home and corporate users in more than 100 countries. Try it for FREE at www.bitdefender.com



BitDefender® 9 Standard - PC World Best Buy, March 2006

Insure.com

Auto • Life • Health • Home • and more!

Over 200 companies. Compare prices in seconds.
Freedom to buy from the company of your choice.

10-Year Term Life Sample Monthly Premiums

Age	\$500,000	\$1,000,000	\$2,000,000
35	\$14	\$21	\$37
40	\$18	\$30	\$54
45	\$27	\$47	\$89
50	\$39	\$70	\$136
55	\$58	\$107	\$209
60	\$84	\$158	\$311
65	\$136	\$257	\$510
70	\$213	\$419	\$834

"The premier Web site in terms of details and ease of use, (best of all, it's free)" — Yahoo! FINANCE

"...we'd recommend you do your insurance shopping here..." — Barron's

Insure.com

Or call 1-800-323-7720 for FREE quotes and advice

Ad Code: PCW 6/06

NOTE: The sample Pennsylvania rates shown above are not specific to any individual person or insurer. Please call 1-800-323-4514 or visit www.insure.com to obtain personal quotes specific to your health history profile. Copyright © 1994-2006 Quotasmith.com, Inc. 8205 South Cass Avenue, Suite 102, Darien, Illinois, 60551. All rights reserved. CA agent #0A13853, LA agent #2006696, MA agent #333509159. Quotasmith.com, Inc. dba Insure.com Insurance Services in CA under agent #0627712, in LA under agent #205078, Quotasmith.com, Inc. dba Insure.com Insurance Services, Inc. in UT under agent #90093. Quotasmith.com dba Insure.com and Life Quotes, Inc. in CO.

FIND.PCWORLD.COM/52378

INTRODUCING:

A Virtual Server that JUST MAKES MONEY!

- Host from 5 to 100 domains
- Windows and UNIX sites with Email!
- Over 1000 templates included!!!
- Free Virus scanning/Spam filtering
- Free 24/7 Outstanding Support
- Free 24/7 Support for your clients
- Free Site Creator
- Free Setup

Let us take care of all the hardware, software, and template designs so that you can concentrate on what matters most: building websites and making more money!

Pricing from
\$39.99!

Check out our
free demo at
BlueGenesis.com

Blue Genesis

Call TODAY! 1-866-258-3350 for a free 30 day trial!

FIND.PCWORLD.COM/52360

DID YOU KNOW?

Cable locks with barrell style keys can be unlocked with a rolled up business card, **But not the Note Saver,**

see the video at www.compu-lock.com



The NoteSaver Features

- A flat double bitted key
- Adjustable for a snug fit
- Offers different style cables
- Master keyed at no charge
- Easy to use

EMAIL: sales@compu-lock.com

Compu-lock Inc. 800.448.4455

FIND.PCWORLD.COM/52364



There's a better
way to get back
your data ...

...call us.

ESS DATA RECOVERY LABS

800.237.4200

www.savemyfiles.com

FIND.PCWORLD.COM/52368

HighSpeed PC Specialty Computer Hardware

HSPC Tech Station Fast-Access Computer Case!

"The Tech Station (patent pending) is a hardware workbench bringing PC parts within easy reach yet keeping them safe and secure. Perfect for PC builders, upgraders, and overclockers."

- HDD storage/cooling rails for up to two 3.5" hard drives
- AGP/PCI card support brace with thumb screws (no loose add in cards!)
- ATX Control Kit (mini power/reset switches, LED's speaker)
- 120mm fan for ideal cooling
- Anti-static and non-conductive!
- Standard, Large, and custom sizes/colors available

"HDD storage/cooling rack" "AGP/PCI support brace" "ATX Control Kit"

www.highspeedpc.com

FIND.PCWORLD.COM/52374

PC WORLD

TECHNOLOGY ADVICE YOU CAN TRUST®

Shop
Here

MARKETPLACE

For Advertising Information Call
888-254-0711

CONTACT INFORMATION

PHONE: 415/243-0500 FAX: 415/442-1891
E-MAIL: letters@pcworld.com
WORLD WIDE WEB: www.pcworld.com
MAIL: PC World 501 Second St. #600
San Francisco, CA 94107

ADVERTISING SALES

VP/PUBLISHER, PC WORLD MAGAZINE
Wayne Silverman (201/634-2318)

EAST

Midwest/Southeast/Northeast/Eastern Canada

SENIOR ACCOUNT MANAGER
Kathy McKay (847/759-2723)

SALES ASSOCIATE

Shari Redan (508/370-0819)
New Jersey/New York/Pennsylvania/Connecticut
(201/634-2317)

WEST

Orange County/San Diego/Washington
ASSOCIATE PUBLISHER/MARKET DEVELOPMENT
Susan Green (949/442-4021)

Idaho/Los Angeles/San Francisco/Texas/
Utah/Western Canada

SENIOR ACCOUNT MANAGER
Jane Evans (415/267-1766)

SALES ASSOCIATE

Billie Sutherland (949/442-4014)
Arizona/Colorado/Montana/New Mexico/
Nevada/Oregon/Silicon Valley/Wyoming

SENIOR ACCOUNT MANAGER
Alicia Langer (415/267-4578)

SALES ASSOCIATE

Keri Campbell (415/978-3317)
SENIOR SALES DEVELOPMENT MANAGER
Duane Hampson (415/978-3133)

PC WORLD MARKETPLACE
Neal Mandel (888/254-0711)

PC WORLD REPRINTS

Ashley Rinier (717/399-1900 x125)

CUSTOM PUBLISHING/EVENTS

VP/PUBLISHER, PCWORLD.COM, CUSTOM
PUBLISHING Michael Carroll (508/370-0842)

PCWORLD.COM AD SALES

VP/PUBLISHER, PCWORLD.COM, CUSTOM
PUBLISHING Michael Carroll (508/370-0842)

BUSINESS PROJECTS COORDINATOR
Angela Beaudoin (508/370-0841)

Northwest

SENIOR ACCOUNT MANAGER
Melissa Gruber (415/974-7373)

Southwest

SENIOR ACCOUNT MANAGER
Cindy Crow (949/442-4005)

East

SENIOR ACCOUNT MANAGER
Mark Barreca (732/544-2006)

PCWORLD.COM AD OPERATIONS

AD OPERATIONS AND DESIGN SPECIALIST
Kevin Barden (415/975-2673)

AD OPERATIONS SPECIALIST
Sarah Rose (415/978-3266)

AD OPERATIONS COORDINATOR
Leilani Lopez (415/978-3125)

MARKETING

SENIOR DIRECTOR OF MARKETING Sandy Wong
MARKETING MANAGER Heidi Tanaka

RESEARCH

DIRECTOR, MARKETING RESEARCH Lisa Huck

PRESIDENT, CEO Jeff Edman
EXECUTIVE ASSISTANT Roxanne Warrick

CONSUMER MARKETING

VICE PRESIDENT, CONSUMER MARKETING
Shawne Burke Pecar
ASSOCIATE CIRCULATION DIRECTOR David Cobb
SINGLE COPY SALES DIRECTOR Holly Drawbaugh
DIRECTOR, RETENTION MARKETING Lisa Radler
SENIOR SUBSCRIPTION MARKETING MANAGER
Linda Trinh
SENIOR RETENTION MARKETING MANAGER
Robyn Patty
SUBSCRIPTION MARKETING MANAGER
Jennifer Ma
RETENTION MARKETING COORDINATOR
Shavon Burden

PRODUCTION

DIRECTOR, PRINT AND ONLINE PRODUCTION
Nancy Jonathans
PRODUCTION MANAGER Lisa S. Mireles
TRAFFIC MANAGER Eliza Wee

PCWORLD.COM MANAGEMENT

GENERAL MANAGER Ulla McGee
DIRECTOR, BUSINESS AND LEGAL AFFAIRS
Sue Krenek
SENIOR MANAGER, BUSINESS DEVELOPMENT
Brian Buiizer
DIRECTOR, ONLINE MARKETING Alexa Wriggins
ONLINE COMMUNITY MANAGER Kellie Parker
NEWSLETTER SERVICES MANAGER
Michael E. England
MEMBER SERVICES SPECIALIST Brian Witchel
ONLINE MARKETING SPECIALIST Ben Veechai

HUMAN RESOURCES

VICE PRESIDENT, HUMAN RESOURCES
Kate Coldwell
HUMAN RESOURCES MANAGER Carina Rivera
HUMAN RESOURCES REPRESENTATIVE
Jenny Steele

TECHNOLOGY

CHIEF TECHNOLOGY OFFICER Aaron Jones
DIRECTOR, INFORMATION SYSTEMS
Norman Noble
SENIOR NETWORK ANALYST Walter Clegg
NETWORK MANAGER Rodney Barnes
IT DEVELOPER/ANALYST Stan Erhart
SYSTEMS ANALYST Eileen Quan
NETWORK ADMINISTRATOR Gabe Ramos
DIRECTOR, NETWORK AND INFRASTRUCTURE
Sean Greathouse
SENIOR SYSTEM/NETWORKS ADMINISTRATOR
William Schultz
SYSTEM/NETWORKS ADMINISTRATOR John Wang
LEAD SOFTWARE ENGINEER Jim Hutson
SENIOR APPLICATIONS DEVELOPERS
Arturo Flores, Blossom Woo,
Wei Ming Xu, Bill Cappel
APPLICATIONS DEVELOPER Alexis Barerra
SENIOR DEVELOPMENT MANAGER
Matthew Newton
PROJECT MANAGER Kayan Wong

FINANCE

SENIOR VP, COO/CFO Vicki Peilen
DIRECTOR, FINANCE Diane Ryczek-Rae
DIRECTOR, ACCOUNTING Michelle Reyes
DIRECTOR, FINANCIAL AD OPERATIONS
Diane Hacker
DIRECTOR, ADVERTISING ACCOUNT SERVICES
Kevin Greene
STAFF ACCOUNTANT Lee Ann Baldwin
ACCOUNTING COORDINATOR Andrew Lyon-Hall

ADVERTISER'S INDEX

Type find.pcworld.com/ plus the five digit number below, to go directly to any advertiser in this list.

Advertiser Page Number	Find-It Address	Advertiser Page Number	Find-It Address
1&1 Internet Inc. 26-27	52410	MS Linux Compete 50	52400
3M Privacy Filters 119	52894	MS WSS SQL 2-3	52402
Acer America Corp. 33-40	52440	NEC Display 16	52962
Advanced Toolbar 143	52426	Newegg.com 10-11	52424
AlliGen 83	52910	Nikon 67	52418
Antec Inc. 52	52896	Nuance 6	52926
Anthology Solutions, Inc. 124	52898	PC America 113	52420
AOpen 54	52442	PC Tools 139	52928
ASUS 13	52444	PC World.com Relaunch 2006 84	52710
Brother 29	52412	R-Tools Technology 86	52952
Buffalo Technology 81	52446	Seiko Instruments 137	52450
CDW Corporation C2-P1	52900	Serious Magic, Inc. 43	52448
CDW Corporation 25	52902	Siber Systems 44	52452
CyberPower PC 122-23	52914	SonicWALL C3	52886
Dell, Inc. 14-15	52904	ThinkPad 93-94	52416
eCost.com 49	52423	Toshiba America 4-5	52404
eMusic 72A	52918	Transcend Inc. 97	52406
Fujitsu Corporation 47	52956	Trend Micro, Inc. 31	52960
Grisoft USA 86	52425	TRENDnet 59	52964
Grisoft USA 87	52414	Tripp Lite 121	52888
HP 109	52394	U.S. Robotics 111	52892
Insight 77	52906	Universal Laser Systems 105	52890
IOGEAR Inc. 48	52908	USB Implementers Forum 99	52430
Kingston Technology 65	52396	Velocity Micro, Inc. 135	52934
KONICA MINOLTA C4	52954	ViewSonic Corp. 23	52408
LG Electronics 63	52958	Wowwee Robotics 57	52936
Linksys 129	52398	Xerox Office Group 18-19	52421
Magix 71	52922	XtremeGear 141	52916
Magnific's Inc. 112	52966	Zone Labs 8	52938
Microtek Lab, Inc. 114	52428	ZT Group 85	52422

International Data Group (IDG) is the world's leading technology media, research, and event company. A privately-held company, IDG publishes more than 300 magazines and newspapers including Bio-IT World, CIO, CSO, Computerworld, GamePro, IncWorld, Network World, and PC World. The company features the largest network of technology-specific Web sites with more than 400 around the world. IDG is also a leading producer of more than 170 computer-related events worldwide including LinuxWorld Conference and Expo®, Macworld Conference and Expo®, DEMO®, and IDC Directions. IDC provides global market research and advice through offices in 50 countries. Company information is available at <http://www.idg.com>.



Where's Wireless Data for the Rest of Us?

ARPU: IT SOUNDS vaguely unpleasant, but it happens to be the mobile phone industry's favorite metric of success. It stands for Average Revenue Per User, which in English translates to AMAWCGOCTFO: "As Much as We Can Get Our Customers to Fork Over."

As prices for voice service decline, carriers see increased ARPU in cheesy gimmicks like "cool" ring tones that can annoy dozens of people at a time, "fun" ring-back tones that remind your caller you are truly a person without a life, and "useful" data services that can deliver sports scores but not your e-mail.

ARPU also grows from pricey computer data plans that require a separate account and a PC Card for your notebook, despite the fact that the upscale phone in your pocket would work fine as a wireless modem. Even when they'll sell you an all-you-can-eat data plan for your phone, carriers generally try to protect their higher-cost PC-data offerings.

Now that mobile phones are computers that happen to have smaller screens and keyboards, handsets and services seem stuck in an either/or world. If you're a kid bent on wasting all of your allowance on fashion statements and teensy games, or a businessperson willing to ransack corporate funds to pay costly data fees, you can find the right plan and phone.

But I want to use my phone as a modem for my laptop, and I don't want to pay a fortune. June Fabrics' PdaNet (junefabrics.com), which I've men-

tioned here before, just works: The software turns your Windows Mobile or Palm phone into a modem for your notebook, typically via a USB cable but also through Bluetooth. Carriers—who want to keep you as a potential customer for a separate PC Card and plan—don't sell PdaNet, making this application something you have to locate and use in a sort of data underground.

Now, though, there's good news for people like me who need laptop data access when we travel but aren't willing to spend hundred of dollars a year for high-speed service that we won't use much and that isn't yet offered everywhere. We need the ability to maintain a cheap low-speed plan and

order up superfast service for a day or a week at a price that won't break the bank. And Verizon is the first carrier to respond, with à la carte high speed for \$15 a day for a few notebooks that have built-in EvDO capability. Similar Verizon offerings for PC Card and phone-based data access are on the way.

That's great—and for me, it's far more valuable than other new services carriers are promoting, such as location-based programs that can tell you exactly where to find the nearest pizza parlor. When I'm at home, I know where the pizza place is, and when I'm on the road, I'm not likely to trust anybody who suggests fourth-rate chain restaurants. Then there's TV on a phone: It may be a useful time-killer, but the content is still Springsteen's "57 channels and nothing on."

Ultimately, wireless phones are still about communication, whether you're making a voice call, looking at e-mail, or digging up information on the Web. If other carriers follow Verizon's lead and stop playing games with our data, there will be only one thing that can bring communication to a halt: the doggone short-lived battery. ■

**Enough with
ring tones—
phones can do
a lot more.**



Contributing Editor Stephen Manes is cohost of PC World's Digital Duo (www.pcworld.com/digitalduo) on public television. Browse to find.pcworld.com/31595 to see additional Full Disclosure columns.



Volume 24, number 6, PC World* (ISSN 0737-8939) is published monthly at \$24.95 for one year (12 issues), \$49.90 for two years (24 issues), \$74.85 for three years (36 issues) by PC World Communications, Inc., 501 Second Street #600, San Francisco, CA 94107. Foreign orders must be prepaid in U.S. funds with additional postage. Add \$12 per year for Canada; add \$30 per year for airmail for all other countries. Canadian GST Registration #R124669680. Periodicals Postage Paid at San Francisco, California, and at additional mailing offices. Canada Post Publications Mail Agreement #2493993. Returns: 4960-2 Walker Road, Windsor ON N9A 6J3. POSTMASTER: Send address changes to PC World, Subscription Dept., P.O. Box 37571, Boone, IA 50037-0571. Editorial and business offices: 501 Second St. #600, San Francisco, CA 94107, 415/243-0500. Copyright © 2006, PC World Communications, Inc. All rights reserved. The trademark PC World is owned by International Data Group and used under license by PC World Communications, Inc. Technology Advice You Can Trust™, PC World Top 10™, Top 10™, PC World Top 100™, Top 100™, and Consumer Watch™ are trademarks of International Data Group, Inc., and used under license by PC World Communications, Inc. Printed in the United States.

CAN YOU EASILY BACKUP AND RECOVER DATA FROM ANY POINT IN TIME?



© 2006 SonicWALL, Inc. SonicWALL and the SonicWALL logo are registered trademarks of SonicWALL, Inc.

TAKE A DEEPER LOOK.

SonicWALL® Continuous Data Protection (CDP) solutions let you easily and continuously backup all your data – so you can turn back the clock and instantly recover previous versions. Unlike fixed-schedule tape systems, disk-based SonicWALL CDP provides automatic, real-time local and offsite backup of all productivity files. With SonicWALL CDP, servers, laptops and PCs are protected without the hassle and unreliability of tape, and without the risk of slowing network performance. SonicWALL CDP also provides backup for most popular small business applications and with the Bare Metal Recovery service, you can easily restore operating system files, programs, databases, and settings. It's time to give your data a deeper level of protection. Go to www.sonicwall.com/clock or call 1.888.557.6642



NETWORK
SECURITY



SECURE
REMOTE ACCESS



CONTENT
SECURITY



CONTINUOUS
DATA PROTECTION



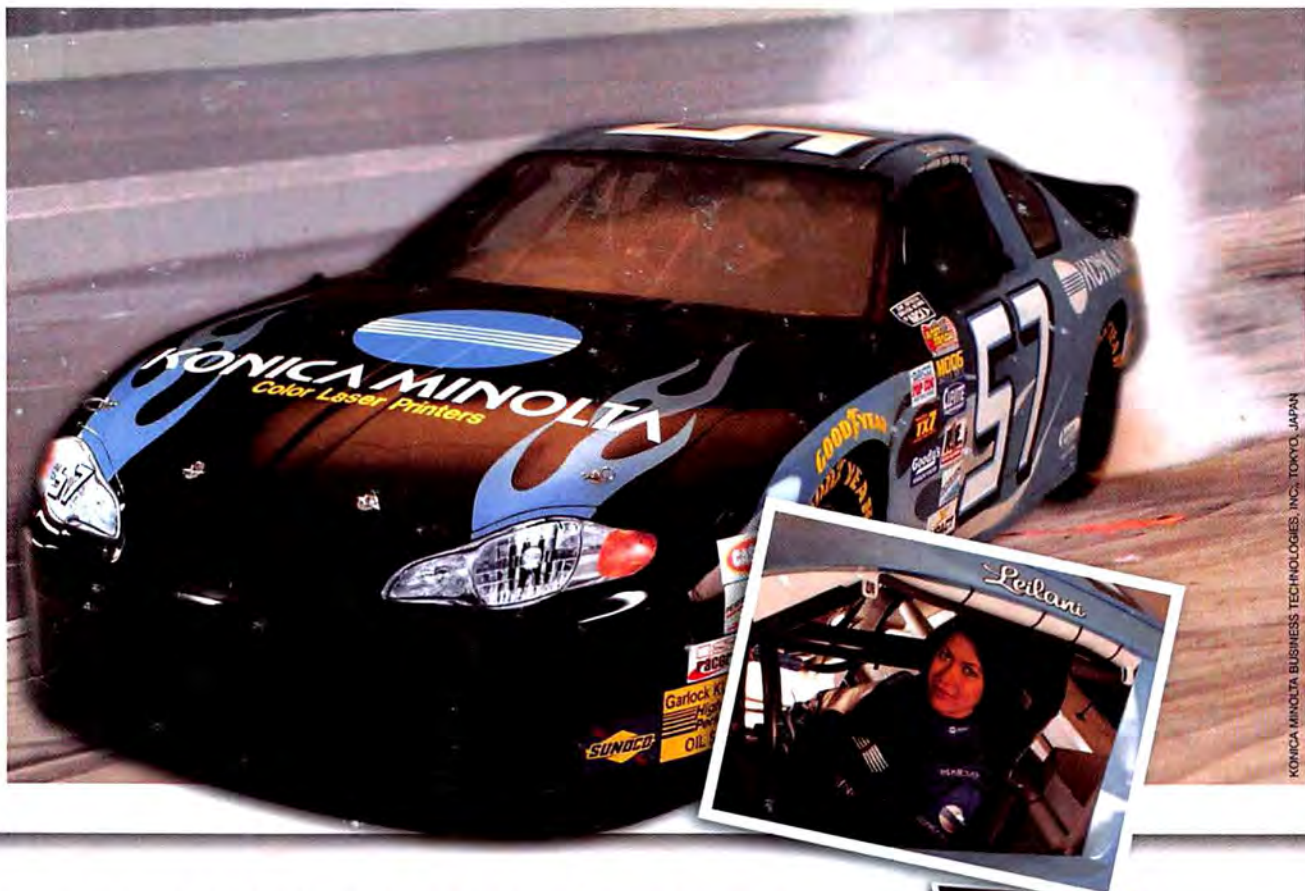
POLICY &
MANAGEMENT

SONICWALL

PROTECTION AT THE SPEED OF BUSINESS



KONICA MINOLTA

Win a Race Weekend from **KONICA MINOLTA**

KONICA MINOLTA BUSINESS TECHNOLOGIES, INC., TOKYO, JAPAN

Here's your ticket to **high-performance**
color laser printing from **KONICA MINOLTA**

Get your business on track with high-speed, quality color laser printing from KONICA MINOLTA. These high-performance printers are fast—up to 27 ppm in color and black & white. And they produce excellent color that leaves the competition in the dust. Take one for a test drive today.

Win a race weekend

Watch performance printing hit the road. Register to win a trip to the races and see #57 KONICA MINOLTA race car driver Leilani Münter take the track. Go to www.buymagicolor.com/race to qualify.



5-year, toll-free US-based support

magicolor® 5440 DL

- 27 ppm color and b&w
- 2400 x 600 dpi
- Fast Ethernet® & USB 2.0
- Windows®, Mac®, & Linux® compatible

New
Low Price

magicolor 5450

- 27 ppm color and b&w
- 9600 x 600 dpi-class quality
- Gigabit Ethernet®, USB 2.0, & parallel
- Windows, Mac, & Linux compatible
- PostScript® 3 & PCL® 6 emulations

New
Low Price

Buyers Laboratory Pick of the Year

CDW PC Connection **PC Mall** **TigerDirect.com** **ZONES**

KONICA MINOLTA

800-523-2696

buymagicolor.com

Copyright © 2006 KONICA MINOLTA PRINTING SOLUTIONS U.S.A., INC. KONICA MINOLTA and the KONICA MINOLTA logo are trademarks or registered trademarks of KONICA MINOLTA HOLDINGS, INC. magicolor is a trademark or registered trademark of KONICA MINOLTA PRINTING SOLUTIONS U.S.A., INC. All other trademarks or registered trademarks are the property of their respective owners. Specifications subject to change without notice. Photography by Phil Cavali Photography (www.philcavali.com).