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THE INDEPENDENT GUIDE TO TECHNOLOGY

NOVEMBER 30, 2004

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GPS: NEVER ASK FOR DIRECTIONS AGAIN

VIDEO EDITING 101

BUSINESS SOFTWARE
Your Guide to the Essentials

47 HOT NEW PCs

ANNUAL BUYERS' GUIDE

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AND
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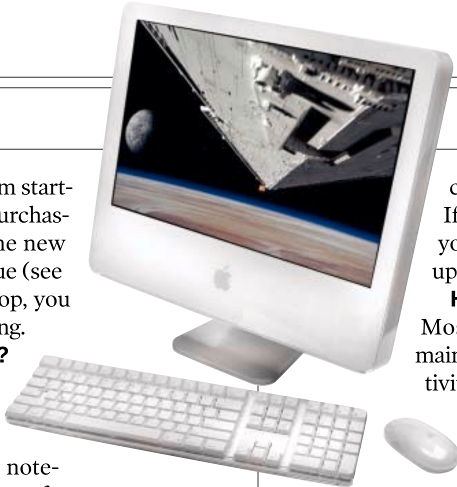
MICHAEL J. MILLER

Forward Thinking

Your Next PC

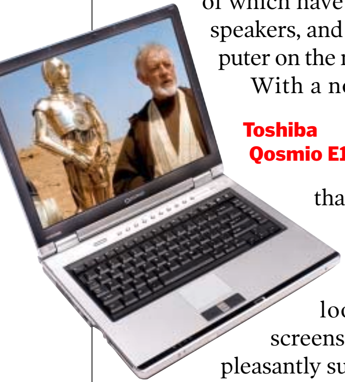
As the holidays approach, I'm starting to get questions about purchasing a new PC. We review the new holiday machines in this issue (see page 82), but before you shop, you may want to do some planning.



Apple iMac G5

Desktop or Notebook? Deciding between a desktop and notebook computer used to be easy: Only road warriors needed notebooks. But with larger screens, faster processors and graphics, and improved durability, notebooks now make sense as a primary computer even for people who move their computers only occasionally. If you're still undecided, take a look at the new high-end desktop replacement notebooks, many of which have 17-inch-wide screens, great speakers, and as much power as any computer on the market had a year or two ago.

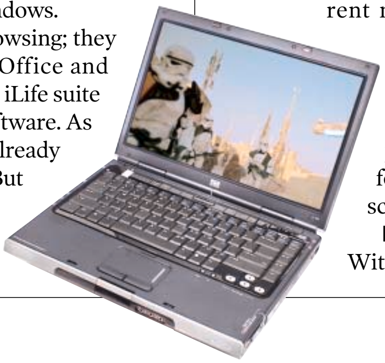
With a notebook, you get a smaller screen, a smaller keyboard, and a bit less power for a higher cost than you would with an equivalently configured desktop. But you gain portability. Go to a store and take a look at the new notebook screens and keyboards. You may be pleasantly surprised.



Toshiba Qosmio E15

Windows PC or Mac? It used to be that you'd go for a Mac if you were into graphic design and get Windows for just about everything else. While that's still true for the vast majority of people, Macs are more appealing these days because of their great industrial design and because fewer viruses, worms, and other threats target Macs than Windows.

Macs are also great for Web browsing; they run a fine version of Microsoft Office and come with Apple's well-integrated iLife suite of basic photo, music, and DVD software. As for Linux, if it's right for you, you already know it—it's really for tinkerers. But for most people, Windows still offers a much wider variety of hardware choices, software titles, and prices. If you choose Windows, make sure you get a security suite and keep it up to date.



HP Pavilion dv1000

How much power do you need? Most people will be happy with a mainstream computer for everyday activities and even for watching video or recording TV. But if you're into gaming or interested in editing video then no system is fast enough. Today's top-end games often use every bit of processing and graphics power you can throw at them, and that split-second advantage in response time can mean the difference between winning and losing.

Look for a lot of memory (at least 1GB of RAM), dual SATA hard drives in a RAID 0 array, and a high-end graphics card (something based on an nVidia GeForce 6600 or an ATI Radeon X600 or better, and no less than 256MB of on-board RAM). For even more oomph, look for PCI Express for faster graphics, an Extreme Edition Intel or AMD Athlon 64 FX processor, and maybe even two graphics cards using nVidia's SLI technology for speeding up some games.

Velocity Micro Vector SX-V

If you're into video editing, you'll want a top-end processor, a midrange graphics card, and a second large-capacity, fast hard drive for capturing, editing, encoding, and storing video files. And don't forget backup. A writable DVD is a must, but even that won't handle the huge video files you might create with video software. I recommend an external hard drive.

For just about everyone else, any one of the current machines will do. I recommend 512MB of RAM. It's an inexpensive upgrade but will improve how fast your computer feels far more than a jump in processor power. There's no reason to settle for less than a 60GB hard drive or a screen smaller than 17 inches.

Do you want a Media Center PC? With the third release of its Windows

▶

If you're into gaming, then no system is fast enough. That split-second advantage can mean the difference between winning and losing.

PHOTOGRAPHY BY THOM O'CONNOR

Forward Thinking

MICHAEL J. MILLER

eMachines M5405

Media Center Edition, Microsoft has made the operating system much more mainstream. Pick a Media Center PC if you want to sit back on the couch and control your photos and music, and record and play back TV. You can get a Media Center PC without a TV tuner, but I'm not sure why you'd bother.

For a Media Center PC, the CPU isn't crucial, but you want to make sure you have a good TV tuner (look at the quality of the monitor), a great display, and a large hard drive, since TV shows can take up a lot of space. Otherwise, Windows XP Home is fine for home users. Windows XP Professional is overkill in most home situations.

Once you've answered these questions, you can pick among the types of desktops (high-end, which includes gaming and multimedia machines; midrange; and all-in-one) and notebooks (high-end or desktop replacement, mainstream, value, and ultraportable) that we review in this issue's cover story.

While any computer today can connect you to the Web and do basic office functions, you're sure to find a lot more to do with your PC if you make the right choices up front.

A New Way to Search

We all suffer from information overload. We've got way too many e-mails, files, photos, and the like to find anything. One solution is to index all your files so you can search through them just as you would on the Web. Since Google is practically a synonym for Web searching, it's not surprising the company is offering its own personal search tool. Google Desktop is a free download that lets you search Outlook or Outlook Express e-mail messages, AOL Instant Messenger conversations, Word, Excel, and PowerPoint documents, photographs, music files, and your Web history. Like similar programs, it does this by creating an index on your hard drive. What makes Google Desktop different from other search programs is that it returns results that look just like a Google Web search.

I've been a fan of indexing programs for a long time. I'm partial to X1 at the moment, as it seems to be both the fastest and the most stable. But plenty of other choices are available, including Creo Six Degrees and Copernic. Google Desktop doesn't offer nearly as many options as these programs. For instance, I like X1's columnar display of e-mail messages, which easily lets me narrow down a search.

I realize that not everyone wants to pay for such a search tool. Google Desktop seems destined to compete with a number of free utilities designed to integrate local searching and Web searching. Competitors include blinkx and Lookout, which Microsoft recently purchased.

Some people are worried about search tools and privacy. Other people are afraid the free software will always be limited and that it will prevent the paid programs from improving. I am concerned about both issues, but I think people will put up with a lot to find things on their computers. After all, isn't that information a lot more relevant than what's on the Web?

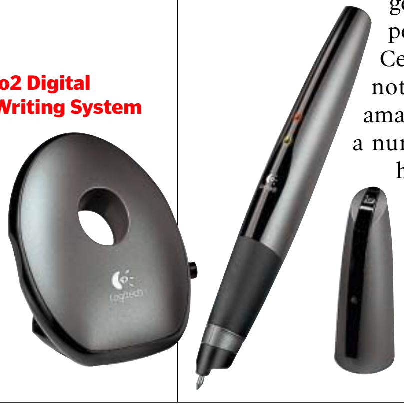
Gadgets of the Month at Digital Life

I had more fun at the recent DigitalLife show in New York than I've had at any of the big technology shows in recent years. That's mostly because we had thousands of computer users stop by our *PC Magazine* Digital Village to take a look at some of the hot gadgets for the holiday season. I expected crowds around the Media Center PCs and HDTVs, and I was not disappointed. But I was amazed at the positive reaction to a number of smaller gadgets that haven't gotten as much hype.

Packet8 showed a video phone that lets you see and talk to another video-phone user via broadband VoIP. FingerWorks showed its iGesture Pad, which looks like a touch pad you'd see on a notebook but is bigger and attached to a desktop PC. You can use this $149 device like a mouse pad, but what makes it stand out is that it interprets movements you make with your hand to perform tasks like copy, cut, and paste.

Logitech's io2 Digital Writing System is a slightly lower-tech alternative to a tablet PC. You use a special pen to write on what looks like normal paper. Then when you dock the pen to your computer, your handwriting and notes are transferred into a special program, or into Word, OneNote, or your e-mail application. I talked to a number of people who didn't want to take a notebook computer everywhere but did want to get their notes into their machines. If you get a chance, check out these products.

io2 Digital Writing System



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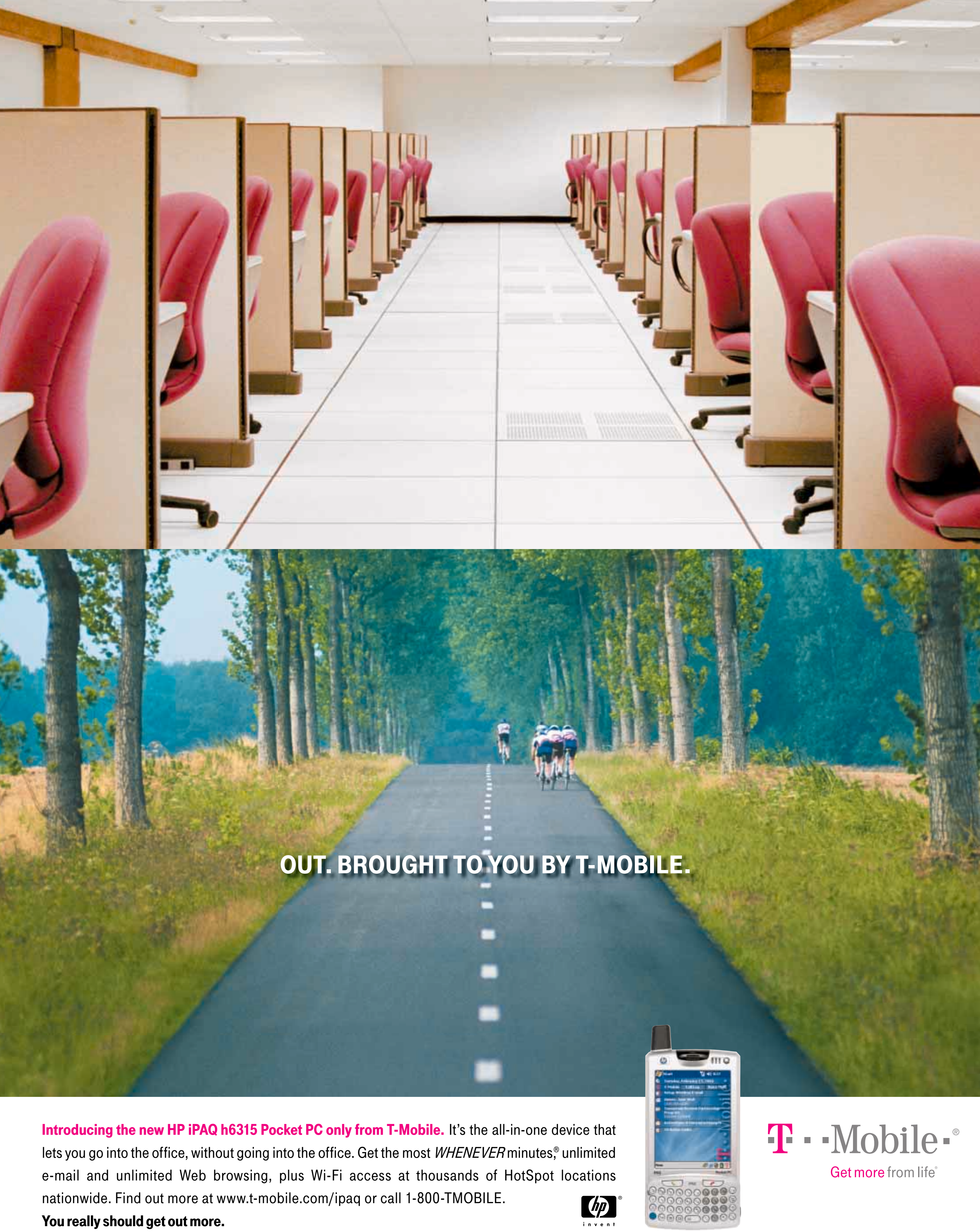

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SOFTWARE

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Running a small business can be a challenge, but there are dozens of tech products that can make the job easier and much more efficient. Our guide explores the latest software and services available to help you handle accounting and finance, employees, customers and contacts, e-commerce, and security, so you can supercharge your operation.

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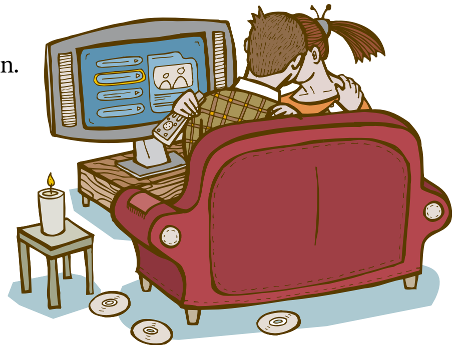

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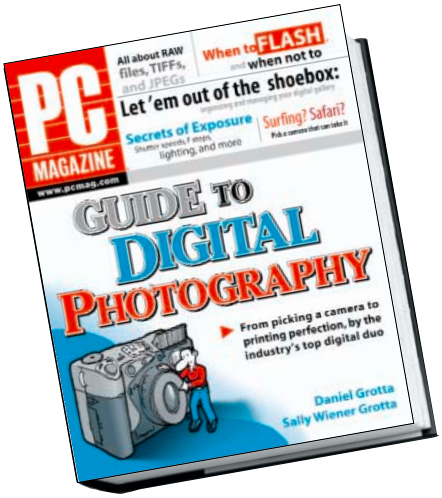
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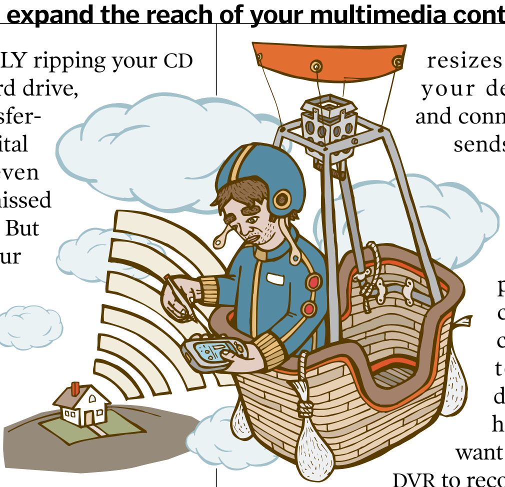
PIPELINE

TECHNOLOGY TRENDS & NEWS ANALYSIS

Your Media Files Unbound

A new service aims to expand the reach of your multimedia content.



YOU'VE BEEN DUTIFULLY ripping your CD collection to your PC's hard drive, buying songs online, transferring images from your digital camera to your PC, and even recording TV shows you missed due to your busy schedule. But what good is that when your PC is in California and you're in Cleveland?

If ORB Networks has its way, plenty. The company is rolling out a service, recently seen at New York's DigitalLife show, that gives you access to your homebound multimedia content on any device with a Web connection.

"The goal is to provide spontaneous access to your media, wherever it exists," says Jim Behrens, ORB's CEO. The impetus for the service, he says, was frustration with the growing number of multimedia file types (three leading music formats, conflicting video schemes, half a dozen image types) and access devices.

With ORB's technology, you don't have to worry about file formats; that intelligence resides within the 10MB client applet on a home PC. When pinged remotely, the client resizes the file to match your device's resolution and connection speed, then sends the file via ORB's secure server.

The communication is two-way: If you snap photos with your camera phone, you can send them back to the My Photos directory on your home PC. And if you want your Media Center DVR to record TV while you're gone, you can set it remotely.

The service, initially available only to users with Microsoft Windows XP Media Center Edition host PCs, will arrive in late November for $9.99 per month (or $79.99 per year). If all goes well, ORB will open the service to all Windows users early in 2005.

Meanwhile, Microsoft has advanced its Media Center Edition 2005 software, with an eye toward covering new Media Center Extender devices of various kinds. Next year, look for many choices when expanding the reach of your multimedia content.—*Jamie M. Bsales*

LOST AND FOUND Google is out with a prerelease version of its desktop search tool, which scours everything from Outlook e-mail to text in business applications. It will compete with offerings from AOL, Microsoft, and others. Download it at *http://desktop.google.com.*

It's a Snap

BILL GROSS, from the Idealab dot-com incubator, has a new angle on Web searches. At October's Web 2.0 conference in San Francisco, Gross unveiled a prerelease version of Snap (*www.snap.com*), a search engine that incorporates site visitor feedback and executes search refinements as you type them.

Snap puts search results into rows and columns; you can then re-sort them by clicking on column headings. For example, Popularity orders search results by how they've fared with other site visitors. The engine uses technology licensed from X1 and delivers results that vary widely from those returned by other search engines.

Snap isn't fully cooked, and Gross admits to some compatibility problems with the Firefox browser. But it seems it will give power searchers much flexibility.—*SR*

Spies Behind Bars

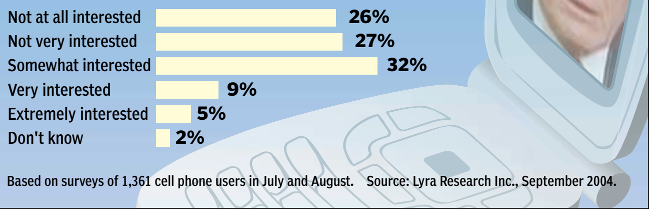
HAS YOUR BROWSER been hijacked lately? The biggest crackdown on spyware yet got underway in October when the House of Representatives overwhelmingly passed a bill declaring spyware illegal. The bill imposes stiff penalties on violators, including up to five years in prison, as well as fines.

The Internet Spyware (I-SPY) Prevention Act of 2004 outlaws accessing a computer without authorization, engaging in identity theft, impairing the security protections of a computer, and more. It also calls for $10 million to go to the Department of Justice to combat spyware and phishing scams.—*SR*

Want TV on Your Cell Phone?

Camera phone technology has caught on like wildfire, and many analysts predict that TV will be the next hot item on cell phones. But more than half of cell phone users say they are not at all or not very interested. Many cite disruptive and inappropriate phone use as a reason for their lack of interest.

U.S. Cell Phone Users Interested in Watching TV or Videos on Mobile Devices

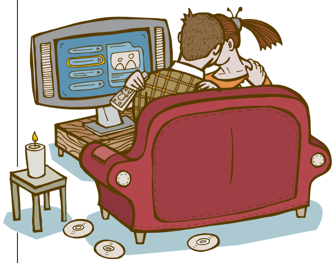


Based on surveys of 1,361 cell phone users in July and August. Source: Lyra Research Inc., September 2004.

ILLUSTRATIONS BY ALEX EBEN MEYER

Movie Date

THE LAG TIME between movie and TV screens may be shrinking. Netflix and TiVo are partnering to develop entertainment offerings, including video on demand. TiVo allows digital downloading of TV programming, while Netflix provides its Internet subscribers with rentals of over 25,000 DVDs, with titles arriving via U.S. mail. The new partnership could earn TiVo subscribers a vast new content library and offer Netflix subscribers a faster delivery process: PC to TiVo to TV.



"We really see DVDs as being a dominant force now and a more dominant one in five years," says Netflix spokesperson Shernaz Daver. "We also believe that video content distribution will be a big market for Netflix."

Hollywood might not be so eager to cooperate, though, says Akitya Kishore, senior analyst at The Yankee Group. "Major studios release their movies in a series of windows. First the theaters, then airlines, then rentals, and finally video on demand, which is 45 to 52 days after video rental."

He adds that Netflix receives its new releases in the rental window, when the studios earn the bulk of their post-theater revenue. The ways Hollywood will allow digital delivery of movie content are uncertain, but Kishore is convinced that Netflix will have to wait for the video-on-demand window.—*Karen Jones*

The 411 on SMS

TRADITIONAL 411 SERVICE is facing a new threat. Rather than dialing 411 from your cell phone to look up a number or find an address, you could try two new short message service (SMS) programs that are offering free searches. Send a text query using SMS on a cell phone, and a text reply will provide address and phone number listings. That can amount to significant savings for people paying $1.25 to call 411. On many wireless plans, SMS services are essentially free.

The king of search engines has launched the most extensive SMS 411 service: Google SMS. It provides addresses, phone numbers, and restaurant listings. Simply send a query, such as "pizza 10021," to 46645 (GOOGL on most phones) and Google SMS will reply with all the pizza parlors in that ZIP code. Furthermore, shoppers can use the service to find out product prices, wordsmiths can look up definitions, and diners can calculate tips.

"You don't want the whole damned Web on your cell phone, you just want things such as addresses, phone numbers, directions, and traffic updates," says T.J. Morey, VP of marketing for Synfonic. Synfonic offers its own free 411 SMS service. Send the state and business name to 650-430-7183, and Synfonic returns a text message with the address and phone number. It can also suggest similar businesses nearby.

If SMS and dial-pad letter sequences are still Greek to you, Synfonic has another solution. Go to *www.synfonic.com*, and set up your own shortcuts, such as S for Starbucks. That way, you can stay caffeinated and connected.—*John R. Quain*

MY BIO FILE

The FDA has approved Applied Digital's VeriChip, a rice-size, implantable RFID chip that lets a doctor swipe a handheld scanner over a patient to obtain a complete medical history. Once scanned, the chip—inserted by injection—wirelessly sends an encrypted code that allows the doctor Internet database access.

Staffers at the attorney general's office in Mexico are already "chipped" for security identification scanning. But several Christian Web sites oppose the FDA approval, calling the subcutaneous chip the Mark of the Beast.

Sharing Music and More, Freely

AS EVERYONE'S COLLECTION of digital media expands, new ways to share are arriving. Two music-minded veterans of the dot-com boom have launched an application called Grouper (*www.grouper.com*), which lets up to 30 family members or friends define a closed group for sharing photos, music, and other content. The application is free for the moment and has some unusual features, including one that allows group members to stream songs back and forth without violating copyright laws.

grouper
Welcome

Grouper CEO Josh Felser and president David Samuel cofounded Spinner, which AOL bought in 1999 for $320 million and rebranded as AOL Radio—now among the largest online broadcasters. The two cite limitations on sharing features at other services as the reason they created Grouper. "E-mails would be blocked because media files were too big," says Felser. "Burning discs or memory sticks for friends took hours and cost too much. Uploading files to Web sites was painfully slow."

Felser notes that peer-to-peer features, limited group size, and a free sharing model are Grouper's strong points. "It streams music from PC to PC, which does not violate copyright law because it's classified as a private performance," he says. "One of my frustrations with Ofoto," says Felser, "has been that I can't just let friends print out pictures stored there. They have to pay. With Grouper, they can browse thumbnails of photos on my hard drive and download whichever ones they want."—*SR*

THOUGHT INTERFACE A 100-electrode chip dubbed BrainGate, implanted in the motor cortex of a quadriplegic man, has allowed him to check e-mail and play computer games using his thoughts. More is available at *www.cyberkineticsinc.com.*

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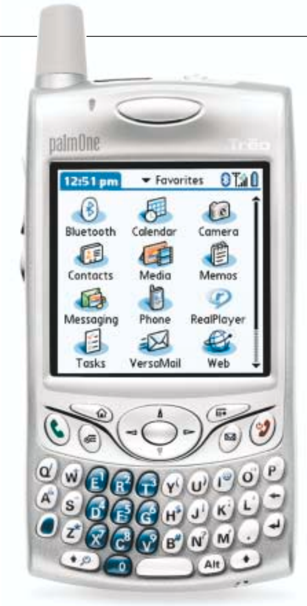
$1,999.99 direct. Hewlett-Packard Development Co., www.hp.com.

One-Touch Backup

The **Maxtor OneTouch II** external hard drive lets you easily back up photos, music, and other important data at the touch of a single button. The installation configures the software to back up automatically every day. Maxtor's new DriveLock feature allows users to password-protect the drive's contents. The bundle includes an exclusive version of Dantz's Retrospect software, which lets you restore an entire system to a previous state should a virus or other disaster strike.—*MKM*

250GB: $329.95 list; 300GB: $379.95. Maxtor Corp., www.maxtor.com.

The PDA/Phone That Does It All



Snap and share pictures, capture and view video, transfer music, photos, and videos from a desktop, play MP3s, and surf the Web with the **PalmOne Treo 650** smart phone. You can also create Microsoft Word and Excel documents, as well as increase storage capacity and add applications and peripherals using the expansion card slot. Microsoft Exchange ActiveSync enables direct corporate e-mail and calendar synchronization. Additional features include built-in Bluetooth wireless connectivity, a QWERTY keyboard, and a bright 320-by-320 color display. The new "nonvolatile" file system keeps information safe even when the unit is not charged.—*MKM*

Pricing to be determined. palmOne Inc., www.palmone.com/us.

Lightning Laser Printers

The new 25-ppm **Lexmark C760** and **C762** laser printers, as well as the scanner-equipped **X762e** MFP, are the only color laser devices rated for 1 million pages (with proper maintenance), claims the company. They can print on a variety of stock, including 36-inch-long banners. And the unique Lexmark toner resists fading, even outdoors.—*MKM*

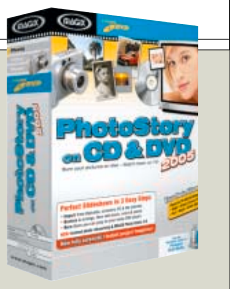
C760: $1,300 street; C762: $1,800; X762e: $7,500. Lexmark International Inc., www.lexmark.com.

Take Control of Your Media

The Logitech Harmony 680 remote is the first in this family designed specifically to control a PC running Media Center Edition. The product works seamlessly with up to 15 devices, including televisions, AV receivers, and DVD players. To program the remote, a Web wizard asks a series of questions about your components, then downloads the appropriate instructions from the Harmony Internet database through a USB connection on your PC.—*MKM*

$199.95 list. Logitech, www.logitech.com.

Stylish Slide Shows



Magix PhotoStory on CD & DVD 2005 is a 3-in-1 software package that professionally restores and edits photos, creates slide shows with music, and burns presentations to CD and DVD. You can instantly create home slide shows with the PhotoShow Maker module and burn them to DVD to share with friends. The software has lots of slide show transitions, templates, and special effects, as well as virtual camera panning and zooming, DVD menu templates, and more.—*MKM*

$39.99 list. Magix, www.magix.com.

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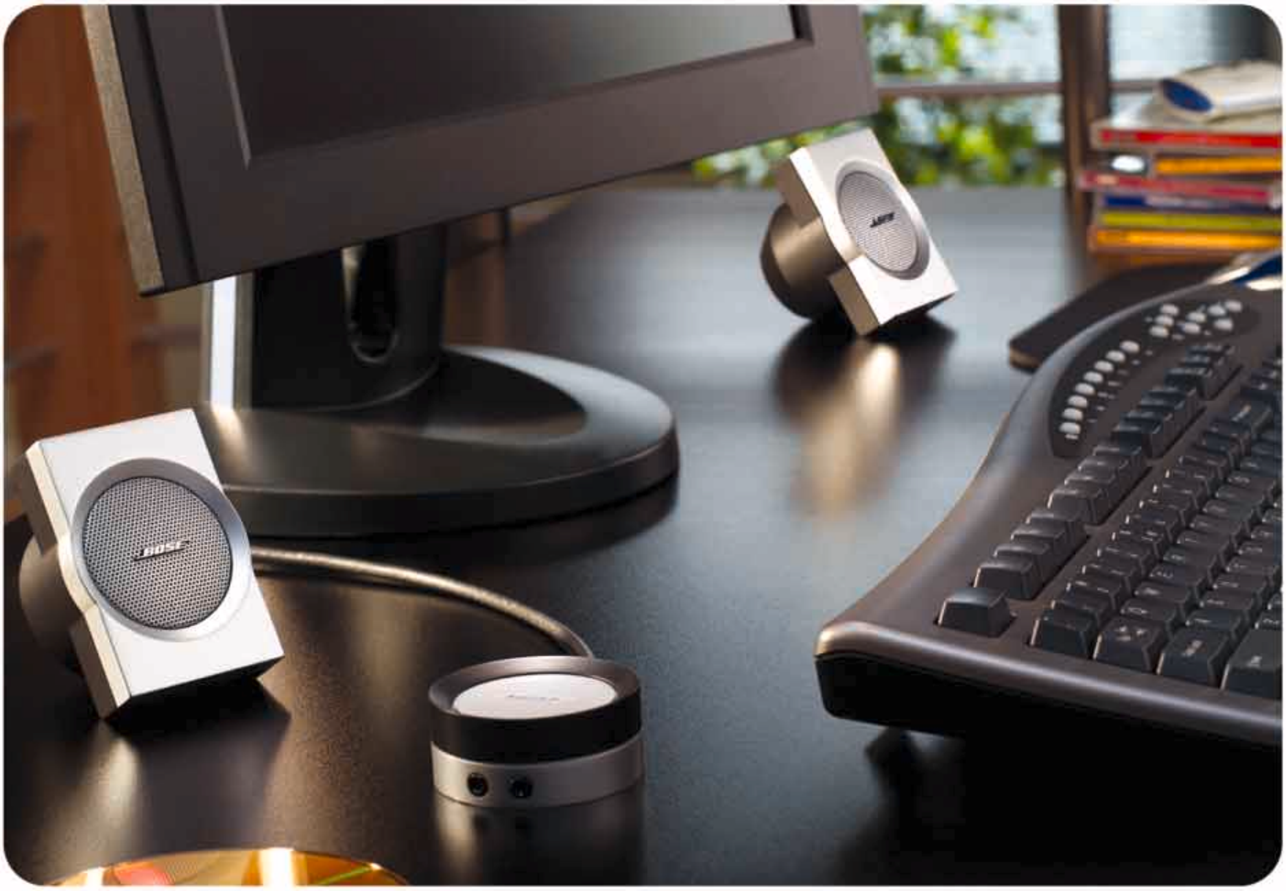

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"The Bose Companion 3 multimedia speaker system sounds a lot larger than it is…"
– Electronic House

"The Companion 3 satellites… deliver sound that doesn't play around."
– MacHome

"…worth every penny."
"…the sound quality is absolutely magnificent."
– Saskatoon Sun

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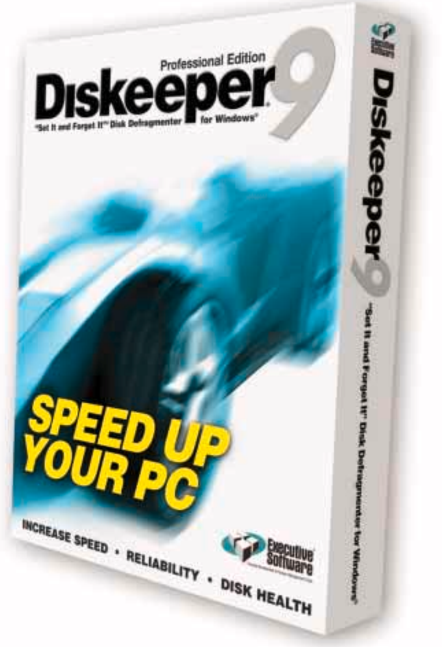
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NOVEMBER 16–NOVEMBER 29, 2004

In the market to buy? Here are our latest Editors' Choices in the leading technology categories—the products we've picked as the best from the hundreds that PC Magazine Labs has been testing. For links to the complete reviews, including dates of publication, visit www.pcmag.com/editorschoice.

DESKTOP PCs & SERVERS

GAMING DESKTOPS
- Falcon Northwest FragBox Pro
- NEW Falcon Northwest Mach V
- NEW Polywell Poly 939N-FX55

MULTIMEDIA DESKTOP
- NEW Dell Dimension 8400

MEDIA CENTER PC
- HP Media Center Photosmart PC m1050y Series

ALL-IN-ONE
- Apple iMac G5

MIDRANGE PC
- NEW Velocity Micro Vector SX-V

SMALL-BUSINESS PC
- IBM ThinkCentre A50p

CORPORATE PC
- IBM ThinkCentre S50

ENTRY-LEVEL SERVER
- IBM eServer xSeries 306

ENTERPRISE SERVER
- Dell PowerEdge 2850

PORTABLE PCs

BUSINESS NOTEBOOKS
- Acer Travelmate 8000
- HP Compaq nc6000

ULTRAPORTABLE NOTEBOOK
- IBM ThinkPad X40

MULTIMEDIA NOTEBOOKS
- HP Pavilion dv1000
- Toshiba Qosmio E15

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- Apple iBook
- NEW eMachines M5405

eMachines M5405

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- Motion Computing M1400
- Toshiba Portégé M205-S809

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- HP iPaq hx4700
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Dell Dimension 8400

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PHONES
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HOME ENTERTAINMENT

MEDIA HUBS
- Creative Sound Blaster Wireless (music)
- Prismiq MediaPlayer
- Turtle Beach AudioTron AT-100 (music)

DIGITAL VIDEO RECORDER
- SnapStream Beyond TV 3

HDTVs
- NEC PlasmaSync 61XM2+/S
- Sharp Aquos 37-inch LCD TV

CAMERAS

ULTRACOMPACT
- Sony Cyber-shot DSC-T1

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- Casio Exilim Pro EX-P600
- Kodak EasyShare LS743

SUPERZOOM
- Olympus Camedia C-765 Ultra Zoom

ENTHUSIAST
- Konica Minolta DiMage A2
- Leica Digilux 2
- Olympus C-5060 Wide Zoom
- Olympus C-8080 Wide Zoom

DIGITAL SLR
- Canon EOS 20D

CAMCORDERS
- Canon Optura 400
- JVC GR-D33US
- Sony DCR-DVD201 DVD Handycam
- Sony DCR-HC40 MiniDV Handycam

DIGITAL IMAGING

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- Microtek ScanMaker 6100 Pro

IMAGE EDITORS
- Adobe Photoshop CS (pro)
- NEW Adobe Photoshop Elements 3.0 (consumer)

PHOTO ALBUM SOFTWARE
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PHOTO SHARING
- OurPictures
- smugmug

PHOTO-PRINTING SERVICE
- Shutterfly

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CD-/DVD-BURNING SUITE
- Roxio Easy Media Creator 7

DVD AUTHORING
- Sonic MyDVD Studio 6
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PORTABLE AUDIO
- Altec Lansing inMotion
- Apple iPod
- Apple iPod Mini
- Belkin Digital Camera Link
- Delphi XM Roady2
- iRiver H140
- Samsung Yepp YP-T5V

SOUND CARD
- Creative Sound Blaster Audigy 2 ZS

SPEAKERS
- Creative Gigaworks S750
- Klipsch ProMedia GMX D-5.1

PC MEDIA PLAYER
- Microsoft Windows Media Player 10

MUSIC STORE
- Napster 2.0

Audiovox SMT 5600

WEBCAM
- Logitech QuickCam Pro

MOUSE
- Logitech MX1000 Laser

PRINTERS

PERSONAL PRINTERS
- Canon Pixma iP4000
- Lexmark C510n (color laser)
- Samsung ML-2250 (laser)

PERSONAL AIOs
- Brother MFC-3420 (ink jet)
- Brother MFC-8420 (laser)
- Canon MultiPass MP390 (ink jet)

PHOTO PRINTERS
- Canon i9900 Photo Printer
- Epson PictureMate
- Epson Stylus Pro 4000

NETWORK PRINTERS
- HP Color LaserJet 4650n
- HP LaserJet 9000dn
- Xerox Phaser 4500DT
- Xerox Phaser 7750DN

DISPLAYS & STORAGE

BUSINESS DISPLAYS
- Envision EN7220
- IBM ThinkVision C220p
- NEC MultiSync LCD1960NXi

BUSINESS PROJECTOR
- Sony VPL-CX85

GAMING GRAPHICS CARDS
- ASUS V9999 Ultra Deluxe
- ATI Radeon 9800 XT

MAINSTREAM GRAPHICS CARD
- PNY Verto GeForce 5700 FX Ultra

DVD BURNERS
- BenQ DW830A 8X DL

▶

EDITORS' CHOICES

NOVEMBER 16–NOVEMBER 29, 2004

- HP DVD Movie Writer dc4000
- Memorex True 8X External Dual Format Recorder
- Pioneer DVR-A07XL

EXTERNAL DRIVES

- Transcend 1.8" Portable Hard Drive
- Western Digital Media Center
- WiebeTECH Fire800

REMOVABLE STORAGE

- Iomega Rev 35

NETWORKABLE STORAGE

- Buffalo LinkStation Network Storage Center

PORTABLE PHOTO STORAGE

- Micro Solutions RoadStor

PRODUCTIVITY SOFTWARE

OFFICE SUITE

- Microsoft Office 2003

OCR

- ScanSoft OmniPage Pro 14 Office

PDF CREATION

- Adobe Acrobat 6.0
- FinePrint pdfFactory PRO 1.57
- Jaws PDF Creator 3.0

DOCUMENT MANAGEMENT

- ScanSoft PaperPort Pro 9 Office

DESKTOP PUBLISHING

- Adobe InDesign CS

FINANCE & ACCOUNTING

- Microsoft Money Premium 2005
- QuickBooks Premier 2004
- QuickBooks SimpleStart

WEB SITE CREATION

- NeoVerve StoreSense

WEB RESEARCH

- Amplify
- enLighter Retriever
- Onfolio Professional

MEDIA CREATION SUITE

- Roxio Easy Media Creator 7

E-MAIL CLIENT

- Microsoft Outlook 2003

VIDEOCONFERENCING

- SightSpeed Video Messenger
- ViditTel

WEB COLLABORATION

- Intranets.com

DATABASE

- FileMaker Pro 7

BLOG/WIKI TOOLS

- EditMe
- Socialtext Workplace 1.0
- TypePad

UTILITIES

ANTIVIRUS

- Norton AntiVirus 2005

FIREWALLS

- Norton Personal Firewall 2005
- ZoneAlarm Pro 5

SECURITY SUITES

NEW Norton Internet Security 2005

- ZoneAlarm Security Suite 5

ANTISPYWARE

- Ad-Aware SE Plus 1.0.2
- SpySweeper 3.0

ANTISPAM

- Cloudmark SpamNet 2.5
- MailFrontier Desktop 4.0
- Qurb

POP-UP BLOCKER

- PopUp Cop

INSTANT MESSAGING

- MSN Messenger 6.1

FILTERING/MONITORING

- Cybersitter 9.0
- Spector Pro 5.0
- The Children's Internet

ANONYMIZER

NEW GhostSurf 2005 Platinum

FILE COMPRESSION

- PKZip 8.0 for Windows
- StuffIt Deluxe 8.0

BACKUP

- IBackup
- Retrospect Pro 6.5

ROLLBACK

- Norton GoBack 3.0

DISK IMAGING

- Symantec Ghost 9.0

PARTITIONING

- PartitionMagic 8.01

DEFRAGGERS

- Diskeeper 8.0 Pro
- PerfectDisk 6.0

REMOTE ACCESS

- LapLink Everywhere 3.0

FILE MANAGER

- Novatix ExplorerPlus 6.1

MIGRATION

- Alohabob PC Relocator Ultra Control
- Desktop DNA Pro 4.7

TOOLBARS

- Dogpile
- Google Toolbar

DESKTOP CUSTOMIZATION

- Object Desktop 2004

DOWNLOAD MANAGER

- DownloadStudio 1.0

SCREEN CAPTURE

- SnagIt 7.0.3

FILE VIEWER

- IrfanView 3.85

VIRTUAL PC

- VMware Workstation 4.5

PASSWORD MANAGER

- AccountLogon 2.5

ENTERPRISE SOFTWARE & DEVELOPMENT

NETWORK ANTIVIRUS

- Trend Micro Enterprise Protection Strategy

ENTERPRISE ANTISPAM

- BrightMail Anti-Spam 5.1
- Postini Perimeter Manager

E-MAIL SERVER PLATFORM

- IBM Lotus Notes and Domino 6.5

WIRELESS PLATFORM

- GoodLink 3.0

WEB FILTERING

- Websense Enterprise 5.1

CRM

- salesforce.com Enterprise Edition

DATABASE

- Oracle 9*i* Database

Norton Internet Security
Block Traffic
LiveUpdate
Options
Help & Support
Norton Internet Security
Status & Settings
Outbreak Alert
Statistics
Subscription Status
User Accounts
Norton AntiVirus
Norton AntiSpam
Turn Off
Check Security
symantec.
Norton Internet Security 2005

System Status: OK

Security On
Outbreak Alert On
Personal Firewall On
Intrusion Detection On
Norton AntiVirus On
Norton AntiSpam
Settings for: Supervisor
Privacy Control On
Parental Control Off

Internet Security
Norton Internet Security protects your computer from Internet threats.
More Info

Norton Internet Security 2005

WEB CONFERENCING

- WebEx Meeting Center

ENTERPRISE DEVELOPMENT

NEW Borland JBuilder 2005

- IBM WebSphere Studio Device Developer 5.6 (mobile)
- SQL Anywhere Studio 9 (mobile)

WEB SITE DEVELOPMENT

- Macromedia Contribute 3
- Macromedia Studio MX 2004

WEB SITE ANALYSIS

- WebSideStory HBX
- WebTrends 7 Enterprise

VULNERABILITY SCANNER

- Retina Network Security Scanner

NETWORKING

SERVER OS

- Microsoft Windows Server 2003 Enterprise Edition

WIRELESS INFRASTRUCTURE

- Cisco Aironet 1200
- D-Link DCS-5300G 802.11g Internet Camera
- Hawking HWPS12UG (print server)
- Linksys Wireless-G WRT54GS (802.11g)
- Netgear ProSafe-FWAG114 (802.11a/g)
- 3Com Office Connect Wireless 54Mbps 11g Travel Router

SECURITY APPLIANCE

- ServGate EdgeForce

REMOTE-ACCESS APPLIANCE

- Neoteris Access 1000

GEAR & GAMES

HOME AUTOMATION

- X10 ActiveHome Professional

SIMULATION

- Microsoft Flight Simulator 2004
- The Sims 2

ACTION/COMBAT

- Battlefield Vietnam
- Far Cry
- Halo: Combat Evolved
- Orbz 2
- Savage: The Battle for Newerth

SPORTS

- Madden NFL 2005

REAL-TIME STRATEGY

- Rise of Nations: Thrones and Patriots

VIRTUAL WORLD

- Second Life

ONLINE GAME

- EverQuest: Evolution

MOBILE GAME

- Bejeweled

EDUCATION

- eMedia Beginner Guitar Method 3.0
- Math Mission: The Race to Spectacle City Arcade, The Amazing Arcade Adventure
- VTech V.Smile Learning System, Smartbridge Library
- Zoombinis Island Odyssey

REFERENCE & HOBBIES

- Coin Collector's Assistant Plus
- Microsoft Encarta Reference Library 2005
- Sonicfire Pro 3.2
- Visual Thesaurus

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FIRST

HANDS-ON TESTING OF NEW PRODUCTS • www.pcmag.com/first looks

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44 Norton Internet Security 2005
46 Dell Axim X50
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Surf in Secret

THE MAGAZINE
WORLD'S LARGEST
COMPUTER-TESTING
FACILITY

BY CADE METZ

By now, you know. They're watching you. As you surf the Web, it's ridiculously easy for someone to track your activity. The sites you visit can track you, and worse still, your IT administrator can track you. • If you want your private behavior to remain private, you need a utility that can camouflage your Internet traffic and keep your surfing anonymous. Here, we review a quartet of anonymity apps: Anonymizer 2004, Bypass, GhostSurf 2005 Platinum, and Steganos Internet Anonym Pro 7. All four operate in the same basic way. When you make a Web request, rather than sending it straight to the site you're trying to visit, thse apps first route it through a remote proxy server, masking your IP address in the process.

The request still goes through your normal proxy server, but your ultimate destination is hidden, so your administrator (or other party who might be snooping on the line) can't easily track where you're surfing. And since your IP address is masked, third-party sites can't track you. For further protection, Anonymizer, Bypass, and GhostSurf will actually encrypt your requests, so not even someone listening in on the wire can track you.

Anonymizer 2004

The name says it all. Anonymizer keeps your Web requests anonymous—and that's about it. Each time you make a call to the Web, Anonymizer routes it through the company's private proxy servers, masking your IP address. If you like, you can even encrypt each request with 128-bit Secure Sockets Layer (SSL) encryption, so not even someone listening on the wire can snoop on your Web traffic.

Yes, this means that a single organization is handling all your Web activity. But the company insists that, although all your requests go through its servers, nothing is ever written to disk, and hence there is no permanent record. Even if the company were subpoenaed, it claims, it wouldn't be able to divulge any information about you.

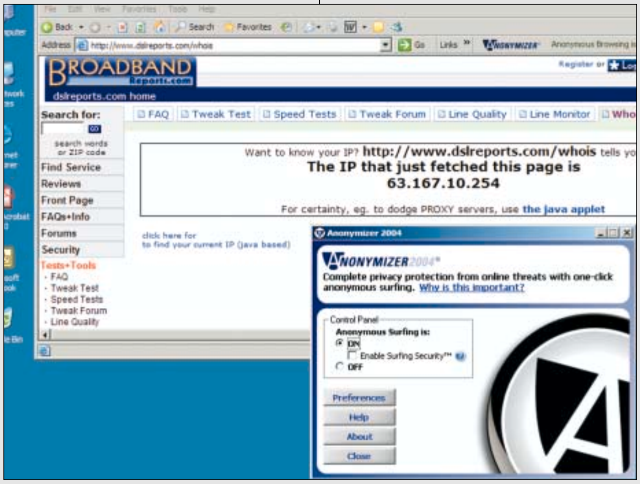
For the most part, during testing at PC Magazine Labs, the app performed as it should, correctly masking and encrypting our Web requests. But it did malfunction when we tried to use Outlook Web Access, a Web-based e-mail application. This was not a known bug, but the company says it will soon be fixed. And in the grand scheme of things, this is no more than an annoyance. There's little need to hide your IP from your own e-mail server, and you can always turn off Anonymizer when accessing it. (Still, GhostSurf's solution—to let you set the app to ignore particular sites—is preferable.)

Turning Anonymizer on and off is a breeze. You can do so from a button integrated with your Web browser or from a standalone window. The app's price ($29.99 for a year's subscription) is reasonable, but doesn't compare well with the one-time fee of $49.95 asked by GhostSurf (our favorite tool in this category).

And unlike competitors, Anonymizer doesn't include any additional privacy tools, such as an Internet trace cleaner or a spyware detector. For those, you'll have to upgrade to Anonymizer Safe Surfing Suite ($49.99 a year). For even more protection, Anonymizer Total Net Shield ($99.95 a year) does all that the other two utilities handle, and also masks e-mail, IM, and newsgroup traffic; blocks pop-up windows; and filters spam.

Anonymizer 2004

$29.99 per year. Anonymizer Inc., www.anonymizer.com. ●●●◐○



File Edit View Favorites Tools Help
Back Search Favorites
Address http://www.dslreports.com/whois
Go Links Anonymizer Anonymous Browsing
BROADBAND Reports.com
Register or Log
dslreports.com home
Search for:
GO
search words or ZIP code
Find Service
Reviews
Front Page
FAQs+Info
Forums
Security
Tests+Tools
FAQ
Tweak Test
Speed Tests
Tweak Forum
Line Quality
FAQ
Tweak Test
Speed Tests
Tweak Forum
Line Quality
Line Monitor
Who
Anonymizer 2004
ANONYMIZER 2004
Control Panel
Preferences
Help
About
Close

Want to know your IP? http://www.dslreports.com/whois tells yo

The IP that just fetched this page is
63.167.10.254

For certainty, eg. to dodge PROXY servers, use the java applet

click here for
to find your current IP (java based)

Complete privacy protection from online threats with one-click anonymous surfing. Why is this important?

Anonymous Surfing is:
● ON
☐ Enable Surfing Security™
○ OFF

ANONYMIZER'S SIMPLE UI reflects this utility's simplicity: It does one thing, and it does it well. So if all you want is anonymous surfing and not much else, take a look at this utility.

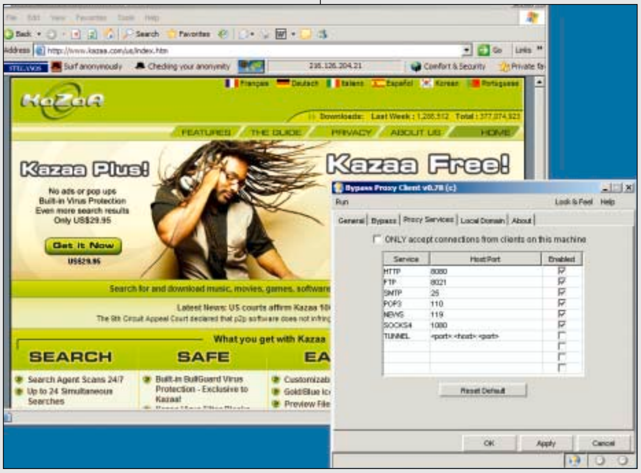
PHOTOGRAPHY BY THOM O'CONNOR

LOOKS

WHAT THE RATINGS MEAN: ●●●●● EXCELLENT | ●●●●○ VERY GOOD | ●●●○○ GOOD | ●●○○○ FAIR | ●○○○○ POOR

46 Nokia 3205, Sony Ericsson K700i
46 Kyocera SoHo/KX1
48 Archos Gmini 400, Rio Carbon
48 Zipper HD 2.2GB
48 BTO Plusdeck2
48 MSN TV 2
50 Microsoft Virtual Server 2005 Enterprise Edition
50 JBuilder 2005 Enterprise
52 Ricoh Aficio CL7100D
52 Princeton SENergy 914
52 HP LaserJet 1160
52 Samsung SyncMaster 173mw
52 NEC MultiSync LCD1735NXM

RED denotes Editors' Choice.



☐ ONLY accept connections from clients on this machine

Service	Host:Port	Enabled
HTTP	8080	☑
FTP	8021	☑
SMTP	25	☑
POP3	110	☑
NEWS	119	☑
SOCKS4	1080	☑
TUNNEL	<port>:<host>:<port>	☐
		☐
		☐
		☐

BYPASS LETS you get around IT department restrictions and even features 128-bit encryption. So if other anonymizer sites are blocked, Bypass can still let you surf in private.

Bypass Proxy Client 0.78

What if your IT administrator or a public ISP (say, at a hotel) gets wise to the anonymity market? What if these entities start blocking access to the proxy servers run by companies like Anonymizer and GhostSurf? Well, we wholeheartedly encourage you to abide by your company's IT policies. But since you asked, there is a way around them: Bypass Proxy Client 0.78.

Much like Anonymizer and GhostSurf, the Bypass Proxy Client encrypts your Internet requests and reroutes them through its own servers. But in addition to offering the client, the company offers Bypass Portal Server, letting you set up your own remote proxy server on another machine. You can route all requests through, say, your home machine before sending them on to Bypass's servers, and IT will be none the wiser.

Not only that, Bypass can reroute all sorts of Internet traffic—not just HTTP requests. It handles FTP, SMTP, POP3, NEWS, SOCKS4, and SOCKS5, so it can anonymously reroute nearly everything you do on the Web, from newsgroup to P2P file-sharing requests.

Unfortunately, this powerful application isn't for novices. When you set up the client, you'll have to change a few settings on your Web browser and any other client you wish to mask requests from. And unless you carefully read the support page on the company's Web site, you won't realize this is necessary. Needless to say, setting up the proxy server to reroute requests to your own machine is even more difficult.

Bypass is a subscription service. If you pay $5.95 a month, you can transfer 50MB of data per day at speeds of up to 120 Kbps. For $9.95 a month, you can transfer 100MB at 200 Kbps. There's a free option as well, but it's almost too slow to use, and it restricts you to only two transfer protocols at a time. If you're a hardcore, advanced Internet user and you can afford the $10 a month, Bypass is the way to go. If not, you should probably look elsewhere.

Bypass Proxy Client 0.78

$5.95 per month (for up to 50MB of data per day), $9.95 per month (100MB per day). Guruworks Inc., www.bypass.cc.

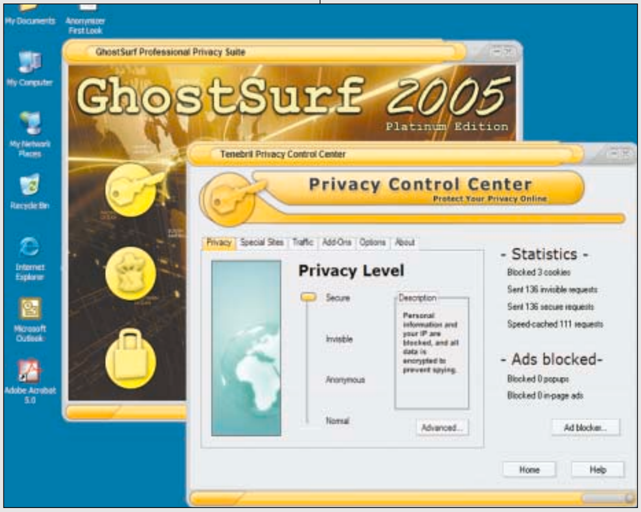
●●●●○

GhostSurf 2005 Platinum

With our Editors' Choice in this group, anonymity is just the beginning. In addition to masking your IP address, GhostSurf 2005 Platinum provides all sorts of additional privacy tools, including a full copy of the company's standalone antispyware application, SpyCatcher.

When Tenebril first introduced GhostSurf in 2001, the app masked your IP address by routing your requests through various public servers, much as Steganos Internet Anonym Pro 7 (reviewed here in a sidebar) does. The company soon switched, however, to its own, private servers for GhostSurf, claiming that public servers were not only hard to trust but often terribly unstable. The new private server method—also favored by Anonymizer 2004—works beautifully. If you like, you can even encrypt your Internet requests, hiding them from anyone who might listen on the wire. All your traffic does travel through Tenebril's server, but the company claims nothing is ever cached.

The app can mask not only your Web requests, but also IM messages. And with two



Description: Personal information and your IP are blocked, and all data is encrypted to prevent spying.

- Statistics -
Blocked 3 cookies
Sent 136 invisible requests
Sent 136 secure requests
Speed-cached 111 requests

- Ads blocked-
Blocked 0 popups
Blocked 0 in-page ads

IN ADDITION TO anonymous surfing, GhostSurf 2005 Platinum Edition provides ad blocking (via the company's SpyCatcher utility), spyware blocking, and more—all for a reasonable price.

free software add-ons, it can mask newsgroup and IRC traffic. Conveniently (and unlike the other anonymity tools we've tested), the app even lets you compile a list of Web sites where you *don't* want your identity masked. In some cases, you'll want a site to know who you are so they can customize content, store certain information on your behalf, or provide special services. With this feature, you avoid the tedium of continually switching your anonymity utility on and off.

GhostSurf also provides several other privacy tools. Its AdArmor tool can block pop-up windows, ActiveX controls, and other scripts. The TracksCleaner tool lets you erase local traces of Internet activity. And Personal Data Vault lets you hide all your system passwords and other sensitive system data behind heavy encryption. It also lets you "shred" electronic documents, so they can't be recovered from your hard drive. You can even use the Personal Data Vault as a backup tool, saving encrypted data to removable media or external drives.

Even better, the company includes its SpyCatcher module ($29.95 if purchased separately) to keep spyware at bay. This utility scans your hard drive and identifies known spyware programs that have already infiltrated your system, then flags new threats as you surf.

The one item missing is a tool to encrypt e-mail traffic (which Anonymizer offers in an add-on module). Still, all told, GhostSurf 2005 Platinum is quite a bargain.

GhostSurf 2005 Platinum

$49.95 direct. Tenebril Inc., www.tenebril.com. ●●●●◐

Private Surfing in the Public Eye

You could call it public privacy. Unlike the other three products reviewed here, **Steganos Internet Anonym Pro** *doesn't* route your Web requests through its own servers. Instead, it routes them through myriad *third-party* servers. This is a good thing, and a bad thing. On the one hand, no single organization can track your behavior in full. On the other, several organizations can track your behavior in part, and you have no way of knowing how trustworthy they are.

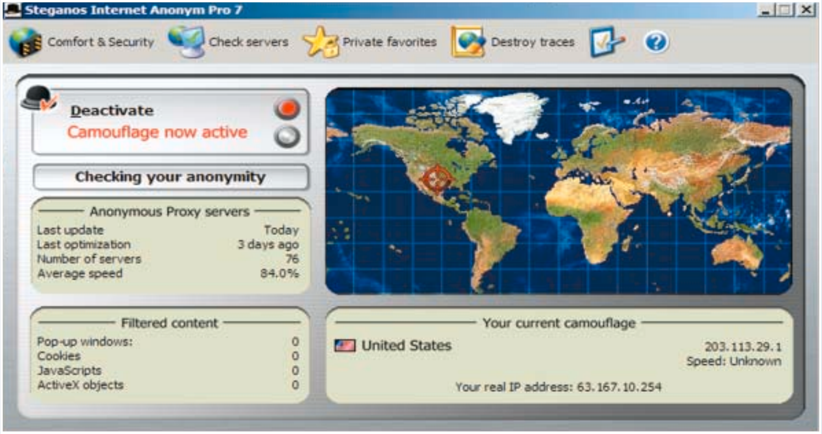
Steganos is a wonderfully slick app offering all sorts of privacy tools. But, before purchasing, you should realize that it taps into public servers you have no way of knowing anything about. Moreover, the use of third-party servers means your data can't be encrypted. Someone listening on the wire could still track your behavior.

When you first install the product, it immediately trolls the Web and establishes a list of available proxy servers it can use to mask your identity. This took a good half hour when we tested the app at PC Magazine Labs, but once the list is established, you can hide your Web identity simply by clicking a button. At first, the app will, say, route your requests through a proxy in France. Then it switches to one in the Netherlands. Then one in Spain. And so on.

If you like, you can instruct the app to settle on just one server, but playing proxy roulette is the way to go. If one server goes down, the app simply switches to another. Your browser performance does slow down noticeably at first, but the more you run Steganos, the faster it gets. Unfortunately, a few days after installation, we ran into a few performance issues above and beyond the normal browser slowdown. On two different machines, the app seemed to seriously interfere with our Internet—not only when it was up and running but when it was completely closed out. On one machine, it seemed to put a drag on our browser that made it all but unusable and severely crippled our Outlook client. On the other, it unexpectedly interfered with certain Web scripts and downloads. Only uninstalling the product fixed the issues. The company says it frequently encounters "incompatibility" problems with the product, that "in order to support any possible outbound HTTP traffic Internet Anonym has to wire itself deeply into the network components of Windows and this is a very fragile and delicate area."

Steganos integrates with your browser, but you can also run it as a standalone window. And in either case, you can see where your requests are being routed, the app displaying a map of the world and a flashing icon that points to your current proxy server. More important, Steganos includes all sorts of other privacy tools. You can change your browser ID. You can disable all cookies, ActiveX controls, and various other scripts. And you can even encrypt your favorites, in case someone comes snooping around your machine.

The $59.95 Pro version of the product also includes a free copy of Steganos Internet Trace Destructor, which not only can destroy local traces of your Internet activity, but can irrevocably shred documents sitting on your hard drive.—*CM*



Camouflage now active

Anonymous Proxy servers

Last update Today
Last optimization 3 days ago
Number of servers 76
Average speed 84.0%

Filtered content

Pop-up windows: 0
Cookies 0
JavaScripts 0
ActiveX objects 0

Your current camouflage

United States 203.113.29.1
Speed: Unknown

Your real IP address: 63.167.10.254

STEGANOS INTERNET ANONYM PRO 7 routes your Web requests through myriad public servers, keeping your surfing private by keeping snoopers guessing.

Steganos Internet Anonym Pro

$59.95 direct; $29.95 for Standard version, which lacks Internet Trace Destructor 7. Steganos GmbH, www.steganos.com. ●●●◐○

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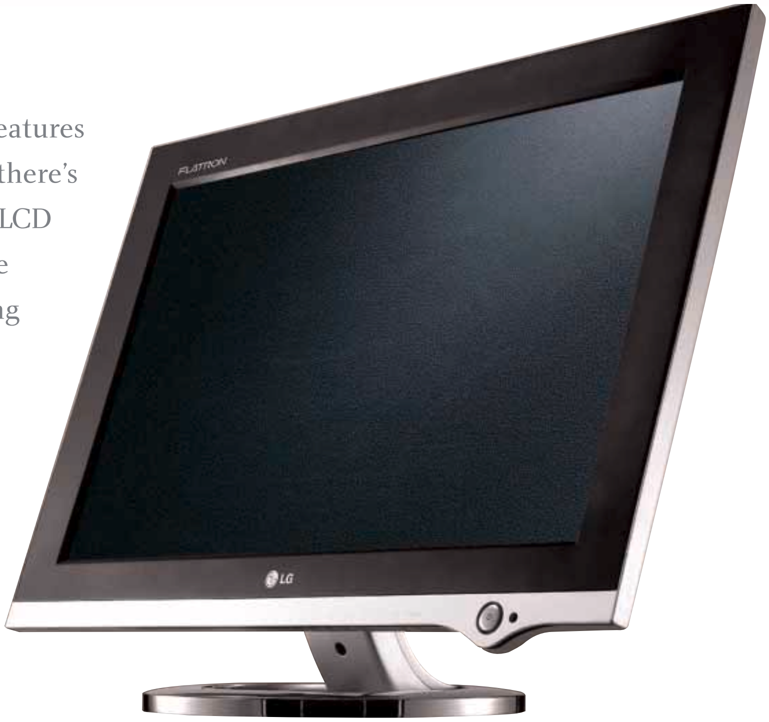

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Life's Good

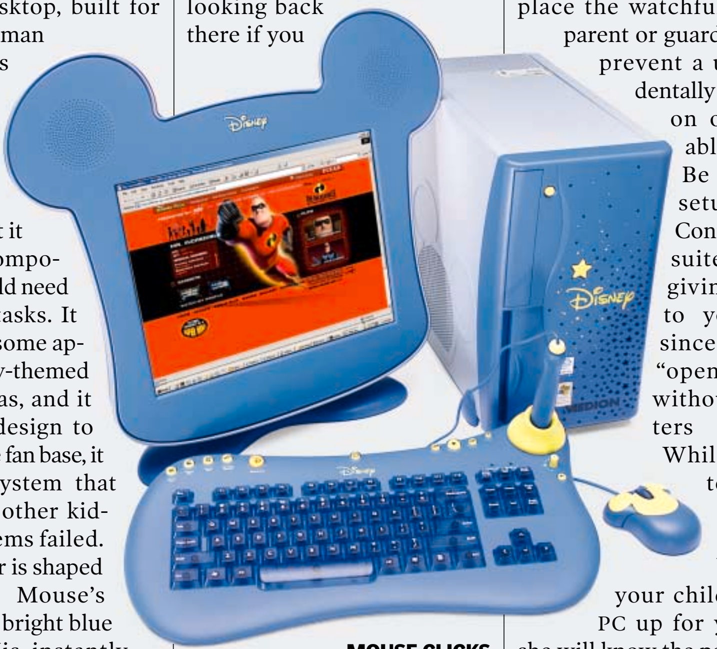
Disney's Vision of a Kid-Friendly PC

BY JOEL SANTO DOMINGO

If you have a child between the ages of 4 and 12, Disney is already a big part of your life—Disney movies, the Disney Channel, Radio Disney, and now (the company hopes) the **Disney Dream Desk PC**. This affordable desktop, built for Disney by German electronics giant Medion, won't blow anyone away with its performance or feature set, but it has all the components you would need to run basic tasks. It also includes some appealing Disney-themed software extras, and it has a funky design to boot. Given the fan base, it could be a system that works where other kid-oriented systems failed.

The monitor is shaped like Mickey Mouse's head, albeit in bright blue silhouette. His instantly recognizable ears sit prominently atop the 15-inch LCD and house the speakers, and while they can't crank tunes to an ear-splitting level, they do a decent job with game and music playback. Conceived by frog design (the firm responsible for the Disney-branded electronics seen in Target and Circuit City as well as countless other products), the monitor will attract younger would-be users, but older kids might feel it's too babyish. If your kids are in the 8-to-12 age bracket, you might want to delete the monitor from the build sheet and put the $299 toward a cooler (read: regular-looking) display. Aside from the monitor's look, we found its image quality a little washed-out compared with that of other 15-inch screens.

The system chassis is a squat tower (in a kid-friendly blue and yellow) that fits nicely behind the display for an all-in-one look. The sliding door on the back of the case keeps inquisitive fingers away from the cables and ports (including the power cable), but don't bother looking back there if you want to turn on the system. We've seen a few adults have trouble finding the ingeniously "hidden in plain sight" power button on the front of the case. (Hint: It's the large yellow star in the field of stars.)



MOUSE CLICKS
Disney's Dream Desk is perfect for (filtered) Web surfing and educational games for tots.

One creativity-inspiring extra is the included optical pen. Much like a tablet/pen combo seen on graphic artists' desks, this pen is actually designed to "draw" on your desk or the included mouse pad. The pen works fine with the included Disney Pix drawing software, making it easy and intuitive for kids to sketch on the PC.

The Dream PC is ready for both dial-up and broadband Internet with a built-in modem and Ethernet port for cable modem or DSL setups. The system comes with the ContentWatch suite of Internet protection products, including Web filtering, e-mail, and pop-up protection components. While the suite can never replace the watchful eye of a parent or guardian, it can prevent a user accidentally stumbling on objectionable content. Be sure to setup the ContentWatch suite before giving the PC to your kids, since it comes "open" (that is, without any filters set up). While the filtering is enabled out of the box, if your child sets the PC up for you he or she will know the password to get into the ContentWatch settings and will thus be able to get around the suite's content-blocking system.

You can also set up the ContentWatch suite to notify you via e-mail if there are repeated attempts to access blocked material or objectionable words and images in chat sessions. You can even use the program to enforce time limits on the Web or on e-mail, and to display reports on what sites your child is surfing. One thing we did notice is that the filtering software uses up a little of the CPU's horsepower: Web sites we surfed using a similarly equipped vanilla system came up faster than on the Dream PC.

The unit comes with a well-written user manual, with how-to descriptions of tasks like burning a CD or working the music programs on the system. The Disney-branded games and educational programs mean that this PC is ready for hours of fun after you unpack it, and the Disney.com button on the keyboard means that days of Disney content are just a click away. Disney Flix (home movies), Disney Pix (drawing and photos), and Disney Mix (music) encourage creative play. They also sync well with Disney's optional peripherals, like the Disney 1.3 Megapixel digital still camera ($79), Disney-Lexmark printer (part of a $950 package on disneydirect.com), and Disney Digital Camcorder ($99).

The low-end 2.66 GHz Celeron 330 processor, 256MB of RAM, integrated graphics, and 5,400-rpm hard drive (only a 40GB unit) conspire to prevent the Dream PC from becoming a performance leader, even among value-priced PCs. But it is adequate for educational programs and surfing the Internet. Thankfully, the unit has an 8X AGP slot, making it easy to upgrade the system to run the latest 3D games. (If you do, be sure to upgrade the 256MB of memory using one of the three free DIMM slots.)

The Disney Dream Desk PC shines as a kids' system: The design, included software and symbiosis with Disney's online properties make it hard to ignore. Sure, you can get a faster machine for the same price, but it won't have Mickey ears.

Disney Dream Desk PC

2.66-GHz Intel Celeron D 330 processor, 256MB 333-MHz DDR SDRAM, 40GB hard drive, ATI Radeon 9100 Pro IGP integrated graphics, 15-inch LCD, DVD/CD-RW drive, Microsoft Windows XP Home. $898 list ($950 with matching Lexmark ink jet printer). Disney Consumer Products, www.disney.com.
OVERALL RATING ●●●○○ Music: 48 (out of 100); Photo: 50; Video: 26; Gaming: 24

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Portable GPS: Get There from Here

BY OLIVER KAVEN AND CRAIG ELLISON

Mobile professionals and weekend adventurers have at least one thing in common: The need to find their way in often unfamiliar terrain. While you can spend a bundle on a luxury car or SUV outfitted with a built-in GPS system to help you along, a more affordable and practical solution is one of the new standalone navigation units designed for in-car use. After all, you can move it from one vehicle to the next, and when the system becomes obsolete, you don't have to ditch the whole vehicle.

We tested four of the latest offerings to see which could get us there from here and back again. All did a good job getting us around Manhattan, northern New Jersey, and Long Island. The standout in the group, though, was the TomTom GO. It provides the most intuitive, easiest-to-navigate interface we've seen so far, and its superior 3D point of view more naturally mimics a driver's visual perspective.

COBRA NAV ONE 3000

When we unpacked the Cobra Nav One 3000 we were excited. The Nav One is extremely well made, housed in a solid aluminum casing with a beautifully machined (and sturdy) windshield mount. It is larger than its competitors, but the size is forgivable: It's one of the few units with a hard drive (which holds detailed maps for the entire lower 48 states, Hawaii, and metropolitan areas of Canada) and it features a built-in gyroscope for calculating speed and location when the unit loses its GPS signal.

The product is also equipped with a 5.2-inch screen—the largest available in its category.

Cobra
Calculating a Route
STOP
menu
enter
NAV ONE

THE BIG SCREEN is welcome, but the interface of the Nav One 3000 needs work.

Unfortunately, this did not translate into an easier-to-read map on the screen. Rather than using the display to show extended map information, the Nav One devotes a large portion of it to soft-button icons. We were also disappointed by its 2D maps, which are often confusing and crowded, especially in city environments. Street names are squished onto the road they describe. We often found ourselves staring at the screen to decipher oddly grouped and sometimes overlapping letters. Be prepared to rely more on the system's voice commands (available in English, French and Spanish) than on the actual map.

There were a couple of interface features we liked. For instance, the Nav One switches to a detail view when you are approaching a turn. An hourglass-like progress bar indicates how far you are from the turn and the screen displays a large snapshot view of the intersection or road fork ahead. Another feature that comes in handy is the Planned Route screen, which displays a list of all upcoming maneuvers pertaining to your route.

Planning your path or entering a destination, on the other hand, led to a lot of frustration. The device lacks a touch screen, so instead of picking letters from a virtual keyboard, you scroll through the alphabet by moving a joystick up or down; after selecting one you must move the cursor to the right to choose another. Entering city or street names was tedious and time-consuming.

We would have considered the Nav One a noble effort a few years ago. But by today's standards, its display and interface are in urgent need of an overhaul.

Cobra Nav One 3000
$1,309.95 direct. Cobra Electronics, www.cobra.com. ●◐○○○

NAVMAN ICN 510, ICN 635

Weighing in at only 5.8 oz, the Navman iCN 510 is a battery-operated GPS that provides spoken, turn-by-turn directions (you can choose a male or female voice). The iCN 510 measures a mere 4.75 by 2.75 by .75 inches and has a 3.5-inch touch screen. It comes with complete street-level map data for the United States (in three CDs) as well as POI (Point of Interest) data.

NAVMAN
RIGHT: A40/OXFORD STREET
100 m
GREEN STREET
NORTH AUDLEY
BALDERTON STREET
310 m
490 m
18 BAKER STREET
NAVMAN
iCN 635
OK
ESC

A BRIGHT 4-inch screen makes the iCN 635 ideal for in-car use.

When you first power up the iCN 510, it doesn't contain any map information. The installation software uses Microsoft's ActiveSync to upload your selection of map data for the base map and the individual states you select. You control the iCN 510 either via the touch screen interface (there's an included stylus as well) or with the six keys and rocker-style switch.

You have a choice of either a 2D map with north at the top or a 3D bird's-eye map with user-selectable viewing perspective.

To navigate, you can input an address, select a POI, or navigate to a town center. You can also select from shortcuts and favorites. The navigation screen shows a preview of your next turn as well as upcoming-turn instruction.

NAVMAN
NAVMAN
ICN 510
E 32ND ST
MADISON AVE
30TH ST
160 ft
SE
28 E 30TH ST
ESC

THE USER-FRIENDLY interface adds to the iCN 510's appeal.

Overall, the iCN 510 is easy to use and is a good value. But if you don't need a battery-operated device and have a few more dollars to spend, consider the top-of-the line iCN 635. It features a spectacular 4-inch screen that is easy to view even in bright sunlight. The UI and map data are identical to that of the iCN 510, but this unit uses an infrared receiver (IR) remote rather than a touch screen. Though it takes longer to enter data with the IR remote, the screen stays finger-

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Note: Recording 8x DVD media at 8x speed requires an 8x-capable DVD burner.

print-free. The larger speaker in the iCN 635 also provides better sound than the iCN 510.

Though the screen is smaller than factory-installed in-car systems, the quality of the display and the features make the iCN siblings a viable alternative to an OEM navigation system.

Navman iCN 510

$499.95 list. ●●●◐○ Navman iCN 635, $749.95 list. ●●●●○ Navman USA Inc., www.navman.com.

TOMTOM GO

What we've always expected from a GPS navigation system is ability to enter a destination address as quickly and efficiently as possible and to receive clear audio and visual instructions promptly. On all counts, the TomTom GO delivers. The GO is the easiest-to-use in-car GPS system we've reviewed yet.

Housed in a curvy and relatively small case, the lightweight GO comes with a suction cup windshield mount and an adhesive bracket for on-dash installation. The lack of buttons on the GO might surprise you at first, but access to the features is provided via touch screen.

Navigating the system's interface is exceptionally simple; its large, easy-to-read icons provide access to all operational features. At no point are you required to fiddle with a stylus or to weed through hard-to-find submenus, as you are on the Cobra and Navman entries. And the GO will run for 5 to 6 hours on a full battery charge, which allows you to fully disconnect from the cigarette-lighter adapter.

The included CD contains the main application and street-level maps of all 50 states (state or regional level), which can be uploaded through the mini-USB port onto the 256MB SD card located on the front of the GO.

Getting started with the GO is a pleasure. Multiple destination routes and an extensive POI database are available, and simple A-to-B navigation by address is easily entered into the system. The GO first asks for the city name, then displays all matches, based on the loaded state maps. This was far more convenient than Cobra's system, which requires you to enter the state first. Route instructions are relayed by voice and rendered in 3D (they can also be displayed as text).

The quality of GO's 3D map was far superior to any products we've tested in the past. The maps are a closer approximation to the driver's perspective than 2D versions and make it easy, even in dense city environments, to see upcoming turns. The zoom feature provides even more detail or, alternatively, a broader overview of the surrounding area. You can even adjust the preferences to left- or right-hand display.

tomtom
HWY 28
Merriam St
Linden St
Washington St
Milk Pl
Prospect St Newton St
Bonner Ave
0.35
3.0
8.45
10:22
10:30
37
Mcgrath Hwy HWY 28

TOMTOM GO has great features not found on other portable GPS systems.

Switching to night mode when it's dark allows you to anticipate upcoming sharp turns in the road—a great additional safety feature. When driving under overpasses or in tunnels, the system switches on its ASN (Assisted Satellite Navigation) feature, a technology that calculates your position in the absence of a GPS signal based on information from internal position sensors.

The most surprising feature, however, is the quality of the built-in speaker and voice. We could not believe at first that the little speaker on the back of the unit was producing such full-bodied sound. Inside the car you might think that "Laurie," the friendly navigator, was sitting right beside you.

Our only criticism is that the screen is very receptive to glare—common to all touch screens—and can become unreadable when hit by direct sunlight. But overall, the TomTom GO is the first device to deliver ease of use, accuracy, a great display, and superior sound rolled up into one sleek package.

TomTom GO

$899.95 direct. TomTom B.V., www.tomtom.com. ●●●●○

Staying on Course

Why buy travel and mapping software when zero-cost directions are a couple of clicks away on the Web at MapQuest or Yahoo!? Well, your answer may be because online maps are dinky and often produce hard-to-read printouts. Those who want better results really need PC-based mapping software, and the 2005 edition of the best-selling **Microsoft Streets & Trips** is one of the best available.

For 2005, in addition to the standalone software available for $40 (street), Microsoft offers a second bundle that includes a USB GPS receiver (from Pharos) for $115 (street). The GPS is compact, installs quickly, and can also be used with Pocket PC PDAs or smart phones (Pocket PC–enabled mobile phones) with the purchase of a CompactFlash expansion sled ($45) or Bluetooth module ($90). If you already have an NMEA 2.0-compliant GPS receiver, Microsoft has also improved the wizard that helps you make that work too.

Streets & Trips 2005's many little improvements are enough to rationalize upgrading if your software is a couple of years old. Several new or improved features have been unfurled, including a GPS pane that

displays your heading, speed, and latitude/longitude; a reroute-from-here feature if you go off course; more accurate map data; and more ways to customize your maps. It also now lists 1.8 million points of interest, up from one million two years ago.

None of the mapping products available are perfect. But the people working on Streets & Trips have done a good job with the improvements, making the competition all the more intense.—*Bill Howard*

Microsoft Streets & Trips 2005

$40 street, or $115 street with Pharos GPS receiver. Microsoft Corp., www.microsoft.com/streets. ●●●●○

JUMP TO NEXT PAGE >>

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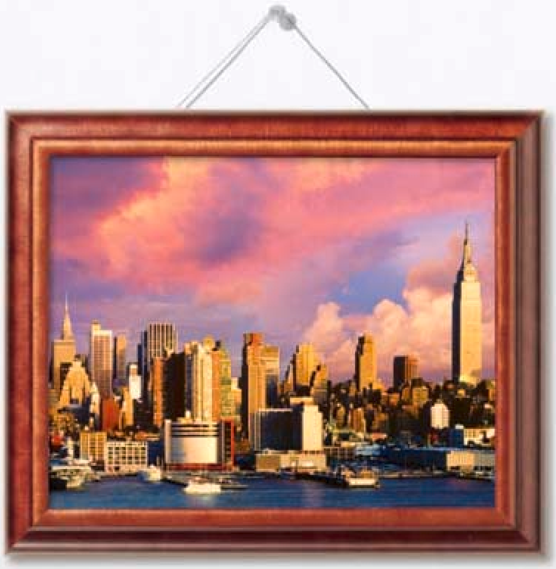

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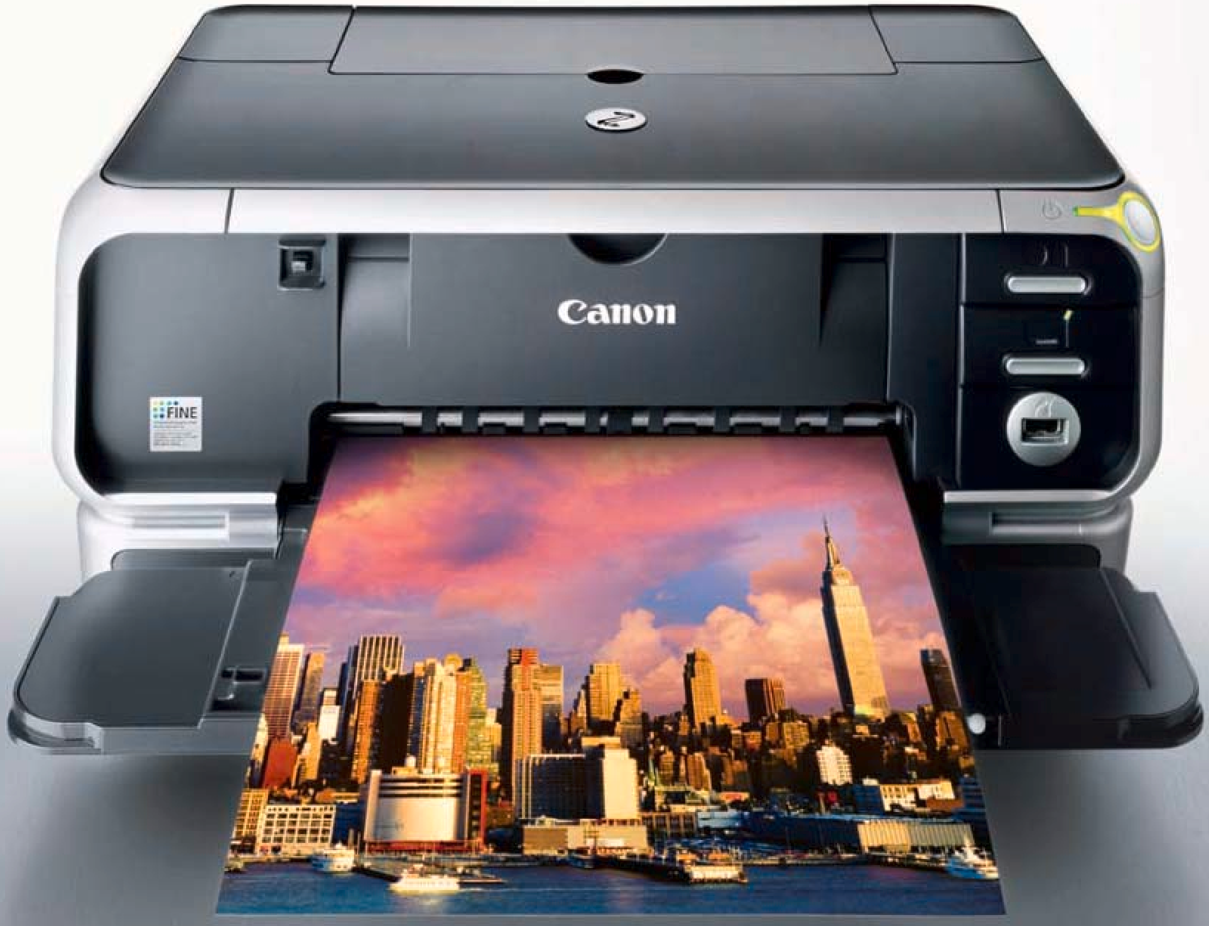

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- Direct photo printing from PictBridge compatible digital cameras and DV camcorders***

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- Fax up to Super G3 speed in color or black & white*****

PIXMA MP750

- Print, copy and scan
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- ContrastPLUS ink system for true-life photos and laser-quality text

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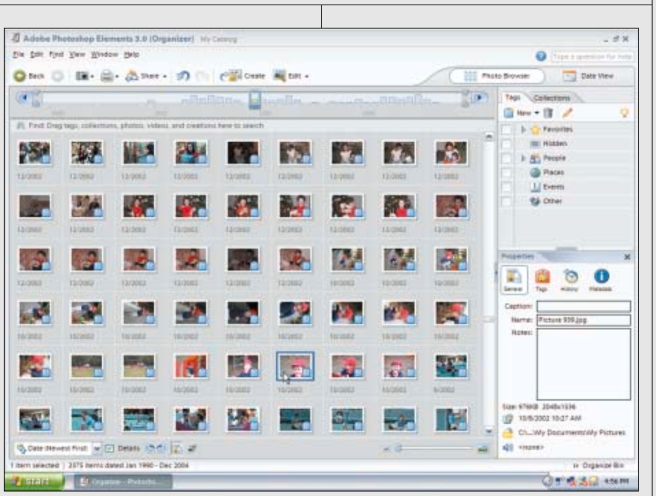
Photoshop Elements: Still the Best

BY GALEN FOTT

Adobe has taken two sibling applications, Photoshop Elements and Photoshop Album, and combined them into a single solution that will meet all the needs of budding digital photographers. The result, known simply as **Adobe Photoshop Elements 3.0**, is a complete digital-imaging package comprising the Editor component, for fixing up images, and the new Organizer component, for cataloging and searching your burgeoning digital photo collection.

Adobe has done a great job of getting the parts to work together. Elements 3's Welcome screen lets you pick which component you want to launch first; whichever you choose, there are handy buttons in the interface to launch the other component at any time. For instance, you can use Organizer to find a specific photo and then send it to Editor with just a click.



THE PHOTO BROWSER in Elements' Organizer shows you scalable thumbnails of all the images in your catalog.

Organizer is the best image-management solution we've seen, as it adds some handy new features not found in the standalone Photoshop Album (yet), such as Boolean tag searches to go along with all the old tools and tricks. Organizer also gives you plenty of options for sharing photos. You can print projects like calendars and postcards, create Web-based photo galleries, easily attach photos to customized e-mail messages, and produce slide shows and burn them to Video CDs.

Elements 3's Editor boasts both a redesigned interface and easier access to powerful tools. New image-editing tools include Photoshop's amazing Healing Brush, which lets you easily remove blemishes and imperfections from photos. Meanwhile, a new Quick Fix mode offers an even simpler interface to Elements—it's a perfect choice for image-editing newbies.

We do have a few complaints, though. For example, we are surprised that you can't pan and zoom in on images in slide shows—a handy feature that is becoming fairly standard in similar apps. The filters and layer styles are confusingly implemented. Still, this is easily the best choice available for organizing and editing your digital photos.

Adobe Photoshop Elements 3.0

$99.99 direct. Adobe Systems Inc., www.adobe.com ●●●●◐

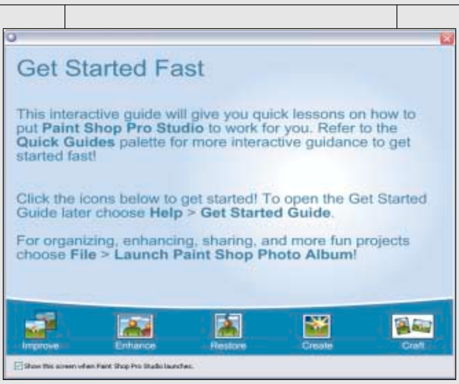
Entry-Level Studio No Match for Elements

BY GALEN FOTT

Digital image enthusiasts looking for an approachable editing and management package are the target of the new **Paint Shop Pro Studio**. Like Adobe Photoshop Elements 3, PSP Studio provides a complete solution for editing and organizing digital images. But when the two products are compared, Adobe's generosity in selecting features for Photoshop Elements 3—which has many of the powerful tools found in Photoshop, including the Healing Brush—casts Jasc's stinginess in striking relief.

For example, PSP Studio has no adjustment layers and no History palette, and offers less than half of Paint Shop Pro 9's effects filters. Even more crippling are the sparse tools for correcting color and contrast. As a beginner you might not mind these omissions, but PSP Studio affords little room for users to evolve beyond the basics.

In contrast with Adobe's approach in Elements 3, Jasc hasn't done much to make PSP Studio easier to use than Paint Shop Pro. The animated Get Started Guide screen is of very little educational value. There is an excellent Learning Center, but Paint Shop Pro 9 has exactly the same feature. The main reason PSP Studio is easier to use is simply the lack of advanced features that might distract some users.



Get Started Fast

This interactive guide will give you quick lessons on how to put **Paint Shop Pro Studio** to work for you. Refer to the **Quick Guides** palette for more interactive guidance to get started fast!

Click the icons below to get started! To open the Get Started Guide later choose **Help > Get Started Guide**.

For organizing, enhancing, sharing, and more fun projects choose **File > Launch Paint Shop Photo Album!**

☑ Show this screen when Paint Shop Pro Studio launches.

THE GET STARTED GUIDE in PSP Studio aims to steer you in the right direction for accomplishing common image-editing tasks.

Although the included Paint Shop Photo Album 5 is a very good program for organizing and sharing your digital image collection, it comes up short when compared with Photoshop Elements 3's Organizer component. You can do slide shows, but PSP Album lacks the advanced features and control offered by competing products, such as Photoshop Elements and even Microsoft Digital Image Suite 10.

PSP Studio's tools are effective. But despite a few unique features, such as a Bezier pen tool for drawing paths, the application is too limited.

A bundle of the full Paint Shop Pro 9 and Paint Shop Photo Album 5 Deluxe Edition would be much more in line with what Adobe Photoshop Elements 3 has to offer. As it stands, the only argument for Paint Shop Pro Studio is its price.

Paint Shop Pro Studio

$69 direct. Jasc Software Inc., www.jasc.com ●●●○○

Two Suite Approaches to Complete Security

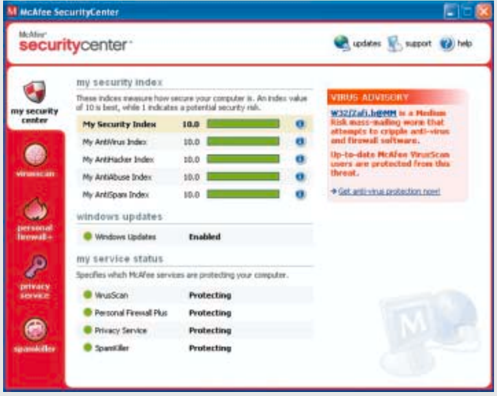
BY NEIL J. RUBENKING

While PC-savvy security mavens may prefer to install individual best-of-breed antivirus, firewall, antispam, and antispyware utilities, most PC users are better served by a path of lesser resistance: An integrated all-in-one suite, which is less expensive than buying individual apps and avoids the possibility of incompatibility between security modules. After all, you don't want your antivirus and antispam tools dueling for control of the incoming e-mail stream. Two of the biggest names in PC security—McAfee and Norton—have recently released new versions of their suites, so we put each to the test.

McAfee Internet Security 2005 7.0

The new McAfee's Internet Security 2005 7.0 suite bundles McAfee SpamKiller 6.0 (First Looks, November 2), McAfee VirusScan 9.0 (First Looks, November 2), McAfee Personal Firewall Plus 6.0, and the subscription-only McAfee Privacy Service 7.0. MIS 2005's Security Center manages these four modules and also tracks Windows Update status, effectively replacing the Windows XP SP2 Security Center.

SpamKiller filters any POP3 e-mail account, regardless of the e-mail client used. It can filter Exchange and IMAP accounts under Microsoft Outlook and will process MSN and Hotmail accounts directly. You can add individual addresses or the entire contents of your Address Book to a Friends list; mail from these senders will never be blocked. As we noted in our earlier review, in our testing SpamKiller erroneously identified about 4 percent of valid mail as spam and failed to block one-fourth of the actual spam—far worse performance than the leading antispam products.



my security index

These indices measure how secure your computer is. An index value of 10 is best, while 1 indicates a potential security risk.

My Security Index	10.0
My AntiVirus Index	10.0
My AntiHacker Index	10.0
My AntiAbuse Index	10.0
My AntiSpam Index	10.0

windows updates

Windows Updates	Enabled

my service status

Specifies which McAfee services are protecting your computer.

VirusScan	Protecting
Personal Firewall Plus	Protecting
Privacy Service	Protecting
SpamKiller	Protecting

VIRUS ADVISORY

W32/Zafi.b@MM is a Medium Risk mass-mailing worm that attempts to cripple anti-virus and firewall software.

Up-to-date McAfee VirusScan users are protected from this threat.

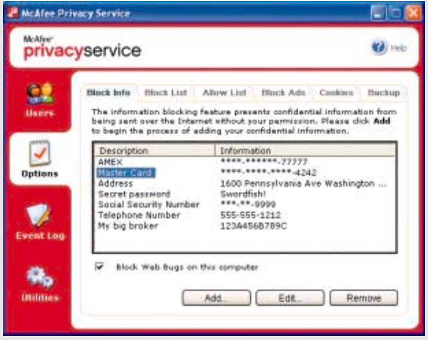
Get anti-virus protection now!

THE SECURITY CENTER lets you track what's going on in all parts of the McAfee Internet Security suite.

VirusScan received Checkmark certification from West Coast Labs (*www.westcoast.com*) for virus detection, virus removal, and Trojan detection. Virus Bulletin (*www.virusbtn.com*) recognizes it with a VB 100% award, and the utility is certified by ICSA Labs (*www.icsalabs.com*) for virus detection, though not for virus removal. VirusScan scans files on access, on demand, and on schedule, and it scans inbound and outbound e-mail as well as IM attachments. The WormStopper module blocks suspicious outgoing e-mails—too many recipients, or too many e-mail messages generated in a short time—but unfortunately produces a pop-up for every message exceeding the limits. It doesn't log viruses it has repaired or deleted but does attempt to remove "potentially unwanted programs," or PUPs (spyware or adware). And we are impressed with its detailed virus database and interactive world map of virus infestations.

The firewall in MIS 2005 is preconfigured to allow or block over 700 known programs, thus reducing the number of pop-ups requiring user response. It can alert you to inbound and outbound connection requests from unknown programs. In testing, the McAfee firewall blocked all significant port attacks and defended itself against direct attacks on the firewall process. However, it failed all but one of our leak tests (which duplicate techniques a Trojan horse could use to masquerade as a permitted program). If a new, unknown worm or Trojan surfaces using such techniques, this firewall won't keep it from phoning home.

McAfee's Privacy Service prevents personal data from going out over the wires and includes parental-control features as well. As the administrator, you define any number of data items in categories like Phone, Credit Card, Social Security, and so on. The data itself is stored in an encrypted database, and portions of sensitive items (like account numbers) are obscured in the list of data items. If the administrator attempts to send any protected data element via e-mail, IM, or a Web page, the privacy service will ask whether or not to block it. Other users don't get a choice: Private information is automatically replaced by the string "mcgdog."



The information blocking feature prevents confidential information from being sent over the Internet without your permission. Please click **Add** to begin the process of adding your confidential information.

Description	Information
AMEX	****-******-77777
Master Card	****-****-****-4242
Address	1600 Pennsylvania Ave Washington ...
Secret password	Swordfish!
Social Security Number	***-**-9999
Telephone Number	555-555-1212
My big broker	1234456B789C

☑ Block Web Bugs on this computer

THE PRIVACY SERVICE feature prevents users from sending or posting sensitive data.

In addition to securing personal data, MIS 2005 lets parents create global lists of blocked and allowed Web sites, set an overall policy on cookie acceptance, and globally block Web bugs, banner ads, and pop-up ads. You also control access for all other users of the system. Each user is assigned to one of five age groups, from young child to adult. Those not in the adult group are limited to age-appropriate sites and cannot access any sites on the blocked list. In addition, you can set up a schedule of days and times when each user is allowed access. Access attempts that are blocked due to content or schedule are logged for your review. Privacy Service user accounts are not tied to Windows user log-ons, so McAfee recommends setting the system to log the user on initially with the fewest possible privileges—and for the master account holder always to remember to log off.

All told, MIS 2005 combines an excellent antivirus tool with a good personal firewall and a so-so antispam module. And the privacy and parental-control features are a nice bonus. The suite is a reasonable solution, especially for anyone already using one or more of these McAfee utilities. For those making a fresh start, we'd recommend the Norton entry instead.

McAfee Internet Security 2005 7.0

$69.99 direct. McAfee Inc., www.mcafee.com. OVERALL ●●●○○ Antivirus ●●●●○ Antispam ●●◐○○ Firewall ●●●○○ Privacy/parental control ●●●○○

▶

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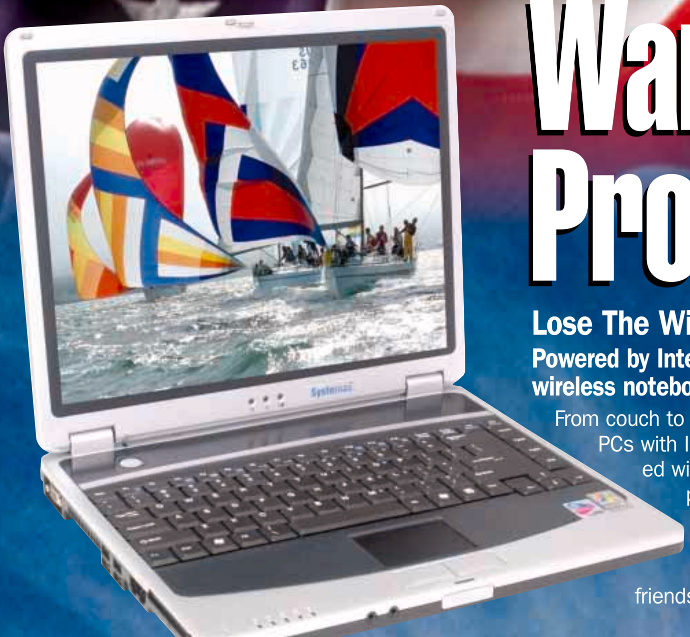

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SYXS-NC-036139

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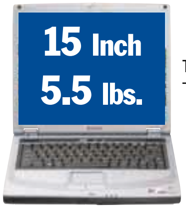
Pursuit® 4020



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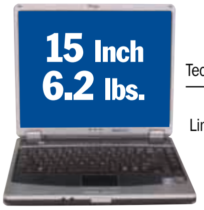
Pursuit® 4210



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- Intel PRO/Wireless Network 802.11b/g
- 15" SXGA TFT Screen (1400x1050)
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intel inside

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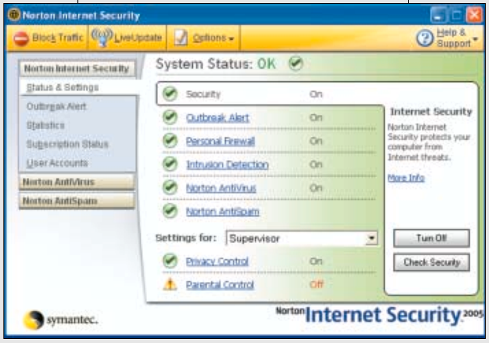
Norton Internet Security 2005

Norton Internet Security 2005 bundles together the standalone Norton AntiSpam 2005 (NAS), Norton AntiVirus 2005 (First Looks, November 2), and Norton Personal Firewall 2005 (First Looks, November 16) utilities. It adds privacy control, parental control, and a handy overall console that displays an overview of all NIS 2005 modules, with options to configure individual features or get more detailed status reports.

Norton AntiSpam integrates specifically with Outlook, Outlook Express, and Eudora, but can protect any POP3 account regardless of the e-mail client used. While it does not support IMAP or Exchange accounts, it can process Hotmail and Yahoo! accounts directly. You can train the spam filter by pointing out any valid mail identified as spam or vice versa. After a short training period, in our testing the utility's accuracy was very good, approaching that of MailFrontier Desktop 4.0. Accuracy is improved by populating Norton AntiSpam's whitelist with your address book and those to whom you send mail. Its AutoBlock feature aims at blocking phishing scams and other malicious spam but may accidentally catch valid mail.



System Status: OK

Security On
Outbreak Alert On
Personal Firewall On
Intrusion Detection On
Norton AntiVirus On
Norton AntiSpam

Settings for: Supervisor

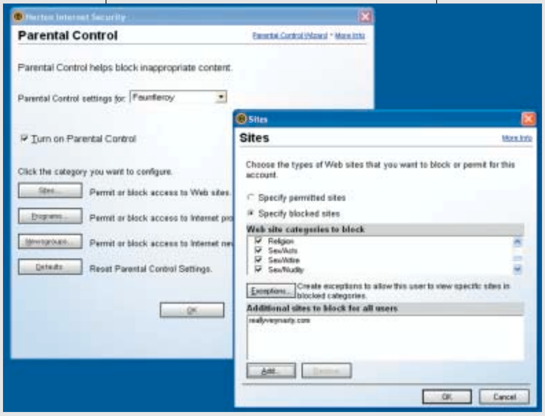
Privacy Control On
Parental Control Off

Internet Security

Norton Internet Security protects your computer from Internet threats.

THE SUITE'S HANDY CONTROL PANEL gives quick access to the individual modules.

Norton AntiVirus (NAV) is still our top choice for standalone virus protection, and its scanning integrates seamlessly with that of Norton AntiSpam. Independent labs recognize its accuracy: NAV received all three Checkmarks from West Coast Labs and a Virus Bulletin VB 100% award. It is certified by ICSA Labs for both virus detection and cleaning, and it scores 100 percent for detection with AV-Test. It scans inbound and outbound e-mail and IM attachments, and logs all viruses found. An online virus database provides details of just what was stopped. And by default it also scans for spyware, adware, dialers, and other threats. Our only real gripe is that it flags viruses even when they've already been neutralized by a server-side antivirus tool.



Parental Control

Parental Control helps block inappropriate content.

Parental Control settings for: Fauntleroy

☑ Turn on Parental Control

Click the category you want to configure.

Permit or block access to Web sites.
Permit or block access to Internet pro
Permit or block access to Internet ne
Reset Parental Control Settings.

Sites

Choose the types of Web sites that you want to block or permit for this account.

○ Specify permitted sites
● Specify blocked sites

Web site categories to block
☑ Religion
☑ Sex/Acts
☑ Sex/Attire
☑ Sex/Nudity

Create exceptions to allow this user to view specific sites in blocked categories.

Additional sites to block for all users
reallyveryrnasty.com

YOU CAN BLOCK particular users from accessing inappropriate content with Norton Internet Security 2005.

The standalone version of NAV actually offers a degree of firewall protection, but full protection comes from the suite's Norton Personal Firewall module, our Editors' Choice (along with ZoneLabs' ZoneAlarm Pro 5) in the category. NPF avoids overloading the user with pop-up queries by referring to a database of almost 1,700 known programs; the warnings that do appear are unobtrusive. In our testing it blocked all significant port attacks and leak tests. We tried to disable the firewall manually using attacks a Trojan might use, but we were foiled. When the firewall prevents an intrusion from a particular site, it can automatically block all access from that site for a half-hour or more—a welcome protection against denial-of-service attacks. We like the fact that you can define four distinct zones (Default, Home, Office, and Away) with different settings.

The suite's integrated Privacy Control can block or warn when any user sends out personal information, such as credit card numbers and passwords. For each item, you can specify whether it's okay to enter that data in an IM client, an e-mail message, or a Web site. Item-specific exceptions let you control data further, so, for example, your eBay password can be allowed on the real eBay site but blocked if you enter it on a phishing scam imitation of eBay. But the protection isn't perfect. All users registered to a given PC share the same database of private information, and that master list of items doesn't mask any data, so you can't hide your account numbers from the kids if they have a valid Windows XP log-on. Symantec advises entering only the last portion of account numbers or other sensitive information.

The Browser Privacy feature provides a degree of anonymous browsing by suppressing standard information that Web sites can normally get from your browser. Among these are the type of computer and browser you're using and the URL of the site you linked in from. It can also block animated images, scripts, and flash animation, and by default it blocks ads from a list of specific advertising sites.

The suite has features for parental control that will block sites in any or all of over 30 categories from Adult Humor to Weapons, on a per-user basis. You can allow a user to access a specific site that would otherwise be blocked, or choose to block all sites except those on a permitted list that you define yourself. You can also choose what types of Internet-aware applications each user is allowed, perhaps disabling file sharing, IM, or network games. If desired, you can block access to newsgroups based on words in the name (for example, *alt.sex*) or allow only specific newsgroups. Unlike the McAfee suite's parental controls, those of the Norton suite make no provision for limiting access to specific days and times. On the plus side, also unlike the McAfee suite's, Norton's parental-control accounts are wisely linked to Windows log-on accounts.

The antivirus and firewall elements in Norton Internet Security—the most important elements—are top-of-the-line choices, and Norton's antispam feature is also very good. The privacy and parental control elements are well implemented, though we'd like to see partial masking of particularly sensitive data. We find the suite's user interface a bit sluggish at times, but that's not a serious problem. When you add it all up, Norton Internet Security is easily our Editors' Choice among security suites.

Norton Internet Security 2005

$69.95 direct. Symantec Corp., www.symantec.com. OVERALL ●●●●◐
Antivirus ●●●●◐ Antispam ●●●●○ Firewall ●●●●◐
Privacy/parental control: ●●●●○

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Dell's Multimedia Midrange PDA

BY SASCHA SEGAN

There's plenty to love about the **Dell Axim X50**, one of the first Pocket PCs with Windows Media Player 10 built in. Not only does it transfer and play video better than any Pocket PC has before, it boasts a zippy 520-MHz processor and offers enterprise-friendly features like a CompactFlash card slot, Bluetooth connectivity, and Wi-Fi networking.

The X50 is also a lot better-looking than previous Axims. This one is rounded with attractive black accents and a slightly velvety feel to the plastic sides. The X50 comes in three flavors; we tested the midrange model. The low-end X50 ($299 direct) gives you a 416-MHz processor, half the 64MB of flash memory, and no 802.11b. The high-end X50v ($499 direct) sports a 624-MHz processor, VGA screen, and 3-D graphics acceleration.

DELL
AXIM
X50

The 3.5-inch QVGA screen is crisp and bright. Watching video on your Pocket PC is finally enjoyable. MP3 and WMA files (both protected and unprotected) sounded loud and clear through stereo headphones. But pack an extra battery for long trips. We got 4 hours 6 minutes of life on our typical-use test and 3:32 of runtime when playing video.

Benchmark test results for the X50 were somewhat uneven. It beat the 416-MHz HP iPAQ rx3715 on CPU and graphics tests but fell slightly short on file system and applications tests. We didn't notice any problems in regular use, though, except for occasional pauses in video playback.

MULTIMEDIA tasks are where the X50 shines.

And as long as we're drawing comparisons to the rx3715, we'll point out that the X50 gives you a faster processor, a CompactFlash slot, a more attractive case, and Media Player 10 for $100 less. HP's entry packs in a 1-megapixel camera, more memory, and better battery life. Both are very good PDAs, and for those who want good AV capabilities, the X50's built-in Media Player 10 sets it apart from the pack.

Dell Axim X50

$399 direct. Dell Inc., www.dell.com.
OVERALL ●●●●○ PIM ●●●●●
Entertainment and gaming ●●●●○
Mobile Professional ●●●●◐
Enterprise ●●●●◐

Sync with Outlook, Play Multimedia

BY SASCHA SEGAN

As the first phone to use Windows Media Player 10, the **Audiovox SMT 5600** is a hands-down crowd-pleaser for consumers and businesspeople alike. It packs in excellent Outlook syncing capabilities and provides the best multimedia experience we've seen on a phone. Add to that a fine design and excellent battery life, and we had no choice but name it our latest Editors' Choice for smart phones.

First and foremost, the SMT 5600 is a small, sleek, 3.6-ounce phone. Sound through the earpiece speaker, an included wired headset, and a Bluetooth headset was loud and clear.

Windows Mobile for Smartphones 2003 SE made syncing with Outlook very easy. Plug the phone into your PC with the included mini-USB cable and your calendars, contacts, and to-dos all come over.

If your office runs an Exchange 2003 server, your e-mail will even sync wirelessly. Scrolling through our Outlook e-mail box was quick and easy, thanks to a convenient scroll bar and fast 200-MHz processor.

What really sets this phone apart is its inclusion of WMP 10. The software plays WMA and MP3 music files, as well as video files of any stripe that have been simply dragged and dropped via WMP 10 on a PC. For video playback, it gave us 5 hours 38 minutes of runtime. The phone's mini-SD slot (awkwardly placed under the battery) takes cards up to 256MB, holding up to 4 hours of video. Alas, as with other camera phones, the VGA camera takes soft-focus, washed-out pictures. Still, the smooth syncing and vibrant video make this phone a winner.

WITH ITS WMP 10 software, the SMT 5600 is a winner.

Audiovox SMT 5600

$199.99 with one-year contract. Audiovox Communications Corp., www.attws.com. OVERALL ●●●●○
Phone ●●●●◐ Multimedia/Camera ●●●○○ Data/Messaging ●●●●◐
E-mail ●●●○○ Smart Phone ●●●●◐

IN SHORT

Nokia 3205

Pros: DIY faceplates and wallpaper let you create a custom look. Excellent sound. Rugged.
Cons: Poor battery life and speakerphone.
Bottom line: The Nokia 3205 is a fun, tough, and inexpensive phone that's a good choice for 'tweens and teens. Kid-friendly features include an FM radio, a flashlight, seven built-in games, and a basic camera—and they'll probably lose the phone before they break it.

$219.99 list; as little as $39.99 with service. Nokia, www.sprintpcs.com.
●●●○○

Sony Ericsson K700i

Sony Ericsson

Pros: Excellent 1.8-inch screen. Clear voice quality. Built-in FM radio. Easy Bluetooth connections.
Cons: So-so image quality from the VGA camera, despite exposure compensation settings.
Bottom line: The Sony Ericsson K700i is a fun little phone that delivers a few extra features that take it beyond the basics.

$399 list. Sony Ericsson Mobile Communications AB, www.tmobile.com.
●●●◐○

Kyocera SoHo/KX1

Pros: Attractive design with removable covers. Loud speaker.
Cons: Doesn't receive picture messages. Navigation pad is small.
Bottom line: The Kyocera SoHo looks good and sounds good, and its simple feature set—no camera or built-in games—will be a good fit for people who just want to make phone calls.

$99-$149. Kyocera Wireless Corp., www.kyocera-wireless.com. OVERALL
●●●○○

For an in-depth look at these products go to www.pcmag.com/pda

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intel inside centrino™ MOBILE TECHNOLOGY

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Archos Gmini 400

BY BILL MACHRONE

Want to make someone jealous? Sit down in a public place with an **Archos Gmini 400** media player and fire up a movie, flip through digital photos, or play some games. The iPod-sized device packs a 20GB hard disk and a 2.2-inch, 320 by 240 pixel color screen sufficient to watch movies enjoyably. Want more? The Gmini is also a high-quality audio player.

We've seen other personal media players, most notably the Creative Labs and iRiver and Portable Media Center devices built on the Microsoft platform (First Looks, October 5), but none with the Gmini's combination of ease of use, battery life, and small size (5.5 ounces and 4.2 by 2.4 by 0.7 inches, HWD). The controls are sheer simplicity: power, a navigational rocker, a select button, and a back button.

Video files we saved to the device played smoothly, with very good color rendition. The Gmini 400 has audio and video out, so you can connect it to a TV for a full-screen display of movies or a slide show. We played the videos on our 50-inch rear-projection TV, and they looked surprisingly good, on a par with a VHS tape.

Audio performance from the Gmini was very good, with a slight, gradual dropoff of frequencies above 15 kHz and minimal harmonic distortion. The built-in audio recorder can record WAV files with excellent fidelity, up to 48 kHz, through either the line-in or microphone jacks.

When viewing photographs, we found colors bright and saturated, and sharpness very good (within the limits of the 320 by 240 pixel screen). And the Gmini's battery life is surprisingly good. We watched an entire movie on a cross-country flight and still had plenty of battery left to listen to music the rest of the way.

Despite the obvious limitation of a 2.2-inch screen, the Gmini 400 is a very satisfying device.

ARCHOS
Video
Music
Photo
Resume
Browser
Setup
Games
AudioCorder
Help

THE GMINI 400 plays music, videos, and photos well.

Archos Gmini 400

$350 street. Archos, www.archos.com. ●●●●◐

Rio Takes on the iPod Mini

BY BILL MACHRONE

Music player pioneer Rio Audio has introduced its first small hard drive player, the **Rio Carbon,** a 5GB player that's smaller and sleeker than the trend-setting 4GB Apple iPod mini.

The screen is readable and brightly backlit whenever you touch a control. And at a mere 3 ounces, the Carbon won't weigh you down. The fully rotating wheel in the upper-right corner is in some ways superior to the iPod's touch wheel, because you feel a click for each line on the menu or each increment in volume.

Refreshingly, the Carbon does not require a driver or dedicated software on the PC. You can drag and drop individual songs or albums directly to the player's disk, and it will sort them by artist, album, genre, and year. Rio recommends that you use the provided software, however, to download playlists and DRM-protected music.

Two additional features might pique your interest: a stopwatch capable of recording up to 10 splits, and a voice recorder. The voice recordings are low-fidelity, 32-Kbps files, but adequate for the task.

The Carbon is also a great-sounding player. The earbuds that come with it are among the best conventional ones we've seen supplied with a player. They're clean in the midrange, with full bass and bright trebles. After-market headphones, however, may cause static if the plug is all metal. The Carbon's tone presets show only subtle differences. But the custom setting is a full five-band EQ with a wide range of adjustment.

If you want a gigabyte more storage in your music player for the same money as the Apple unit, give the Carbon a look.

Rio
Karrin Allyson
College
Robert Frost
MP3 128K 4.6MB

SLEEKER EVEN than the iPod Mini, the Rio Carbon is tiny.

Rio Carbon

$249.99 direct. Rio Audio, www.rioaudio.com. ●●●●◐

IN SHORT

Zipper HD 2.2GB

KANGURU Zipper HD

Pros: Small, spacious (2.2GB) hard-disk-based USB drive. Priced lower than (but with similar performance to) flash-memory drives.
Cons: Bulkier than a flash drive.
Bottom line: The Zipper HD is an excellent choice if you need lots of pocketable storage, but don't like the high cost of flash-memory USB devices.

$179.95 direct. Kanguru Solutions, www.kanguru.com. ●●●●◐

BTO Plusdeck2

Pros: A unique way to interface audiocassettes with your PC. Good sound quality.
Cons: No support for chrome or metal tapes. No noise reduction. Requires a serial port. Cumbersome installation not helped by cryptic documentation.
Bottom line: This nifty computer-controlled tape deck requires only a few clicks to capture the contents of a cassette to your hard drive or to record CDs, streaming audio, or digital music files to tape.

$150 street. BTO Co. Ltd., www.plusdeck.com. ●●●◐○

MSN TV 2

Pros: Idiot-proof Internet browsing, e-mail, and messaging for your TV. Plays photos, music, and videos.
Cons: Richest functionality requires broadband.
Bottom line: MSN TV 2 is a set-top box with a Web browser, e-mail, and instant messaging that also functions as a digital media hub if you have a home network. This product is best for those who want Web access and e-mail but not a PC.

$200 street (plus ISP fees). Microsoft Corp., www.microsoft.com. ●●●○○

For an in-depth look at these products go to www.pcmag.com/guides

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*Based on results of printers independently tested by NSTL, Inc., full report available. **Visit www.samsungusa.com for complete service program details. Color output simulated.

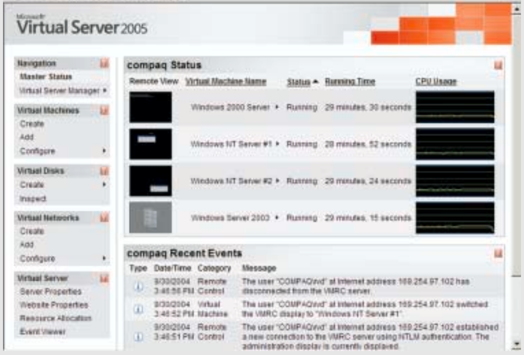
Virtual Server Reduces Hardware Overhead

BY RICHARD V. DRAGAN

Aimed at midsize and large organizations, **Microsoft Virtual Server 2005 Enterprise Edition** ($999 direct) is Redmond's latest version of the virtual PC technology it acquired from Connectix. With excellent administration capabilities and a no-fuss approach to setting up new virtual systems, this new release wins on several fronts as a tool that lets you do more with less hardware.

As far as Microsoft server products go, Virtual Server 2005 is a dream to install. It requires Windows Server 2003 (or Windows Small Business Server 2003). The setup utility creates an underlying virtual master server in a matter of minutes. The master server can drive multiple virtual machines, each one a Windows server with its own view of your hardware.

The Virtual Server administrative console is Web-based and highly functional. Its main page presents a quick status view of all running servers, a thumbnail snapshot of what's running on each virtual machine, and a graph of CPU usage. We would have liked wizards for policy configuration, as many users need hand-holding for that task. Another serious drawback is limited USB support in the VM and the lack of virtualization capabilities beyond the Microsoft software domain.



compaq Status

Remote View	Virtual Machine Name	Status	Running Time	CPU Usage
	Windows 2000 Server	Running	29 minutes, 30 seconds	
	Windows NT Server #1	Running	28 minutes, 52 seconds	
	Windows NT Server #2	Running	29 minutes, 24 seconds	
	Windows Server 2003	Running	29 minutes, 15 seconds	

compaq Recent Events

Type	Date/Time	Category	Message
	9/30/2004 3:46:56 PM	Remote Control	The user "COMPAQ\rvd" at Internet address 169.254.97.102 has disconnected from the VMRC server.
	9/30/2004 3:46:52 PM	Virtual Machine	The user "COMPAQ\rvd" at Internet address 169.254.97.102 switched the VMRC display to "Windows NT Server #1".
	9/30/2004 3:46:51 PM	Remote Control	The user "COMPAQ\rvd" at Internet address 169.254.97.102 established a new connection to the VMRC server using NTLM authentication. The administration display is currently displayed.

WITH ITS VERY CAPABLE Web-based console, the new Virtual Server 2005 lets administrators provision and maintain virtual servers.

Installing a new operating system on each running virtual machine takes some effort, but if you do some planning, you need to do it only once. Virtual Server lets you clone servers quickly using disk images (called Virtual Hardware Disks, or VHDs). VHDs are easily the most immediately useful aspect of Virtual Server, as they allow admins to store and reuse operating system images flexibly. We used this feature to duplicate a Windows 2000 Server install in just a few seconds. Administrators will also enjoy the solid control of server resources, including the ability to control CPU bandwidth, memory usage, and disk space for each virtual machine.

Once your virtual servers are running, you observe what's happening on each virtual desktop by using the Virtual Machine Remote Control (VMRC). This tool lets you control a remote (or local) virtual server using your own keyboard and screen.

Of course, busy administrators usually do not have time to do everything by hand. An important feature in Virtual Server 2005 is its extensive COM-based API library for scripting. With over 40 objects and hundreds of methods to choose from, you can automate every aspect of VS 2005 in scripts or custom apps using most any COM-aware programming language.

Microsoft's Virtual Server 2005 Enterprise Edition does not aim to be a general-purpose solution to virtual clusters, but it will get many organizations thinking about ways to consolidate existing server hardware, especially on legacy applications, and reducing their IT costs.

Microsoft Virtual Server 2005 Enterprise Edition

$999 list. Microsoft Corp., www.microsoft.com. ●●●◐○

JBuilder Brings More Power to Hard-Core Coders

BY RICHARD V. DRAGAN

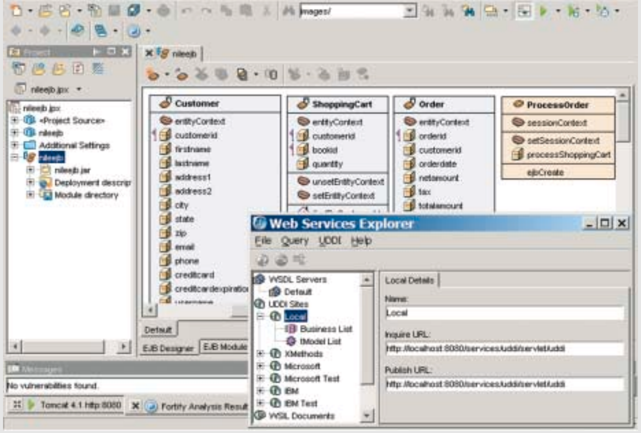
Borland's latest version of its **JBuilder Enterprise** shines with support for late-breaking Java standards, new tools for better security and performance, and a new focus on team development. This proven Java tool continues to impress, with enough power and polish for even the most demanding enterprise developers.

JBuilder runs on Microsoft Windows XP (tested here), Windows 2000/2003, Linux, Solaris, and Mac OS X. Beyond the core IDE, this version ships with a deployable version of Borland Enterprise Server 6.0, plus hooks to other Bor-land products and Fortify, a security-auditing module. JBuilder continues to play well with others, supporting J2EE application servers from BEA and IBM, and open-source platforms like JBoss and Tomcat.

JBuilder 2005 continues Borland's tradition of polished and responsive IDEs that earn high marks for usability. As the product has grown in complexity, however, it does have a nit or two. For example, we found certain project properties hard to find and set. Yet the environment is still a good deal more approachable than IBM's WebSphere or the open-source Eclipse workbench. JBuilder remains a code-centered environment, and Borland makes no attempt to disguise that. BEA Workshop and Sun's Java Creator tools, which put friendlier interfaces on top of the code-generating tools, are better for users with less coding expertise.

Notable Java code improvements in JBuilder 2005 include beefed-up support for refactoring, with a handful of wizards to automate changes to names and classes throughout projects. You can also annotate changes for distributed projects, so that other team members can see what's been changed and update their local code automatically. This feature alone can make all the difference for projects built across different time zones. A new refactoring wizard that changes your code to the new JDK 1.5 standard is another welcome addition.

This release focuses on improving existing code as much as it does on creating new code. Besides running code audits for style, JBuilder 2005 integrates Fortify Software's security-analysis tool. (An initial set of auditing rules comes free with JBuilder 2005. Updated rules cost $499 per year.) We audited a variety of legacy applications—including an online store and travel application—and the


JBuilder 2005 - nileejb EJB Module
File Edit Search Refactor View Project Run Team Enterprise Tools Window Help
Customer
ShoppingCart
Order
ProcessOrder
Web Services Explorer
File Query UDDI Help
WSDL Servers
UDDI Sites
Local Details
Name:
Local
Inquire URL:
http://localhost:8080/services/uddi/servlet/uddi
Publish URL:
http://localhost:8080/services/uddi/servlet/uddi
No vulnerabilities found.
EJB Designer
Tomcat 4.1 http:8080
Fortify Analysis Result

JBUILDER 2005 lets you design and build the business logic behind your applications with wizards for SOAP-based Web services and Enterprise JavaBeans.

Fortify wizards made dozens of suggestions for improving our code. It even spotted a potentially troublesome “SQL injection” hack vulnerability in a Web-search form. Besides the standard—and still powerful—integrated debugger, a standout improvement in this release is the ability to profile server-side code with the bundled OptimizeIt Server Trace tool. This addition means that for the first time, JBuilder Enterprise developers can check server-side code to spot performance bottlenecks. Microsoft Visual Studio .NET has had this feature for some time.

JBuilder 2005 also supports the emerging JavaServer Faces 1.1 (JSF) standard, a new way to create multitiered architecture. JSF splits off the presentation logic (JSPs) and the underlying business logic, so developers can build more scalable, more maintainable applications.

JSF is the designated successor to Struts, which was first with a widely embraced solution. It encourages a new style of building Web applications using XML tags instead of Java code. The JSF support in JBuilder 2005 is not as visual an experience as Sun’s new Java Creator Tool, but it let us design with about a dozen controls automating the cutting and pasting of (often elaborate) custom XML tags that build JSF user interfaces. Other wizards build behind-the-scenes components that perform event handling in JSF. We used these new features to convert a handful of vanilla JSPs into JSF-compliant pages.

Borland also presents a powerful Enterprise JavaBeans design tool for getting control of behind-the-scenes database and business components. An improved Web-services browser lets you generate stub code quickly for interoperating with other servers. You can create your own Web services too, using additional wizards.

Overall, for any team moving code to new JSF or JDK 1.5 standards, JBuilder 2005 will likely be a must-have upgrade. For anyone else, this all-purpose Java IDE has a good deal to offer geographically distributed software development teams.

JBuilder 2005 Enterprise
$3,500 direct. Borland Software Corp., www.borland.com. ●●●●◐

LEGAL NOTICE
Netscape SmartDownload Software Litigation
LEGAL NOTICE OF PROPOSED CLASS ACTION SETTLEMENT AND HEARING

If you installed or used any version of Netscape SmartDownload software distributed before October 2000, or made available through the Internet a file that anyone downloaded (or tried to download) using such software, please read this carefully as it may affect your legal rights.

What is this Litigation about?

A proposed Settlement for three putative class actions is pending in the U.S. District Court for the Southern District of New York (*Specht v. Netscape Communications Corp.*, Docket No. 00-CIV-4871 (AKH), and related cases). The putative class actions were filed against Netscape Communications Corp. and its parent America Online, Inc. The lawsuits alleged that Netscape SmartDownload software versions that preceded version 1.3 (which was released in October 2000) unlawfully intercepted users’ and website operators’ communications by transmitting to Netscape, during the course of a download, the URL address of the file being downloaded, along with a Key Code and a cookie. Netscape strenuously denies that the versions of SmartDownload at issue violated any law and believes that they were entirely lawful, effective, and valuable software that harmed no one.

What is this Settlement about?

This Notice is only a summary. You should read the Official Notice, which more fully describes the terms of the Settlement. It is available at www.SmartDownloadSettlement.com or by e-mail at SmartDocs@abbeygardy.com.

Under the proposed Settlement, Netscape will agree to (1) continue to refrain from distributing the versions of SmartDownload at issue in the suits, (2) continue to avoid recording any URL or Key Code data sent to it by those older versions, (3) delete URL or Key Code data that it still has that was previously sent by those older versions, (4) not distribute Netscape software that it knows will "intercept" users’ Internet communications in violation of the law at issue in the suits, and (5) cause an outside contractor to periodically review and report to Netscape’s senior management whether its current software has functions similar to the function at issue in the suits. No money will be paid to any Settlement Class Members under the proposed Settlement.

Plaintiffs’ Counsel believe the Settlement is fair and equitable to Class Members for the following reasons, among others: uncertainty of proving all the elements of a violation of the law at issue and of overcoming all Netscape’s asserted defenses, extreme uncertainty of certifying a damages class, extreme uncertainty of obtaining statutory damages, evidence that Netscape never used the data at issue, and the relief afforded by the Settlement. Netscape states it is settling the suits simply to avoid the burdens of litigation.

What are the next steps and how do they affect me?

A hearing will be held on **January 10, 2005**, at 4:00 p.m., before the Honorable Alvin K. Hellerstein, U.S. District Judge, at 500 Pearl Street, New York, NY 10007, to decide whether the proposed Settlement should be approved. Class Members do not need to do anything to remain in the Settlement Class, and will be bound by all orders and judgments entered in connection with the Settlement. If you do not exclude yourself from the Settlement Class, and the Settlement is approved, entry of final judgment will release any and all claims you may have against Netscape relating in any manner to these lawsuits.

If the Settlement is approved, Plaintiffs’ Counsel intend to request the Court to order Netscape to pay them attorneys’ fees of up to $1.5 million, plus costs not to exceed $160,000. Netscape intends to oppose that request. If the Settlement is approved, a hearing will be held on **April 11, 2005**, at 4:00 p.m., or at a later time determined by the Court, at the same location listed above, to make a decision on that request.

How can I exclude myself from or object to the Settlement?

If you exclude yourself from the Class, you will not participate in the Settlement and will not be bound by the judgments to be entered pursuant to the Settlement, and none of your claims will be released. If you want to be excluded, you must mail or deliver, such that it is **POSTMARKED** on or before **December 16, 2004**, a written request for exclusion to: SmartDownload Software Settlement, P.O. Box 1623, New York, NY 10150. Any exclusion request must also comply with the other requirements set forth in the Official Notice.

Any objection to the Settlement must be filed and served no later than **December 16, 2004**. Any objection must also comply with the other requirements set forth in the Official Notice.

This Notice is not an expression by the Court as to the fairness or adequacy of the Settlement.

NO INQUIRIES SHOULD BE DIRECTED TO THE COURT.

Dated: September 29, 2004

By Order of the Court
THE HONORABLE ALVIN K. HELLERSTEIN

www.SmartDownloadSettlement.com

Heavy-Duty Speed, in Color

BY M. DAVID STONE

Even a casual glance at the copier-sized, 205-pound **Ricoh Aficio CL7100D** will tell you that it's a heavy-duty printer. The engine in this floor-standing color laser is rated at 35 pages per minute (ppm) for both monochrome and color, with a 200,000-page-per-month duty cycle. Office-friendly paper-handling features include a duplexer and 1,100-sheet paper capacity, with options to boost capacity to 3,100 sheets with the add-on 2,000-sheet paper drawer ($1,245 list). You can also add a stacker with a stapler ($3,100 list) or a booklet maker to fold, staple, and stack ($3,400 list), with a two- and three-hole punch option ($765 list) available for either.

If the heavy-duty paper handing doesn't impress you, the speed and output quality will. On our business-applications suite (using QualityLogic's hardware and software, *www.qualitylogic.com*), the CL7100D handed in a total time of 6 minutes 40 seconds—faster than most monochrome lasers. Bottom line: The CL7100D is certainly the fastest color printer we've seen for this price.

SPEED AND PRICE make the CL7100D worth a look.

The printer's output quality is also among the best we've seen. More than half the fonts we test were easily readable at 4 points, and all were easily readable at 8 points. Graphics were marred by some mild dithering. Photos suffered from a visible tint, particularly for black-and-white output. The printer has a color-calibration feature, but we found it tiresome to use, and it didn't always improve the output.

Very much in the CL7100D's favor is that Ricoh says it works with the widely used HP Web Jetadmin remote printer-administration software. Also worth mentioning is its low claimed cost per page, 1.1 cents for monochrome pages and 7.7 cents for color.

Ricoh Aficio CL7100D

$4,300 street. Ricoh Corp., www.ricoh-usa.com. OVERALL ●●●●○ Text ●●●●● Graphics ●●●●○ Photos ●●◐○

Top-Notch 19-Inch Monitor

BY ALFRED POOR

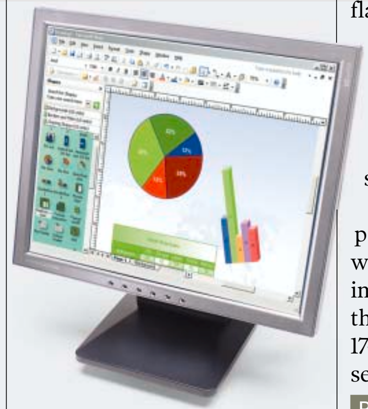
The image quality from the 19-inch **Princeton SENergy 914** is excellent, and the price ($625 street) is low, considering all you get.

The six chrome buttons along the bottom edge of the screen are clearly marked with light-gray legends that are easy to read. The buttons include a source-select control that lets you choose between the three signal inputs—two analog and one digital—and give quick access to gamma presets and backlight brightness.

In our tests with DisplayMate (*www.displaymate.com*), the SENergy 914's image quality was generally excellent. With an analog signal, the autosync feature worked flawlessly. A handy feature automatically sets the brightness and contrast based on the screen's contents, but we found that it took some additional tweaks for optimum performance. We quickly reached settings with top-notch performance in both the dark and light extremes of the gray range.

The 914's uniformity was very good, and viewing angle performance was better than average. We saw a loss of color saturation at about 45 degrees off-axis, but no gross color changes. We found no apparent pixel defects, and color ramps were smooth. The only flaw was faint ghosting with an analog signal. We also noticed moderate smearing of moving images, which is to be expected from an LCD panel with a 25-ms pixel-response time.

The SENergy 914 is not the perfect monitor, but it delivers where it counts the most: image quality. Priced at a level that competes with premium 17-inch LCD monitors, it represents a good value.



THE SENERGY 914 delivers fine image quality at a good price.

Princeton SENergy 914

$625 street. Princeton Digital Corp., www.princetongraphics.com. ●●●●○

IN SHORT

HP LaserJet 1160

Pros: Compact size. Near-excellent text quality.
Cons: Maximum 250-sheet input capacity.
Bottom line: The HP LaserJet 1160 takes up relatively little desk space, and it offers near-excellent text quality and surprisingly good photo quality for a monochrome laser. Performance is less than impressive, but still acceptable.

$329 direct. Hewlett-Packard Development Co., www.hp.com. OVERALL ●●●○○ Text ●●●●◐ Graphics ●●◐○○ Photo ●●●○○

Samsung SyncMaster 173mw

Pros: Versatile multimedia for the desktop. Handy remote control.
Cons: Moderate smearing on moving images. Weak documentation.
Bottom line: This dual-function 17-inch widescreen monitor/TV is designed for business, but its picture-in-picture feature lets news junkies keep current while they're working on office applications.

$700 street. Samsung Electronics America Inc., www.samsungusa.com. ●●●◐○

NEC MultiSync LCD1735NXM

Pros: Digital and analog signal support. Thin bezel and attractive design. Built-in speakers.
Cons: Limited viewing angle. Front-panel buttons and on-screen menu system are a bit awkward to use. Some image-quality flaws.
Bottom line: This is a good value for a basic 17-inch monitor. The flaws are minor, and it comes with some attractive extras.

$435 street. NEC-Mitsubishi Electronics Display of America Inc., www.necmitsubishi.com. ●●●○○

For an in-depth look at these products go to www.pcmag.com/guides

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- 15" XGA TFT Display
- 256MB DDR SDRAM
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- 1-Year Limited Warranty[3]

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- Add a Port Replicator for $199.99
- Add an Additional Power Adapter for $99.99

Desktop Replacement

A Series

Build-to-Order VGN-A170B

- Intel® Centrino™ Mobile Technology
  - Intel® Pentium® M Processor 715 at 1.50GHz[1]
  - Intel® PRO/Wireless Network Connection 802.11b/g[5]
- Microsoft® Windows® XP Professional
- 60GB[2] Hard Drive
- 17" Widescreen WUXGA (1920x1200) with XBRITE™ LCD Technology
- ErgoBright™ Technology with Smart Display Sensor
- 512MB (256MBx2) RAM
- CD-RW/DVD-ROM Combo Drive
- Bluetooth® Wireless Technology[6]
- 1-Year Limited Warranty[3]

$2,099.99 Lease for only **$60** per month.[8]

UPGRADES

- Add an Additional Rechargeable Battery Pack for $199.99
- Add a Port Replicator for $199.99
- Add an Additional Power Adapter for $99.99

Power, Mobility and Performance

S Series

Build-to-Order S170B

- Intel® Pentium® M Processor 715 (1.50AGHz[1], 2MB L2 Cache, 400MHz FSB)
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- 40GB[2] Hard Drive
- 13.3" WXGA Display
- 256MB RAM
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- Only 4.2 lbs. with Supplied Battery
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- Add a Port Replicator for $199.99
- Add an Additional Power Adapter for $99.99

Business Professional

S Series

Build-to-Order S170B

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  - Intel® PRO/Wireless Network Connection 802.11b/g[5]
- Microsoft® Windows® XP Professional
- 60GB[2] Hard Drive
- 13.3" WXGA Display with XBRITE™ LCD Technology
- 512MB RAM (256MBx2)
- Integrated DVD-RW Drive[4]
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- Add an Additional Power Adapter for $99.99
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Sony® VAIO® Desktop PCs equipped with Intel® Processors offer many customized options to meet the demands of business, all while remaining true to the Sony tradition of renowned quality, reliability and style.

Sony® VAIO® RS Series Desktop PC

Build-to-Order PCV-RS600CB

- Intel® Pentium® 4 Processor with HT Technology at 2.80C GHz[1]
- Microsoft® Windows® XP Professional
- 120GB[2] (7200 rpm) Hard Drive
- 256MB DDR at 400MHz
- DVD-ROM and CD-RW Drives
- 128MB ATI® RADEON™ 9200 Graphics Card
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UPGRADES

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- Upgrade to a 160GB[2] (7200 rpm) Hard Drive for $21
- 3-Year On-site Service[7] for $229.99

StylePro™ Series 17" Flat Panel LCD

SDM-S74/B

- 17" TFT Active Matrix (Flicker-Free) 1280x1024 Native Resolution
- **ErgoBright™ Technology.** Saves Energy and Adjusts Brightness and Contrast to Your Preferred Viewing Level with the Touch of a Button
- **Premium Image Quality.** Auto ImageSet™ Technology Optimizes Picture for Consistent Performance
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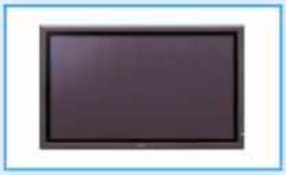

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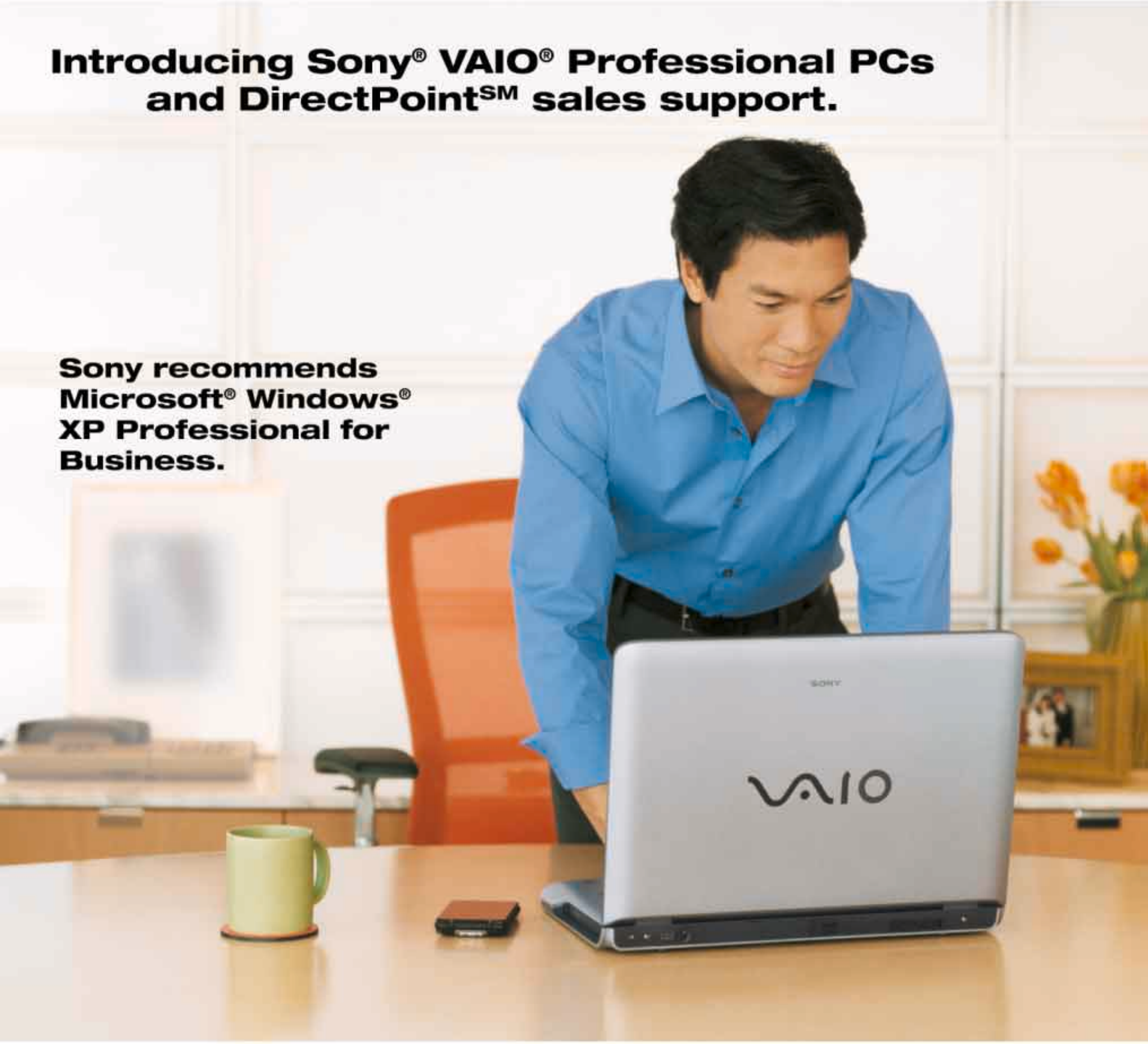

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FEEDBACK

> “The decision to buy versus stream music goes beyond how much entertainment one is ‘missing.’”

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LET ’ER RIP!

I just finished reading Bill Howard’s “Rent, Don’t Rip” column (October 19, page 71), and I do not agree with his money-saving tips.

He says that buying 100 CDs will cost $1,500 and that money would be better used renting music from online music stores. Although I agree that the $1,500 would probably cover downloads I make from online music stores for a decade, what about the hardware needed to play the music? If you do not already own an MP3 player, then you will have to shell out anywhere from $100 to $300 for a portable device. And what about the devices he mentions for the car? The prices I see for a PhatNoise jukebox kit for a car range from $300 to $400 depending on the size of the hard drive. And then there’s installation.

If I didn’t own a portable player or a car player, I would be looking at $400 to $700 up front just for the hardware. And what happens when I fill up that player and need a new one with a bigger hard drive?

Existing CDs may not make sense to Mr. Howard, but I already have lots of them and I already own the hardware necessary to play them in my home, at work, and in my car. And I don’t have to deal with the added time required to transfer them between devices.

CHRISTOPHER MORRIS

REASONS TO BUY MUSIC

While I sort of get the “Rent, Don’t Rip” concept, I do think the decision to buy versus stream music goes beyond how much entertainment one is “missing.” The reason to buy is to have access to the discographies of your favorite artists when and where you want them. Computers and digital music formats have given us so many more options for listening.

I have not found myself wanting to spend another $10 or $15 per month for streamed content, perhaps because I find so much of the current content to be largely undistinguished and not all that compelling. I don’t feel I’m missing very much, though I’m sure there are a few bands or artists that I might want to hear more of. And if “yield management” will slowly increase streaming and usage costs, there will be even less reason to rent music.

I find I’m buying music from the past most of the time. Just got the Faces boxed set. I’d only hear a fraction of the music on these four discs from any of the streaming providers. And I have ripped all the discs onto my iPod using the Apple Lossless format. There are very good reasons to buy music.

A far greater concern should be the erosion of fair use. Consumers who want to rip CDs onto portables or make copies for the car and for travel should be able to so. The entertainment industry has a long, ugly history of fighting technology instead of seizing the new opportunities it offers. They love the renting concept because it means that they can create further impediments to fair use. Is there another industry that is as hostile to its customers?

EDWARD BAUMAN

VIVA XYWRITE—AND KILL WORD

John Dvorak’s diatribe against Microsoft Word (September 7, page 59) was much appreciated, including his new (to me) word, “kludge.” I’m stuck with Word at work, where it drives me up the wall for all the reasons he mentions plus a whole range of others, which all boil down to the fact that the program was never designed for writers. And that’s why, like a surprisingly large number of people, I’m still using XyWrite for writing and editing. For ultimate safety I keep an archived version on an old DOS box, but day to day it runs happily under Windows 98 and XP, and it keeps me happy while doing so.

FRANK BROWNLOW

NET 1, JOHN DVORAK 0

It was ironic to find such an elitist piece of drivel as John Dvorak’s “The Zeros vs. the Ones” (Fall 2004, page 61) in a magazine dedicated to the PC, this generation’s most powerful symbol of egalitarianism. Its offspring, the Internet, is no less of an equalizer in an information marketplace dominated by individuals of the same political persuasion. The Internet is not a passive medium. That Dvorak feels “confronted” by the opinions of people he believes to be disturbed or feeble-minded may say more about him than it does about the Net.

CLAYTON LEE

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MAIL Letters, *PC Magazine*, 28 East 28th Street, New York, NY 10016-7940.
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We regret that we cannot answer letters individually.

Corrections and Amplifications

- ■ Because of an editing error in “Smart Phones” (October 19, page 100), rumored information on a palmOne Treo 650 was printed as fact. We regret the mistake.
- ■ A list of on-demand application providers in “Business IT: Rent or Buy?” (October 19, page 136) contained an incorrect URL for Salesnet. It should have been *http://web.salesnet.com/index.asp*.

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The Yankee Group, a global research and consulting firm, concluded that a significant switch to Linux from Windows or Unix could cost three to four times as much without delivering tangibly better performance or business value. These findings are based on a non-sponsored worldwide survey of 1,000 IT administrators and C-level executives in midsized and large enterprises.

To get the full study, visit **microsoft.com/getthefacts**

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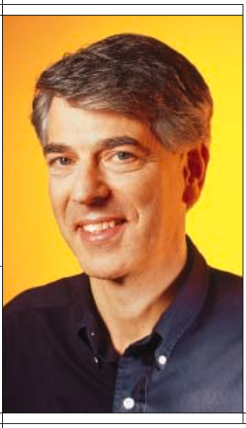

DVD-Authoring Redux

After receiving more than 100 letters from *PC Magazine* readers, I can only conclude that DVD authoring on PCs is a mess. I can't recall another product category or application with such a huge spread of user experiences—from total failure to shining success—with so many partial victories scattered in between. Now that the e-mail deluge has finally ceased, I'm sorting through the suggestions, other than "Buy a Mac," to see what I should do next. Not that I have anything against Apple; I'm just not going to switch platforms to do something that is being done (by some) on PCs.

But it's also apparent from the letters that PC performance matters. Evidently, the software is not sophisticated enough to keep everything in sync if it encounters some hardware slowdowns. Most packages I've looked at recommend working on a machine with a 1-GHz processor and 128MB RAM, or with 2 GHz and 256MB for real-time preview, but 2 GHz and 512MB will probably get you more reliable results.

Disk performance matters too. One reader, ira_e, wrote, "...several DVDs authored with Sonic MyDVD (bundled with my Sony DRU-500A) had out-of-sync soundtracks. [Someone] suggested defragmenting the hard drive before burning. That worked. Why should that matter in a digital world?"

Good question. Video timing is tricky enough, and the computer is already reading the video and audio tracks, assembling your edits, converting formats, applying filters, and streaming the output. The additional latency imposed by a fragmented hard drive may be all that's needed to throw it into chaos.

Ira_e also mentioned that it took him days to edit a disc with 25 chapters in Pinnacle Studio 8, because the program had trouble staying up with that much material. He added that Pinnacle Liquid Edition was "pretty much the only program [he's] used that can lock up a Windows XP machine with consistency."

Joe Steffen passed along a finding from *Videomaker* magazine saying that DVD-R (which I'd been using) has more compatibility problems than +R. He also found that some +RW discs from TDK and Memorex ceased to function in some of his players, but Verbatim discs worked consistently. Sheesh, the last time anybody worried about media compatibility was over 20 years ago—with floppy disks.

Not to argue with ira_e, but reader William Howard (no relation to our columnist) found that Pinnacle Studio 8 was a key player among three critical purchases. The other two were a 3-GHz machine with 1GB RAM and a Memorex internal dual-format 8X DVD burner. Again, the total hardware and software package figures in your success.

Several other readers had a love-hate thing with Pinnacle Studio 8; some moved up to Pinnacle Studio 9 and said it was much better. Michael Koo recommended WinDVD Creator 2 over Pinnacle Studio 8, although he admitted that it has menu-button limitations and that you have to override some of its defaults for DVD-player (not computer) compatibility.

Several readers recommended DVD-lab. One, Tom Cantarine, abandoned his suite of Adobe products for DVD-lab but noted that you have to prerender all of your video in MPEG-2 before you can use it. Sigh.

Ulead DVD Workshop 2 was praised by a number of readers. I've got a copy, and I'll definitely be trying it. One user, Ben Franske, said that it is leaps and bounds better than Ulead DVD Movie Factory, and he stated that the vast majority of the bundled programs are useless when it comes to creating menus. Some people manage to make them work, however: Conrad Brimhall has used both Ulead DVD Movie Factory SE and Roxio Easy Media Creator 7 to create chaptered DVDs. He was another user who found better compatibility with +R discs.

In fact, I found opposing opinions on just about every software package. Nero 6, for instance, garnered high praise from a number of readers. Marvin Wood said it wasn't the most intuitive but worked well. Dirk Swanson, however, said it worked okay but ran slowly and crashed often. Swanson is now using TMPGEnc DVD Author 2.5 and saying, "It's not perfect, but it's the best I've tried."

Christian Super is another TMPGEnc DVD Author 2.5 user, but he cautions, "This is still not for the faint of heart." He started with Sony's Screenblast, didn't like it, tried Nero 6, felt the video editor was weak, then tried Roxio Easy Media Creator 7. Now he uses Roxio to capture and edit, TMPGEnc to author, and Roxio to burn.

Multiple software products are the hallmark of many successful DVD creators. They are also the sign of a market segment in serious trouble.

DVD-authoring software is evidently not sophisticated enough to keep everything in sync if it encounters some hardware slowdowns.

MORE ON THE WEB: *You can contact Bill Machrone at* Bill_Machrone@ziffdavis.com. *For more of his columns, go to* **www.pcmag.com/machrone.**

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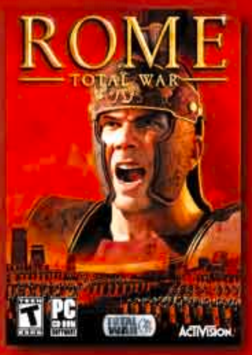

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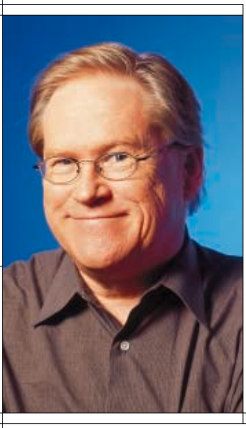
John C. Dvorak



Wi-Fi Nightmares

Of all the technologies that need to settle down, 802.11 wireless in all its manifestations ("a," "b," "g," and—coming soon—"n") should be at the top of the list. There is a mad rush to make the standards for 802.11—used mostly to share crummy 1-Mbps Internet connections—move forward at breakneck speed. At this point, do we really need 802.11n, which proposes speeds between 100 and 540 Mbps using four radios running at once?

A number of companies are already proposing to ship cards and routers dubbed 802.11 pre-n. The Wi-Fi trademark body has threatened to pull the license for any company that uses the "n" moniker before the standard is set, because of the fiasco over 802.11g products that shipped prematurely and became incompatible when the standard was finalized. Now we are seeing this ridiculous pre-n craziness.

This is particularly galling to watch, since even the vanilla 802.11b standard doesn't seem quite done yet. By that I mean the ever-changing encryption modes. First there was some sort of simple key, then along came WEP (Wired Equivalent Privacy) encryption, and now there's WPA (Wi-Fi Protected Access)—while the experts say that "tunneling" via a VPN is the best bet. Meanwhile, everyone seems to be ignoring encryption. And when someone misuses it, everyone gets messed up.

Recently, I went to an event where wireless connectivity had supposedly been set up by an expert. Actually some IT guy back at the home office thought he was doing everyone a favor by making the wireless network tight as a drum. This temporary lash-up was to be used by a very few people for three lousy days. So what does he do? He configures it using WPA. While this may look good on paper, nobody had a laptop or device to support it—so nobody got on the wireless network, except one guy with a brand-new laptop that coincidentally had WPA installed. It's incredibly annoying when people make this sort of blunder. What's the point of so much security? There was no network of document-laden computers with confidential information to protect, just a connection to the Internet. It's mind-boggling.

But what do the IT guys know? Just what they are told. If you go to the Wi-Fi Web site (*www.wi-fi.org*), you'll see that WPA2 is now being promoted! What? WPA itself is already broken?

That said, it's been determined over and over that the biggest threat to your network comes from the people inside the company. And the biggest joke about 802.11 is that nobody uses any of these encryption schemes (except when they should not be used) anyway. I can drive into any city, park my car on any downtown street, and pick up dozens of networks. Maybe a quarter are secured; the rest are wide open.

What is the reason for this? Technology tends to be so disappointing and buggy that when something works at all, nobody wants to mess with it—let alone get fancy. When any 802.11 system gets up and running right, the last thing anyone wants to do is change the settings. Too risky. Most of these networks don't even bother to change the name of the router. It's usually "default" or "Linksys" or "D-Link," the way it came from the factory. It is kind of pathetic.

The biggest joke about 802.11 is that nobody uses any of the encryption schemes—except when they shouldn't.

Things get worse with the confusion created by the industry itself. Look at all the 802.11 initiatives. First there is "b", which came before "a", which was supplanted by "g", because "g" uses the same radio as "b" rather than a new one in "a". "A" is faster than "b", and "g" is the same speed as "a" but runs on a different frequency. "B" and "g" run on the 2.4 wall-penetrating junk frequency and "a" runs in various bands between 5.15 GHz and 5.825 GHz. Pant, pant.

Now here comes 802.11n. Agh. And where are the rest of the letters? 802.11c, 802.11d, and so forth? To further confuse the public, the actual 802.11-whatever refers to a working group, not any sort of branding continuum that would make sense. For example, 802.11c sets the standard for network bridging. And 802.11d is even more off track, since it's a group working on wireless global harmonization.

This is essentially a black hole of confusion, similar to the one created for the old modem market with all its names for various speeds and protocols. I don't even want to get into a discussion about how many of these supposedly compatible Wi-Fi systems do not work well together when you mix brands, despite what we are told.

I love the idea of moving around the world wirelessly. But if I had a choice between going wireless and plugging into an RJ-45, I'd take the RJ-45 with the hard wire anytime. It just works. It's faster and better.

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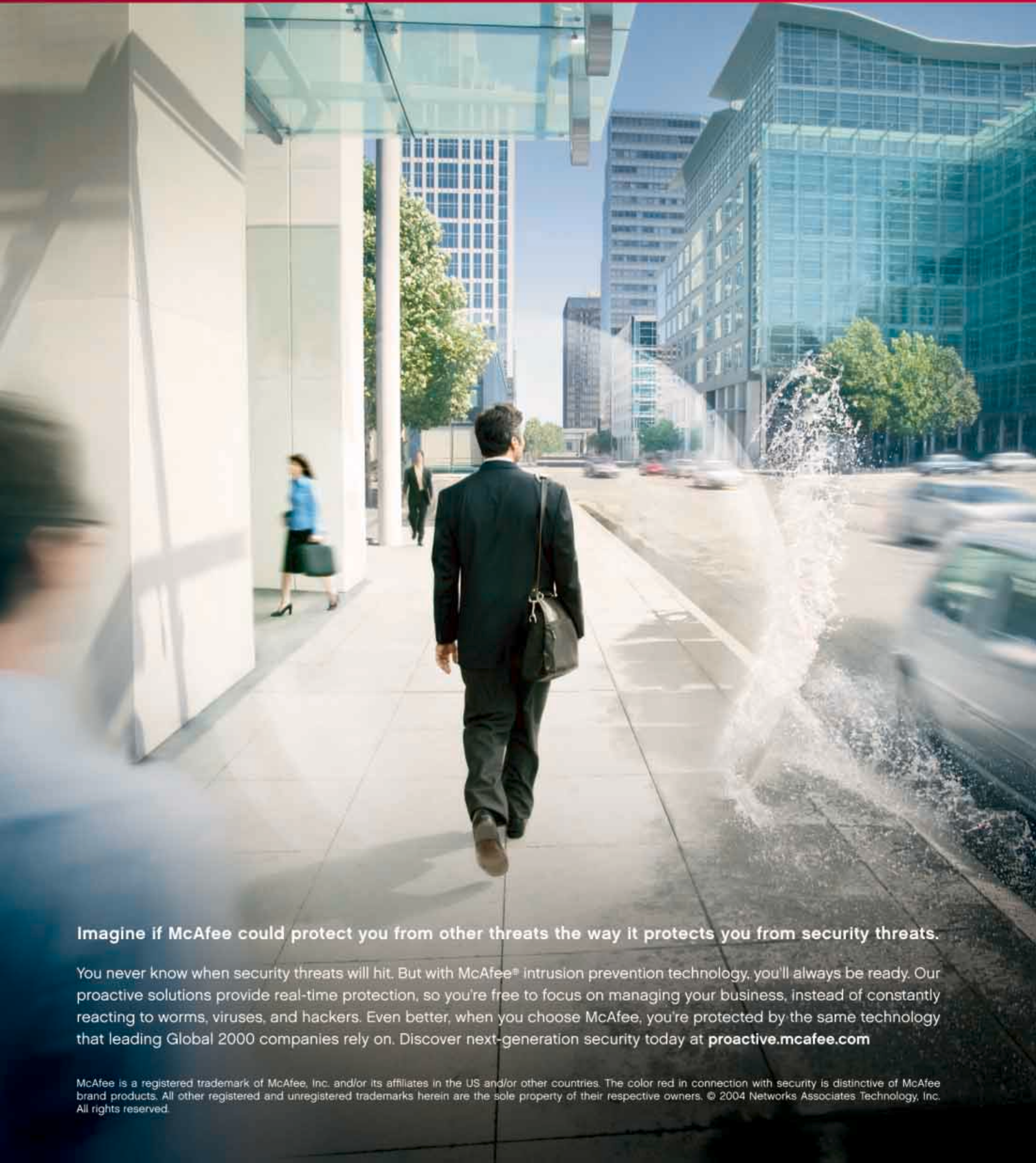

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JOHN C. DVORAK

Inside Track

I've been reading about and following the emergence of VoIP (Voice over IP) services since their inception and have also seen various voice-over-the-Internet initiatives come and go. The investment in those expensive old phone switches and the desire of phone companies to keep them running are the biggest of many roadblocks to the full implementation of VoIP. If you wonder why DSL services have **often deteriorated,** it is because good DSL invites VoIP. Bad DSL, on the contrary, keeps it at bay. This, to me, explains the fact that cable modems have continued to hold and even gain in market share.

If you read the literature, you will see that **concerns over FCC regulations** regarding the linking of VoIP to the PSTN (public switched telephone network) are also keeping VoIP from moving quickly. Maybe it's time to set up a second tier of services that has nothing to do with the PSTN. If you want to call someone on a PSTN system, then **use a cell phone.** If computer users all agreed on a set standard for PC/Internet-based phone services, most of us could easily connect for free, especially if **quality-of-service** protocols were implemented. Just a thought.

Much of the concern always centers around the **911 red herring.** When I was a kid, there was no 911 service. We called the cops directly. For other kinds of emergencies, we'd dial zero (even easier than 911) and tell the operator to get an ambulance or whatever was required. Somewhere along the way, the operators started earning too much money and had to be downsized. Now they're in Bangalore. I'd love to look into the history of 911 services, because I suspect they were implemented to save money, not as a real public service.

Have you ever used 911? They **foul up** all the time. The system is not effective for many emergencies. I would much rather call a smart local operator, but they are all gone. Now 911 is a convenient foil to ward off VoIP. Also, you will note that there wasn't much of a complaint during the mobile phone revolution about 911 until VoIP began to emerge as a threat to the phone companies. They had to shore up their defenses by making sure that cell phones had some sort of 911 capability, although they had been operating cellular services without it for years and years. Agh.

Meanwhile, a number of schemes have sprung up related to 802.11e, which is the quality-of-service working group that should find a way to **enable voice communications** over 802.11a/b/g networks. This will be interesting, especially in venues such as hotels in which 802.11 networks are now being installed **helter-skelter.**

If computer users all agreed on a set standard for PC/Internet-based phone services, most of us could easily connect for free.

Over the years, hotels have seen their profit margins from telecommunications services fall because of cell phones. **Nobody in their right mind** would use the phone in a hotel room anymore, because the hotels are **gouging their customers** on phone use. This is a trend that began about 15 or 20 years ago. A simple call to say hello to the family could run you $25.

And while we're on the subject of connectivity, apparently the FCC is looking into all of the various plans to **hook the power grid into the Internet.** This technology is at the point where it almost works well enough to be seriously considered. The end result will be the **talking washing machine.** Just what we need!

The fact that the FCC is looking at the technology, though, means **something is brewing.** Keep an eye on it.

Genuinely Interesting Software Dept.: While IBM finally showed off its multiyear effort to offer big high-end storage systems—the DS6000 and DS8000—to compete with EMC, it may be going in the **wrong direction.** That said, these devices are very cool, and they are amazingly small. About the size of a VCR, the drive subsystems can be scaled to **67.2 terabytes.**

But the kicker to all of this is the fact that IBM is now discussing the **virtualization of storage** across many systems. This was once called distributed storage, and then SANs (storage area networks). It's now called virtual storage systems. This is a concept that has now been talked up for almost a decade

Overlooked in all of this is a $199 low-end software solution for small and medium-size businesses that can do all of the newfangled conceptual/virtualization SAN stuff for a lot **cheaper** and with equivalent or better performance. The company that makes the software is called DataCore and it has gotten ex-IBM superstars involved with its system. So before you start throwing your money away on some of those ridiculously overpriced subsystems, take a look at these folks. Go to *www.datacore.com* to find out more. Hot stuff.

While we are on the subject of terabytes, we can expect to have terabyte hard drives on our desktops in about two years. Meanwhile, companies have not given up on nonmagnetic media: A **holographic recording** technology is expected to work within the next few years, delivering a 1-terabyte optical disc. That will be just in time for you to store those 100MB RAW photo files that are headed your way. It just never ends.

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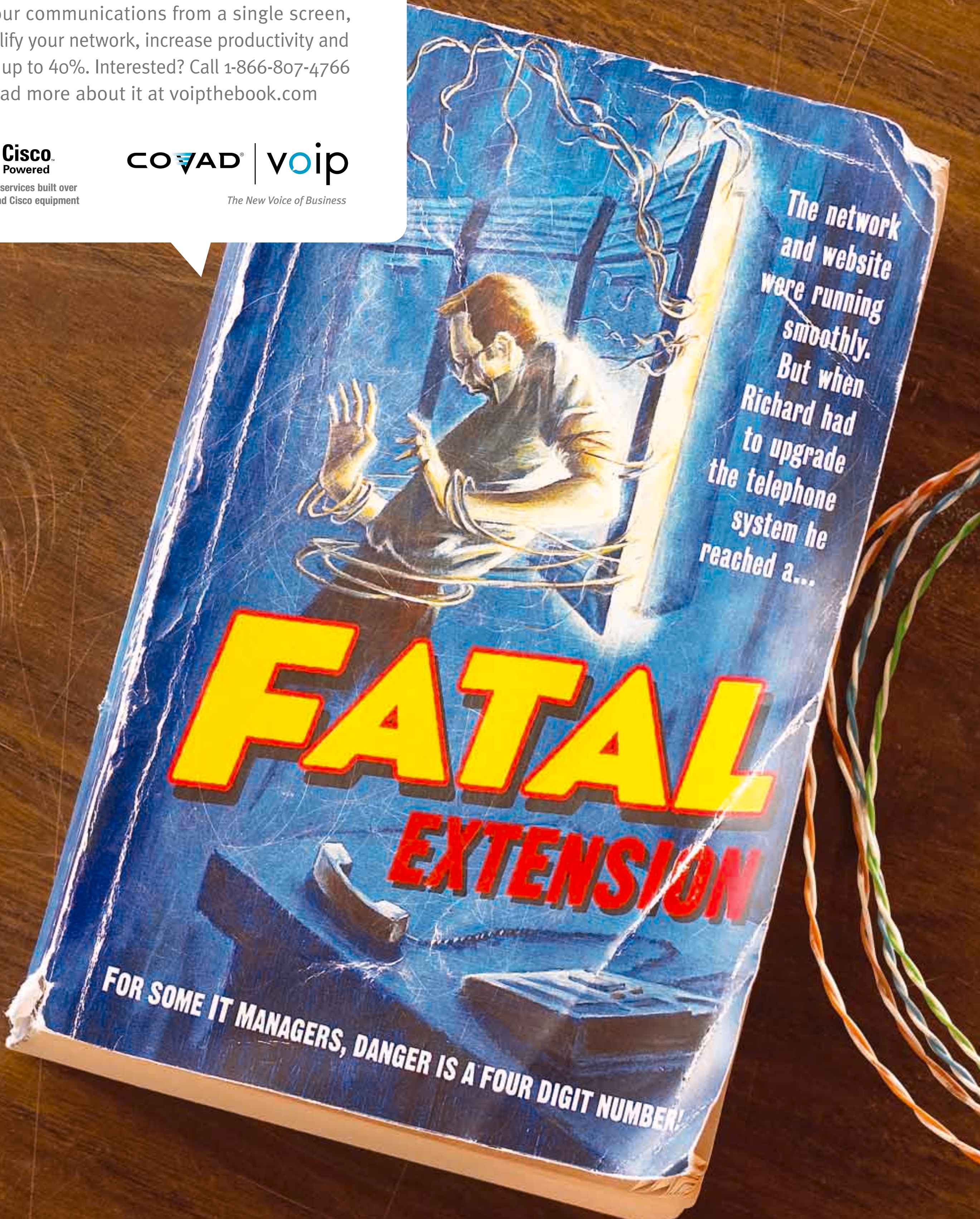
The network and website were running smoothly. But when Richard had to upgrade the telephone system he reached a...
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Bill Howard

Backup Systems Don't Get No Respect

In any Rodney Dangerfield memorial survey to rank PC hardware, backup systems would get the least respect (excepting power protection). They are capital-B boring, at least until you trash a couple files, or a complete hard disk, at which point they become important (but still boring). It has been years since I've lost a file, and part of that is luck. The other part is preparation: having the right backup hardware and software to ensure files are safe.

For several years I've been a fan of network hard disks, essentially headless (no monitor) shoeboxes containing a hard disk, power supply, Linux, and an Ethernet adapter. You can quickly copy files to them. For home users they make a great central repository for photos, music, and digitized videos that you want to play elsewhere in the house. Buffalo Technology, D-Link, Iomega, Linksys, and Ximeta make them. Buffalo's LinkStation Network Storage Center is the best because in technology that isn't cutting edge, price plays a major role, and Buffalo is cheap at about $260 for the 120GB version. It functions as a USB print server and lets you attach an external USB drive for more storage. With most network hard disks you have to add your own backup software to automate the process, which is important since it's something users often forget.

Even cheaper are USB or FireWire external hard disks, but they can back up only one PC at a time. Some have backup software; some don't. I like the Maxtor OneTouch II now that the complex Dantz Retrospect backup software has been upgraded. There are also solid products from Iomega, LaCie (FireWire only) Seagate, Western Digital, and WiebeTech. If you're really cost conscious, you can buy a USB hard drive enclosure for $50 and add your own 120GB to 200GB hard disk for $100. Or you could put a second hard disk in each PC.

Recently, I've become a fan of the Mirra Personal Server. It took a year to warm up to Mirra because it seemed to be an overly expensive backups-only SOHO/departmental device, meaning you couldn't use it as a central repository for photos or music that you could share with, say, the digital media hub in the living room. In fact, applications can't directly access the contents of the disk except through Mirra's software. So $400 seemed an awful lot for an 80GB drive and backup software. But there are enough features in version 2.0 to justify the price, which is about $500 street for 120GB and $750 for 250GB. It makes continuous background backups off all the networked PCs in your home or office. Now you can access and share files online, make backups of your laptop back to the server from a broadband-equipped hotel, synchronize folders among multiple PCs, keep multiple versions of files, and share photos online. Small businesses can share files with clients.

These features help you forget that the Mirra costs twice as much as a desktop PC with the same drive capacity. But your time has value; if it's $40 to $50 an hour and Mirra halves the time spent finding lost files, deleted files, or uninfected previous versions, in a year you've probably saved back the cost of the device.

All these solutions have a downside: The devices share the same building as the original data and are vulnerable to flood, fire, earthquake, or theft. So you still need to keep your most crucial data offsite. For most users this entails a combination of DVD-R backups stored in the office or safe deposit box, possibly online backup (your ISP typically offers a couple gigabytes), and certainly—for notebook users or presenters—a USB key that carries the data you use right now.

I've adopted overlapping forms of backup: More than necessary for an average month, just enough for a month when a natural disaster might strike. Now that I'm comfortable with Mirra, it's our family's main form of backup and it's the one that bails us out of common jams. A second copy (the only freely accessible network copy) of the music, photo, and video files is on a network hard disk, as are all the data files. But they're all in the same building, so monthly DVD backups go in the safe deposit box, and the files are also on my laptop. I keep presentations I'm giving on a USB key in my pocket in case the laptop fails. I will admit to one piece of Type A behavior: I keep a creaky old network hard disk in a detached shed that has (this is not normal, I admit) a wired Ethernet connection. You could do that if you have a detached garage (and a spare UPS). It's better to be lucky and prepared, if boring, than merely lucky, because luck won't last forever. Though backups may not get no respect, they can be a godsend when things go wrong.

I've adopted overlapping forms of backup: More than necessary for an average month, just enough for a month when a natural disaster might strike.

MORE ON THE WEB: *You can contact Bill Howard directly at* bill_howard@ziffdavis.com. *For more of his columns, go to* **www.pcmag.com/howard.**

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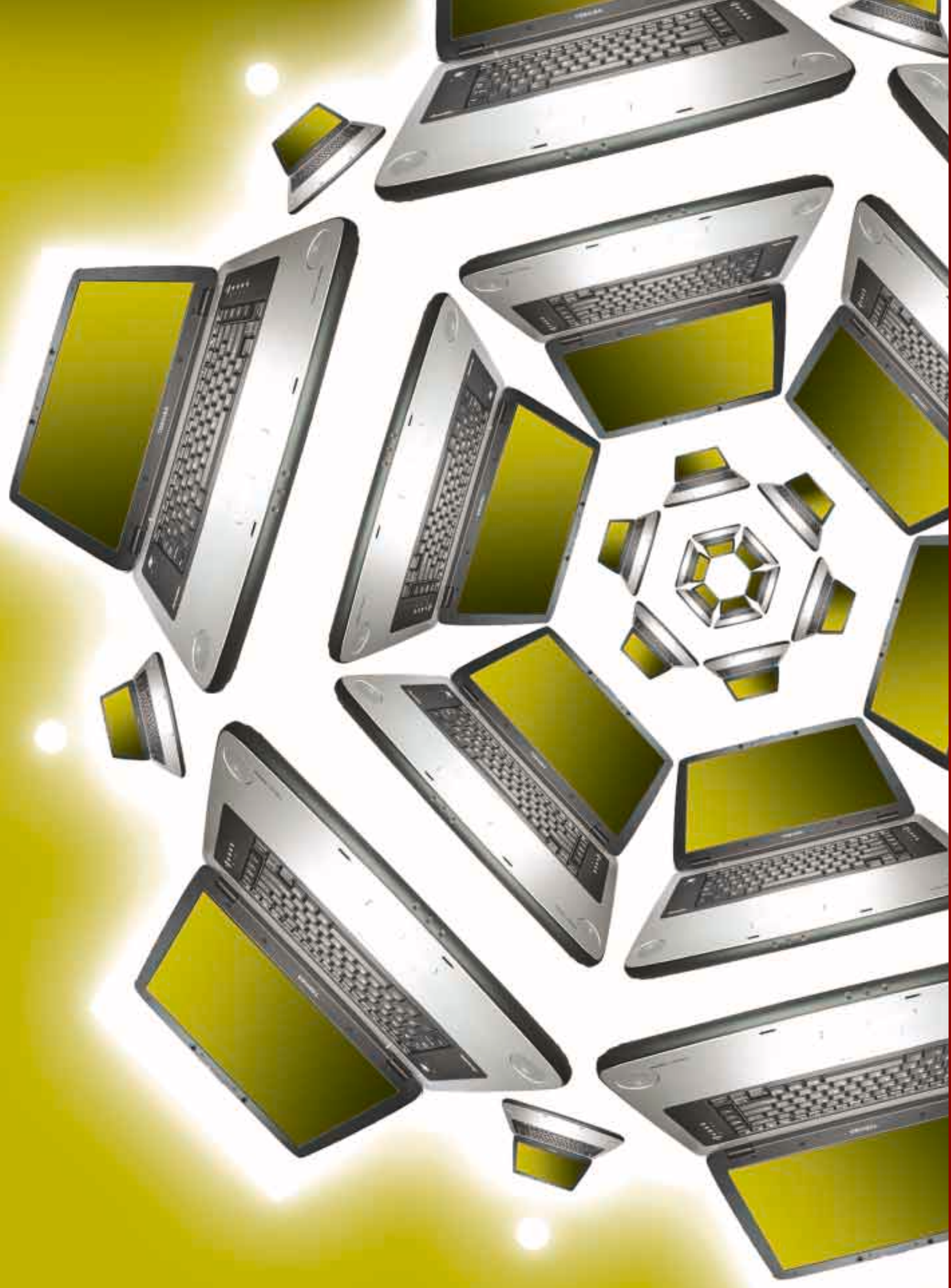

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Video Editing 101

Turn your home video into a crowd-pleasing movie.

BY JAN OZER

While most of us feel comfortable shooting with a camcorder, fear of actually editing the video is so rampant that it deserves an official medical designation, like timeline-aphobia or transitionitis. In years past, when working with analog formats (for example, 8-mm, Hi8, and VHS-C), underpowered computers, and minimal hard disk space, this apprehension was probably justified.

Today, though, if you own a DV camcorder and late-model Windows XP computer, you'll find video editing surprisingly accessible. With the holiday season looming (and perhaps summer videos waiting to be edited), there's never been a better time to take the plunge. So take a deep breath, visualize success, and follow along with our introduction to video editing.

We'll be working with a home video of a birthday party highlighted by a visit from a clown. While the edits are specific to this project, the techniques should work for most home videos.

We're going to demonstrate the techniques using Microsoft's Movie Maker 2.1 for Windows XP because it's freely available to all Windows XP users. Other programs for editing digital video that have higher-end features than Movie Maker 2.1 are available. For our review of two of the best consumer products, Adobe Premiere Elements and Pinnacle Studio Pro 9, see "Video-Editing Power for Non-Pros," (*http://go.pcmag.com/nonproediting*). For newcomers, though, Movie Maker is a good place to start.

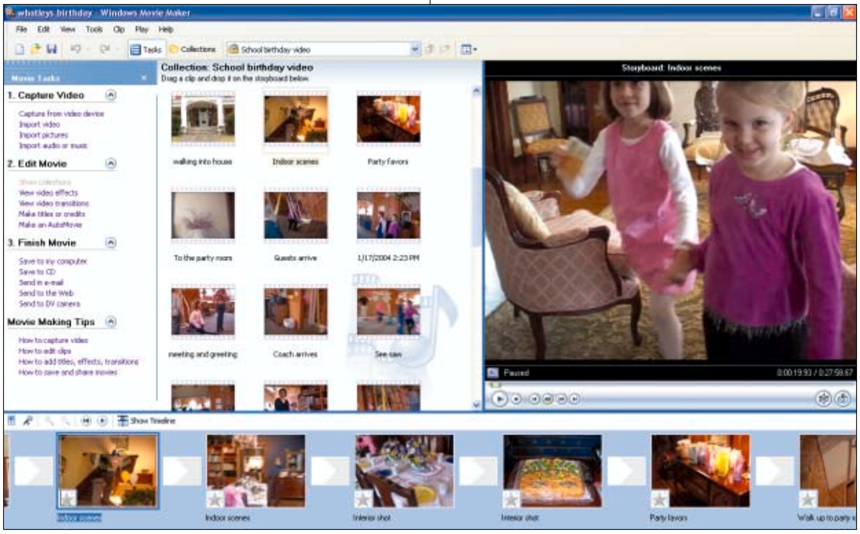

whatleys birthday - Windows Movie Maker
File Edit View Tools Clip Play Help
Tasks Collections School birthday video
Movie Tasks
1. Capture Video
Capture from video device
Import video
Import pictures
Import audio or music
2. Edit Movie
Show collections
View video effects
View video transitions
Make titles or credits
Make an AutoMovie
3. Finish Movie
Save to my computer
Save to CD
Send in e-mail
Send to the Web
Send to DV camera
Movie Making Tips
How to capture video
How to edit clips
How to add titles, effects, transitions
How to save and share movies
Collection: School birthday video
Drag a clip and drop it on the storyboard below.
walking into house
Indoor scenes
Party favors
To the party room
Guests arrive
1/17/2004 2:23 PM
meeting and greeting
Coach arrives
See saw
Storyboard: Indoor scenes
Paused
0:00:19.93 / 0:27:58.67
Show Timeline
Indoor scenes
Indoor scenes
Interior shot
Interior shot
Party favors
Walk up to party s

FIGURE 1: The Movie Maker interface helps you easily capture, view, and edit your movie clips.

This latest version of Movie Maker is available only as a component of Windows XP Service Pack 2; if you've downloaded SP2, you should have Movie Maker 2.1. Go to your *Start* menu and select *All Programs,* then *Accessories and Entertainment.* You can learn more about Version 2.1 and how to start the SP2 download process at *www.microsoft.com/moviemaker.*

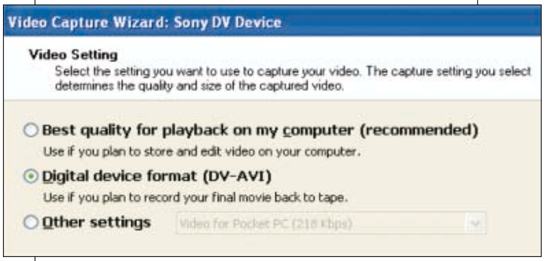
Figure 1 shows the Movie Maker interface. On the top left is the Tasks pane, where you'll initiate most production tasks. In the top middle is the Collections pane, which houses captured and imported content as well as Movie Maker's collections of transitions and special effects. You'll preview your movie in the Monitor, which is on the top right.

On the bottom is the Storyboard, where you'll drag and sequence the clips in your project. As we'll see below, this window converts to a Timeline used to finalize your videos.

CAPTURE YOUR VIDEO

The first step in most productions is capture, in which you transfer video from a DV camcorder to a computer. This occurs over a FireWire connection, officially called IEEE-1394. All DV cameras have a FireWire port, so you'll need a FireWire port or card in your computer and a FireWire cable.

To begin, click on *Capture from video device* in the Tasks pane. This starts a wizard that includes several straightforward decisions, like naming the captured files and identifying where to store them. When you get to the *Video Setting* screen, choose DV-AVI (Figure 2). Even if you don't plan on sending the video back out to your DV camera, capturing in DV format ensures the highest possible output quality.



Video Capture Wizard: Sony DV Device

Video Setting

Select the setting you want to use to capture your video. The capture setting you select determines the quality and size of the captured video.

○ Best quality for playback on my computer (recommended)
Use if you plan to store and edit video on your computer.

● Digital device format (DV-AVI)
Use if you plan to record your final movie back to tape.

○ Other settings Video for Pocket PC (218 Kbps)

FIGURE 2: Capturing your video in DV format ensures the highest possible output quality.

You can direct Movie Maker to capture the entire tape automatically or manually capture scenes from the tape via the screen (as shown in Figure 3). Use the

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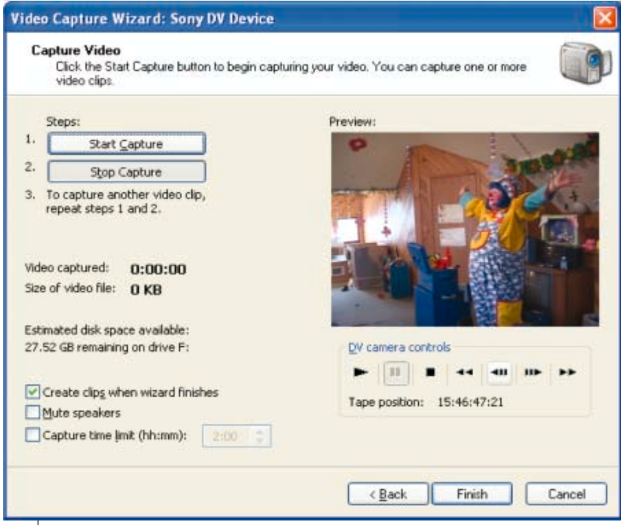


Video Capture Wizard: Sony DV Device

Capture Video

Click the Start Capture button to begin capturing your video. You can capture one or more video clips.

Steps:

1. Start Capture
2. Stop Capture
3. To capture another video clip, repeat steps 1 and 2.

Video captured: 0:00:00
Size of video file: 0 KB

Estimated disk space available:
27.52 GB remaining on drive F:

☑ Create clips when wizard finishes
☐ Mute speakers
☐ Capture time limit (hh:mm): 2:00

Preview:

DV camera controls

Tape position: 15:46:47:21

< Back
Finish
Cancel

FIGURE 3: The Video Capture wizard gives you precise control over your clips.

controls beneath the video window to queue the camcorder to the desired clips, then start and stop capture with the buttons on the upper left.

In both of these instances, click on the *Create clips when wizard finishes* check box. This creates a separate clip for each time you stopped and started the camcorder during shooting, which makes it easier to identify clips you want to include in the production.

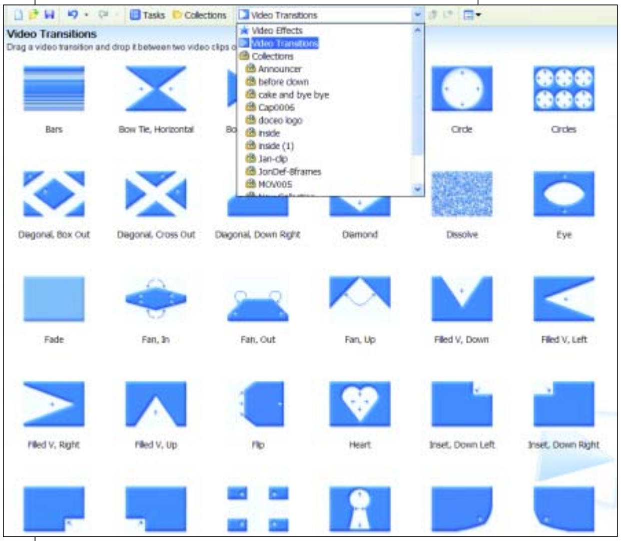
ORGANIZE YOUR CLIPS

Movie Maker creates a new collection for all captured clips. Double-click on any clip to play it in the Monitor. If it contains a scene you'd like to include in the movie label, label it by clicking on F2 and typing the new name. Otherwise, press the Delete key to send it to the cutting-room floor. Then start dragging your keeper clips to the Storyboard.

Movie Maker 2 is nonlinear, which means you can sequence clips any way you'd like, irrespective of when you actually shot them. Thus, you can drag clips to the Storyboard in any order and move them around within the Storyboard like checkers on a checkerboard.

After sequencing the clips in the Storyboard, switch to the Timeline view by clicking on *Show Timeline* above the Storyboard. Where the Storyboard shows only a single frame from each clip, the Timeline displays both the video and audio components, and three other tracks (discussed below) that we'll use to polish our videos (Figure 4).

First, you should trim away any excess frames from your clips. Position your pointer over the edge of a clip to display the trim cursor that is shown in Figure 4. Click and drag the edge of the video until the desired start frame (when trimming the beginning of the clip) or end frame (when trimming the end) appears in the Monitor. When you release the mouse, Movie Maker sets the new trim point.



Video Transitions

Drag a video transition and drop it between two video clips o

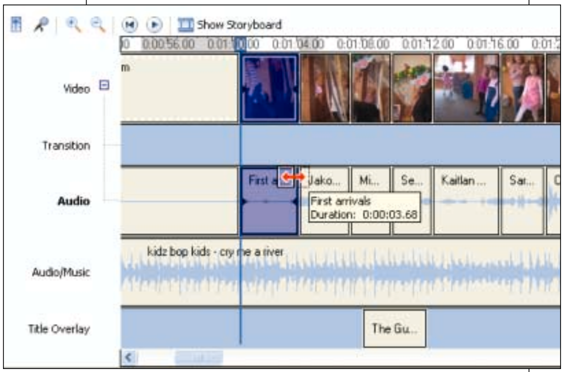
Tasks
Collections
Video Transitions
Video Effects
Video Transitions
Collections
Announcer
before clown
cake and bye bye
Cap0006
doceo logo
inside
inside (1)
Jan-clip
JonDef-8frames
MOV005
Bars
Bow Tie, Horizontal
Circle
Circles
Diagonal, Box Out
Diagonal, Cross Out
Diagonal, Down Right
Diamond
Dissolve
Eye
Fade
Fan, In
Fan, Out
Fan, Up
Filled V, Down
Filled V, Left
Filled V, Right
Filled V, Up
Flip
Heart
Inset, Down Left
Inset, Down Right

FIGURE 5: Transitions help you link the different scenes together smoothly.

POLISH YOUR PRODUCTION

Now let's polish our production, starting with transitions. Transitions are effects that help smooth the flow from one clip to another. Common transitions include a *dissolve,* where the first clip blends with the second before the second clip fully appears, and a *fade to black,* where the first clip slowly fades to black and the second clip fades from black.

You don't have to use a transition between all clips on the Timeline; you can simply *cut* from clip to clip. Try building your movie without transitions at first and see how it flows. Generally, you should insert a transition only when you need to give the viewer a clue that something has *changed* between the two clips, usually either the time frame or the scene location. For example, if the party moves from the playroom to the dining room, a simple dissolve helps smooth the flow.



Show Storyboard
0:00:56.00
0:01:04.00
0:01:08.00
0:01:12.00
0:01:16.00
Video
Transition
Audio
First a...
Jako...
Mi...
Se...
Kaitlan...
Sar...
First arrivals
Duration: 0:00:03.68
Audio/Music
kidz bop kids - cry me a river
Title Overlay
The Gu...

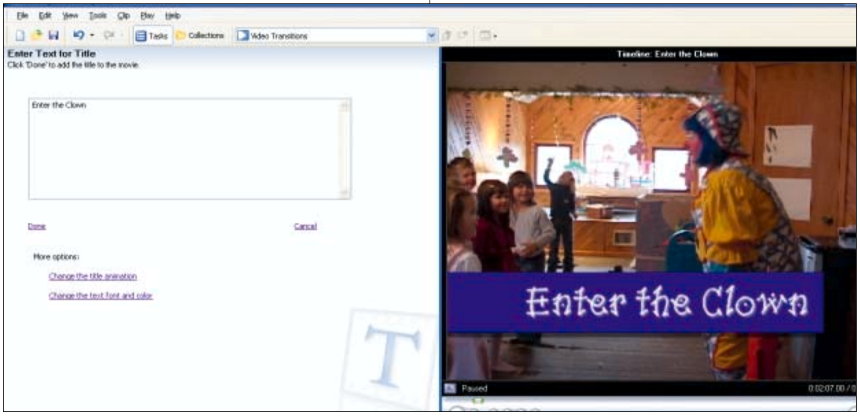
FIGURE 4: The Timeline lets you work with the Video, Audio, Audio/Music, Transitions, and Title tracks of your production.

Movie Maker stores all transitions in a collection just like your captured videos. To display Movie Maker's transitions, choose *Transitions* in the *Collections* list box (Figure 5). Insert a transition by dragging it down between the two clips.

ADD BACKGROUND MUSIC

Beneath the Audio track is the Audio/Music track, where you can insert either narration or background music. The latter in particular is a great way to improve the watchability of your movies.

For example, in the scenes before the clown's performance, there is no real dia-


File
Edit
View
Tools
Clip
Play
Help
Tasks
Collections
Video Transitions
Timeline: Enter the Clown
Enter the Clown
Paused

Enter Text for Title
Click 'Done' to add the title to the movie.

Enter the Clown

Done
Cancel
More options:
Change the title animation
Change the text font and color

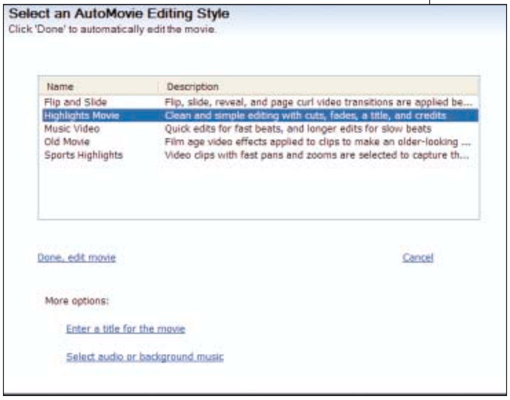
FIGURE 6: You can create titles and credits from the *Enter text for title* screen.

logue to carry the scene. We're simply showing the decorations and food that Momma prepared and documenting who showed up at the party. Adding party music makes the scene look like a music video, which is much more fun to watch.

Import audio by clicking on *Import audio or music* in the Tasks pane. Then, drag the audio file down to the Audio/Music track. If necessary, adjust volume on either the Audio or Audio/Music tracks by right-clicking and selecting *Volume*. Movie Maker can import a wide range of formats, including MP3, WAV, and WMA, but it cannot import a file that's copy-protected.

The bottom track is the Title Overlay track, where you add text titles to your videos. Insert a title at the beginning of the movie to identify the event, periodically through the movie to let the viewer know the story is moving along, and add closing credits at the end to identify the stars of the production.

To create a title, click on *Make titles or credits* in the Tasks pane, which opens the *Enter text for title* screen shown in Figure 6. You can experiment with different title animations and change the text font and color by clicking the respective links beneath the text entry screen.


Select an AutoMovie Editing Style
Click 'Done' to automatically edit the movie.

Name	Description
Flip and Slide	Flip, slide, reveal, and page curl video transitions are applied be...
Highlights Movie	Clean and simple editing with cuts, fades, a title, and credits
Music Video	Quick edits for fast beats, and longer edits for slow beats
Old Movie	Film age video effects applied to clips to make an older-looking ...
Sports Highlights	Video clips with fast pans and zooms are selected to capture th...

Done, edit movie
Cancel
More options:
Enter a title for the movie
Select audio or background music

FIGURE 7: Movie Maker lets you automatically edit the video in any of several styles.

SPECIAL EFFECTS

Movie Maker also offers 53 effects, which you access by clicking on the *Collections* list box and then selecting *Video Effects*. The most important of them are the Fade In effect, which fades your movie in from black, and Fade Out, which fades your movie to black. Apply all effects by dragging and dropping them atop the target clip.

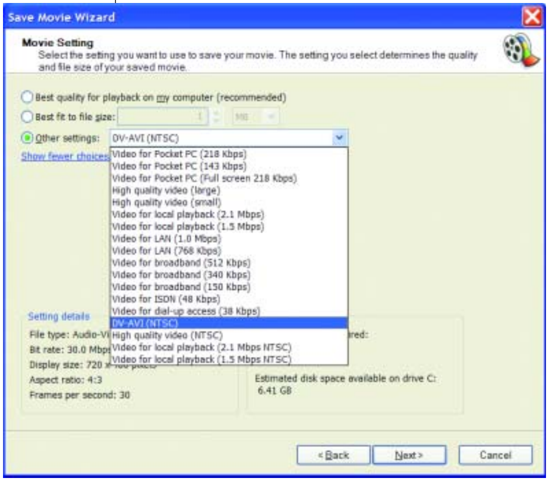
In addition, Movie Maker offers basic effects to correct under- or overexposed video; vastly more sophisticated tools, however, are available from Pixélan Software (*http://www.pixelan.com/mm/intro.htm*). Beyond correcting problems with the underlying video, the use of special effects is a matter of taste. It's best to build your movie without them and add effects only when necessary to achieve a desired look.

YOUR PICTURES OUGHTA BE IN PICTURES

Movie Maker can also import digital still pictures, whether scanned or from a digital camera, and build a video slide show. Click on *Import pictures* in the Tasks pane to import your digital photos, which you can drag to any length on the Timeline. You can zoom into or away from the pictures using the Ease In and Ease Out effects, or purchase more sophisticated pan and zoom capabilities from Pixélan and elsewhere. (See my review of slide-show creation products, including ArcSoft DVD SlideShow 1.0, our Editors' Choice, at *http://go.pcmag.com/slideshowcreation*.)

One great Movie Maker feature is AutoMovie, which converts your clips into a music video–like production. To start, select your clips in the Collections pane, then click on *Make an AutoMovie* in the Tasks pane.

Choose an Editing Style that will deliver the desired feel and tempo for the video (Figure 7), then enter a title for the movie and select a background music track. Movie Maker will scan through the video file, identify the best segments, and synchronize them to the background music. When you have finished editing, click on one of the five output destinations in the Finish Movie section of the Task Bar, then follow the wizard to render your final file.


Save Movie Wizard

Movie Setting
Select the setting you want to use to save your movie. The setting you select determines the quality and file size of your saved movie.

○ Best quality for playback on my computer (recommended)
○ Best fit to file size:
● Other settings: DV-AVI (NTSC)

Show fewer choices
Video for Pocket PC (218 Kbps)
Video for Pocket PC (143 Kbps)
Video for Pocket PC (Full screen 218 Kbps)
High quality video (large)
High quality video (small)
Video for local playback (2.1 Mbps)
Video for local playback (1.5 Mbps)
Video for LAN (1.0 Mbps)
Video for LAN (768 Kbps)
Video for broadband (512 Kbps)
Video for broadband (340 Kbps)
Video for broadband (150 Kbps)
Video for ISDN (48 Kbps)
Video for dial-up access (38 Kbps)
DV-AVI (NTSC)
High quality video (NTSC)
Video for local playback (2.1 Mbps NTSC)
Video for local playback (1.5 Mbps NTSC)

Setting details
File type: Audio-Vi
Bit rate: 30.0 Mbp
Display size: 720 x
Aspect ratio: 4:3
Frames per second: 30

Estimated disk space available on drive C:
6.41 GB

< Back
Next >
Cancel

FIGURE 8: Saving the video in DV-AVI format will permit you to burn it to DVD.

Note that Movie Maker can't author DVDs. To produce a video file to input into a third-party DVD authoring program like MyDVD, click on *Save to my computer*, and output the file in DV-AVI format. As shown in Figure 8, you'll find this option in the *Other settings* list box in the Movie Setting screen.

Beyond these technical details, our best advice to you is to keep the movie, and all of the clips in it, as short as possible. Less is more when it comes to home video, and shorter is almost always better.

Jan Ozer is a contributing editor of PC Magazine. *He is the author of* PC Magazine's Guide to Digital Video.

Server of the Year. More important, server of the years to come.

No server in its class offers more for your business than the HP ProLiant ML330 server, powered by Intel® Xeon™ Processors. Now you can get an "expandable and very speedy server-class machine—at a price that won't make (your) accountants see red." That's what *Network Computing* said of the ML330 when they named it Storage and Server Product of the Year. Unlike most other servers in its class, it comes with what you need to get up and running now as well as expandability for the future. Back it up with the HP StorageWorks DAT 40 tape drive, and you'll also have the secure storage you need. It's all from HP. So you can expect more advice before you buy, more reliability when you do and more support after.

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- One-year limited warranty for parts, labor and on-site support[3]

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Quick and Easy Web Sites with Publisher

Microsoft Publisher is a handy tool for creating a small site.

BY HELEN BRADLEY

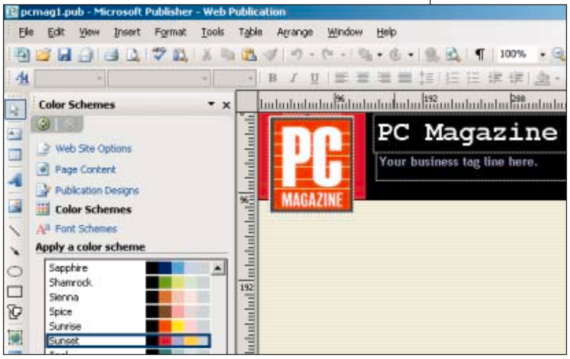
When you're looking for software to help you build a Web site, don't overlook Publisher 2003. Publisher is capable of more than printing newsletters, calendars, and paper airplanes. While it's not in the same league as Dreamweaver or even FrontPage, Publisher is a useful Web site design tool, particularly when you need only a small site.

If you already use a Publisher design set for your publications, you can use the same design for your Web site so you maintain consistency across all publications. Moreover, if you're not an experienced designer, the Publisher pages look good and get you up and running very quickly with a site that looks professional and requires a lot less work than other programs.

When creating a site in Publisher, you can design it yourself or use a preset structure. Go to *File* | *New;* the presets are under the *Web sites and e-mail* heading on the Task pane. The three-page site gives you a home page, as well as About Us and Contact Us pages, and the Easy Web Site Builder lets you choose from a range of different page types depending on your site's goals.

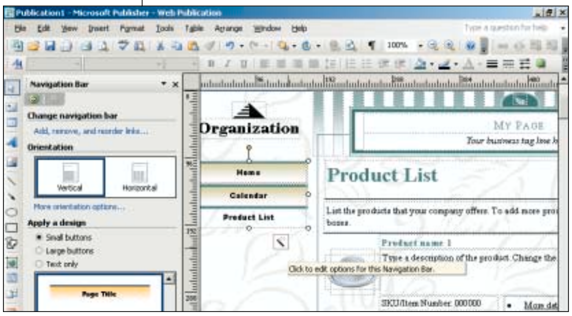
The Product Sales structure adds a main product list page with details pages to the basic three-page site, and Professional Services adds services and service details pages as well as a project list to the basic site. You can easily add to any of the site options by choosing *Insert* | *Page* and selecting a page from the list.

This technique is useful for working around a shortcoming of the Professional Services site: The final page in the Professional Services site is a Project page with links to details pages but no actual pages. While you can't insert the individual details pages (because curiously, there aren't any), you can delete the Project page and add a new Project page with its ancillary details pages using *Insert* | *Page* | *Project List with links.*


pcmag1.pub - Microsoft Publisher - Web Publication
File
Edit
View
Insert
Format
Tools
Table
Arrange
Window
Help
100%
Color Schemes
Web Site Options
Page Content
Publication Designs
Color Schemes
Font Schemes
Apply a color scheme
Sapphire
Shamrock
Sienna
Spice
Sunrise
Sunset
PC MAGAZINE
PC Magazine
Your business tag line here.

MANY DIFFERENT OPTIONS are available to help you design your Web site.

Instead of using a template, you can build a site from scratch by going to *File* | *New* | *Blank Web page.* When you do, configure the page size so your site is constrained to fixed dimensions by choosing *File* | *Page Setup.* Select *Web page* as the Publication type and then one of the preset page sizes, or create your own. Even if you're building from scratch, you can still use the many design, color, and font schemes if you want. Even better, there's lots of functionality you can add—to display products, for example, or to provide links to other pages.


Publication1 - Microsoft Publisher - Web Publication
File
Edit
View
Insert
Format
Tools
Table
Arrange
Window
Help
Type a question for help
100%
Navigation Bar
Change navigation bar
Add, remove, and reorder links...
Orientation
Vertical
Horizontal
More orientation options...
Apply a design
Small buttons
Large buttons
Text only
Page Title
Organization
Home
Calendar
Product List
MY PAGE
Your business tag line h
Product List
Product name 1
SKU/Item Number: 000000
More det

List the products that your company offers. To add more pro boxes.

Type a description of the product. Change the

Click to edit options for this Navigation Bar.

HERE WE'RE ADDING navigation bars to our site. This page displays the products we want to sell.

Providing a means for visitors to move around your site is crucial. Publisher has good navigation tools; they just take getting used to. Preset sites have navigation bars included automatically. You can configure this bar by clicking on it and choosing *Format* | *Navigation bar properties* from the menu. Here you can add or remove pages from the Navigation structure, reorder the links, and even add links to external sites. If you simply want to rename a link, you can do this by editing it directly on the page.

If you create a site from scratch, add navigation bars by choosing *Insert* | *Navigation Bar* | *New.* You can also use this option to add a duplicate set of navigation links to any site—for example, to add text navigation at the foot of the pages. Each navigation bar works independently of the others, so you'll need to configure and update them separately.

The *Navigation bar* tool can also be used to create navigation bars that appear within certain sections of your site. In this case, choose the bar type, click on *Insert Object,* and select the *Insert on this page only* option. Once it's in place, you can add and remove links to other pages as required. To add this or any other navigation bar to another page choose *Insert* | *Navigation Bar* | *Existing* and click on the one to use.

Including titles, descriptions, and keywords with your pages can produce better listings for your site in some search engines. To add these to a page, choose *Tools* | *Web Page Options,* and type a new title in the Page title area. This adds a page title and doesn't affect its name in the navigation links. Here you can also type the page description and keywords up to a maximum of 256 characters for each.

When completed, save your site as a Publisher file so you can edit it again later, then publish it to the Web. The new incremental publish feature lets you upload only pages that have altered since you last uploaded them.

Helen Bradley is a contributing editor of PC Magazine.

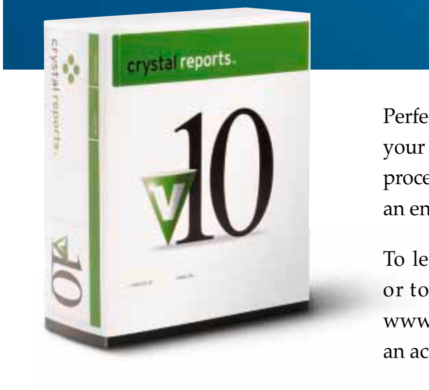
We'd like to think that not all perfect matches are made in heaven.

Crystal Reports 10

Which edition of Crystal Reports® is right for you?

	Report Author/IT Editions		Bundled Developer Editions		Full Developer Editions	
	Standard	Professional	.NET Edition[2]	Java™ Edition[3]	Developer	Advanced
Report Creation						
Visual report designer for rapid data access and formatting	●	●	●[1]	●[1]	●	●
Customizable templates for faster, more consistent formatting	●	●			●	●
Repository for reuse of common report objects across multiple reports[4]		●			●	●
Data Access						
PC-based and Microsoft® ODBC/OLE DB for MS Access and SQL Server	●	●	●	●	●	●
Enterprise database servers (ODBC, native)		●	●[1]	●[1]	●	●
Custom, user-defined data through JavaBeans™				●	●	●
Custom, user-defined data through ADO and .NET			●		●	●
Report Integration						
Report viewing APIs (.NET and COM SDKs)			●		●	●
Report viewing APIs (Java SDK)				●	●	●
Extensive report viewer options (DHTML, ActiveX, Java Plug-in, and more)					●	●
APIs for run-time report creation and modification						●
Report Parts for embedding report objects in wireless and portal apps	●	●			●	●
Report Deployment						
Crystal Reports components for report viewing, printing, and exporting:						
a) Java reporting component				●	●	●
b) .NET reporting component			●		●	●
c) COM reporting component					●	●
Full featured report exporting		●			●	●
Report server (Crystal Enterprise Embedded deployment license)						●

1 Limited functionality. 2 Bundled with Microsoft® Visual Studio® .NET and Boland® C#Builder™.
3 Bundled with BEA WebLogic Workshop™ and Boland® JBuilder®. 4 This feature is available on the Crystal Enterprise CD, included in the Crystal Reports 10 package.



Perfect matches can be made here too. In order to quickly determine which Crystal Reports® best suits your project requirements, we've provided this basic feature chart. Crystal Reports® 10 simplifies the process of accessing, formatting, and tightly integrating data into Windows and web applications via an enhanced designer, flexible data connectivity options, and rich Java™, .NET, and COM SDKs.

To learn more about Crystal Reports 10, compare over 150 different features across versions, or to access technical resources like the Developer Zone and evaluation downloads, visit: www.businessobjects.com/dev/p9. To ask more specific report project related questions, contact an account manager directly at 1-888-333-6007.

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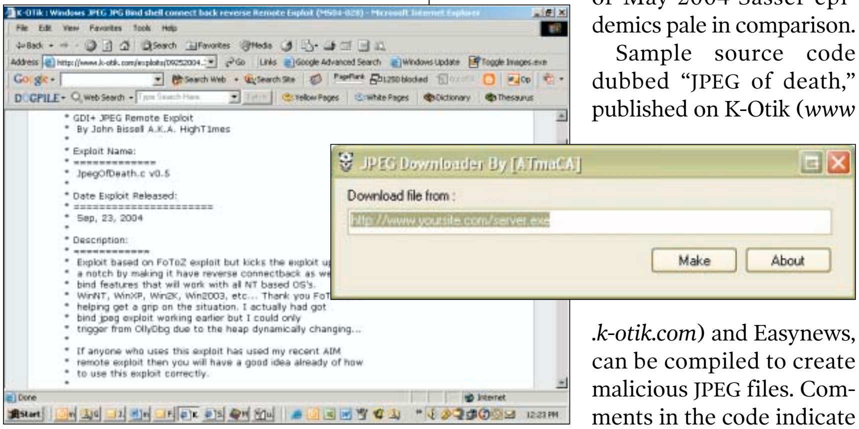
SECURITY WATCH

Picture Peril

Specially crafted JPEGs can run malicious code on unprotected systems. **BY JAY MUNRO**

If you never thought a picture could hurt you, think again. A recent Microsoft security bulletin details a critical Windows vulnerability that enables a malicious JPEG to download and execute a Trojan on a victim's system as soon as the victim views the image. If you run Windows XP Service Pack 2, you're protected. And a firewall that blocks outgoing requests (not the Windows XP firewall) may also block the download of Trojan code. But millions of other users are vulnerable to this new avenue of attack.


K-OTik : Windows JPEG JPG Bind shell connect back reverse Remote Exploit (MS04-028) - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://www.k-otik.com/exploits/09252004.
Go
Links
Google Advanced Search
Windows Update
Toggle Images.exe
Search Web
Search Site
DOGPILE
Web Search
Yellow Pages
White Pages
Dictionary
Thesaurus
Done
Internet
Start
12:23 PM
Make
About

```
* GDI+ JPEG Remote Exploit
*  By John Bissell A.K.A. HighT1mes
*
* Exploit Name:
* =============
*  JpegOfDeath.c v0.5
*
* Date Exploit Released:
* ======================
*  Sep, 23, 2004
*
* Description:
* ============
*  Exploit based on FoToZ exploit but kicks the exploit u
*  a notch by making it have reverse connectback as we
*  bind features that will work with all NT based OS's.
*  WinNT, WinXP, Win2K, Win2003, etc... Thank you FoT
*  helping get a grip on the situation. I actually had got
*  bind jpeg exploit working earlier but I could only
*  trigger from OllyDbg due to the heap dynamically changing...
*
*  If anyone who uses this exploit has used my recent AIM
*  remote exploit then you will have a good idea already of how
*  to use this exploit correctly.
*
```

JPEG Downloader By [ATmaCA]

Download file from : http://www.yoursite.com/server.exe

TO SEE HOW SERIOUS a threat this is, read the lengthy comments at the beginning of the JpegOfDeath.c source code. According to IDefense, JPGDown.A makes it trivial for even unskilled attackers to author hostile JPG files.

The first truly malicious version of the JPEG exploit showed up as a pornographic image on a newsgroup. Usenet newsgroup service Easynews.com posted an alert (*http://easynews.com/virus.html*), claiming it had found several JPEG images that, when viewed, will download a Trojan via an external FTP site. The images were found under the user name "Power-Post 2000." The alert says that the Trojan is downloaded and executed, but currently the code does not propagate, infecting only the machine the JPEG is viewed on. The Trojan, however, could allow the victim's machine to be controlled remotely, possibly for propagation or other purposes.

As we went to print, there were still no worms that use the vulnerability, but security experts feel that it's only a matter of time. For worm authors, the vulnerability may be the holy grail of infection vectors, since it can be passed through e-mail, Web sites, IM, or downloaded programs. Moreover, many kinds of applications and OS versions can view JPEGS, offering innumerable paths for the malicious files to spread. A worm with this kind of infection power could make the August 2003 Blaster or May 2004 Sasser epidemics pale in comparison.

Sample source code dubbed "JPEG of death," published on K-Otik (*www.k-otik.com*) and Easynews, can be compiled to create malicious JPEG files. Comments in the code indicate that Windows will still execute the code even if the JPEG is named .BMP or .TIF. Interestingly, the comments both suggest that a more dangerous worm may be on the way and also encourage "everyone out there to download SP2, patch your Windows systems, etc. Of course this won't be a cure all solution :-/."

As if the posting of this source code isn't bad enough, security company iDefense reports that a utility (JPGDown.A) is available that makes it easy for anyone to download a hostile JPEG file and then distribute it to vulnerable computers. According to IDefense, if the JPEG is viewed on an unpatched system, it will "initiate a download of a remote file as configured by the attacker and execute it."

The vulnerability itself is a buffer overflow flaw in the JPEG parsing engine contained in the file GDIPlus.DLL, a file that is used by the operating system and a great many applications. The JPEG specification allows the embedding of comments in a JPEG file. A two-byte value is supposed to indicate the length of the comments, but if an illegal value is inserted, a buffer overflow condition ensues that overwrites memory structures and potentially allows an attacker to run arbitrary code on the affected system.

Windows systems that have applied the MS04-028 security patches listed at *www.microsoft.com/technet/security/bulletin/ms04-028.mspx* or the Windows XP Service Pack 2 are not vulnerable to the current crop of exploiting JPEGs. In addition, the current JPEG-exploiting files have a unique signature that antivirus vendors can detect. Antivirus products must be set to scan all files, however.

This flaw affects a wide range of Microsoft products, such as the popular Office 2003, and each must have its individual patch applied. This can be done through Windows Update or manually from the MS04-028 bulletin page (*www.microsoft.com/security/bulletins/200409_jpeg.mspx*). For users with products other than Windows XP or Office 2003, Microsoft is offering a tool that scans your hard drive for vulnerable software.

You know the drill: Get patched, make sure your antivirus software is up-to-date, and watch what you download!

Jay Munro is a frequent contributor to PC Magazine *and writes the Security Watch newsletter for pcmag.com.*

THE LOOKOUT

AOL BEEFS UP SECURITY

AOL is offering its customers a new premium service. PassCode is a two-factor authentication system based on RSA Security's SecureID, which uses a keychain-size device that generates a simple, six-digit code that changes every 60 seconds. When logging on to AOL, users will first be prompted for their passwords; this is the first factor. The second factor is the six-digit RSA code. Only if both factors are validated by the system is the user granted access.

PassCode is available to AOL members for a one-time cost of $9.95 for each PassCode device plus an additional $1.95 to $4.95 per month, depending on the number of screen names that are secured to the device.—*Sharon Terdeman*

we protect your digital worlds

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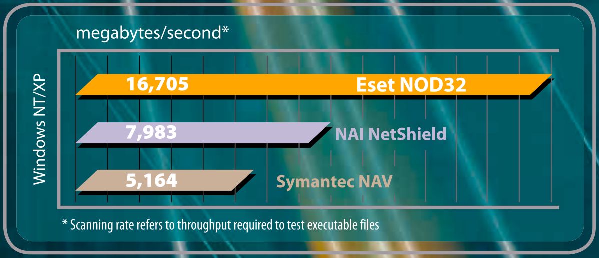
NOD32 consistently outperforms the competition in all Virus Bulletin tests. When it comes to performance, NOD32 leaves the competition in its dust.

Scanning rate



* Scanning rate refers to throughput required to test executable files

Information source:
Virus Bulletin 2/2004 and 6/2004

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NOD32
antivirus system

THE 10X LENS AND THE COLOR SCIENCE CHIP: A LOVE STORY

IT WAS MEANT TO BE.

The new Kodak EasyShare DX7590 zoom digital camera is the marriage of superior engineering and design with groundbreaking technology, resulting in the most advanced Kodak digital camera yet.

Kodak staked a claim in advanced digital photography with the award-winning 4MP Kodak EasyShare DX6490 zoom digital camera. Now, the DX7590 takes technology a step further as the first 5MP camera that combines a Schneider-Kreuznach Variogon 10x optical zoom lens and the innovative Kodak color science image-processing chip with the ease of use that's become the hallmark of the Kodak EasyShare system. And creative control is squarely in your court with a click-to-capture time of 0.2 seconds, 16 scene and 5 color modes, high-speed/low-light-capable autofocus, and new continuous-focus and bracketing modes. At the heart of the DX7590 is the Kodak color science chip, engineered to produce highly saturated, accurate colors. But the greatest image processor available would be nothing without a lens that can capture outstanding color, contrast, and clarity. That's why the DX7590's professional-quality 10x optical zoom lens is designed specifically for digital imaging, delivering the equivalent of 38–380 mm (in 35 mm format, of course). The result is an integration of everything that goes into making a great picture, so you get just the image you want, under every lighting condition, even in prints up to 20" x 30".

Kodak
Schneider-KREUZNACH
10X

The DX7590 is the ideal digital camera for anyone looking to bring together advanced functions and technology with the ease of a point-and-shoot. For more on the most advanced EasyShare camera yet, go to www.kodak.com

Kodak

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USER TO USER

PC MAGAZINE'S COMMUNITY OF EXPERTS AND READERS

Closing a Hole in OE Identity Protection

The article "Password-Protect the Outlook Express In-Box" (*http://go.pcmag.com/oepass*) says "When you log off in this way [using OE's Identities feature], nobody can launch OE without supplying the password." But that's not true if the person logs onto Microsoft Windows as a different user or even as a guest, at least in Windows 98 and Me. The Identity Password dialog in Microsoft Outlook Express will be skipped, and you can see all in-boxes.

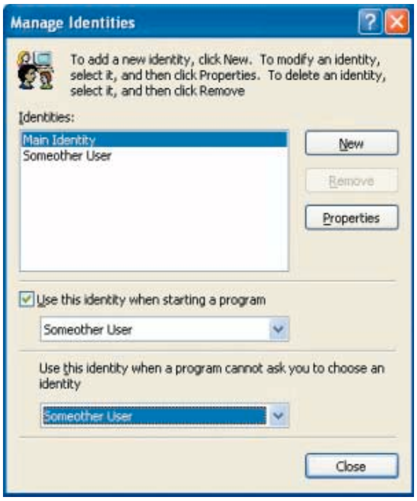
Microsoft Knowledge Base article 258194 explains how to get around this. You must launch *Passwords* from Control Panel, click on the *User Profiles* tab, and check the box that says each user can customize settings. This way each user will have a different profile and won't have access to your e-mail.

LEONARDO F.

This problem is specific to the Windows 9*x* family (Windows 95/98/Me); the Windows NT family doesn't provide an option to have all users share the same settings. If you are using a 9*x* version of Windows, changing your settings so that each user has a different profile may not be sufficient because the no-user "guest" profile (invoked by clicking on *Cancel* in the log-on dialog) may already have access to your main e-mail. The problem may exist even if you already set the system to use a separate profile for each user. Here's how to check and correct that situation.

Log off Windows, wait for the log-on dialog to appear, and click on the *Cancel* button. When the system finishes booting, launch Outlook Express. If it asks you to create an e-mail account, that means there is no problem, so just cancel, close OE, and log off. On the other hand, if OE displays your existing e-mail account, you have a problem.

Select *File* | *Identities* | *Add New Identity* from the menu. Give the new identity a name, but don't fill in any other information. When it asks if you want to switch to the new identity, click on *Yes*. When OE prompts you for account information, just click on *Cancel*. OE may offer to import an existing account, but again cancel this. Select *File* | *Identities* | *Manage Identities* from the menu. Highlight your main identity and click on *Remove*. This will remove access only to the identity from the "guest" log-on. It won't affect the way you access that log-on from your own Windows account.



To add a new identity, click New. To modify an identity, select it, and then click Properties. To delete an identity, select it, and then click Remove

Identities:
Main Identity
Someother User

☑ Use this identity when starting a program

Someother User

Use this identity when a program cannot ask you to choose an identity

Someother User

FIGURE 1: You need to make sure that the no-user "guest" profile can't access your main e-mail.

There's one other possible security hole. Other user accounts on the system may have gotten access to your e-mail identity at some point and may still have access. If possible, log onto each of the other user accounts and remove your identity from the list of available identities. If it's the only identity present, use the same technique you did for the "guest" log-on.—*Neil J. Rubenking*

Ampersands in Excel Headers

I need to include an ampersand (as in "P S & G") in the header of an Excel sheet. But no matter what I do, the ampersand doesn't appear, just "P S G." Do you know how I can get it to show?

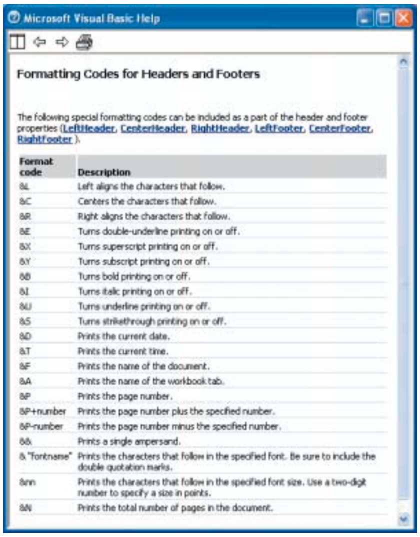
PETER YU

In Excel headers and footers, the ampersand is a control code. For example, *&A* inserts the name of the current worksheet tab. To insert a literal ampersand you must use two of them, as in "P S && G." Excel's own help system doesn't offer an easy way to learn the ampersand codes. To get a list, choose *Visual Basic Editor* from the *Macro* menu, click on *Help* within the VBA Editor's menu, and search on "formatting header footer" (no quotes). This should result in a single topic entitled "Formatting Codes for Headers and Footers," which lists all available ampersand codes.—*NJR*

Small Pictures Become Huge Documents in Word

A number of readers have written to us mystified by a file-size anomaly in Microsoft Word. They'll take a relatively small document, embed a relatively small picture, and wind up with a file that's absolutely immense, 20 or more times as large as the combined size of the document and picture. Yet a different document and picture won't experience this uncontrolled growth.

This problem specifically affects Microsoft Word 2000, 2002, and 2003. It surfaces when a document containing an image in JPEG, GIF, PNG, or EMF format is saved in Rich Text Format or in Word 6.0/95 format. If the document is saved in Word's current format, the problem doesn't arise.



Formatting Codes for Headers and Footers

The following special formatting codes can be included as a part of the header and footer properties (LeftHeader, CenterHeader, RightHeader, LeftFooter, CenterFooter, RightFooter).

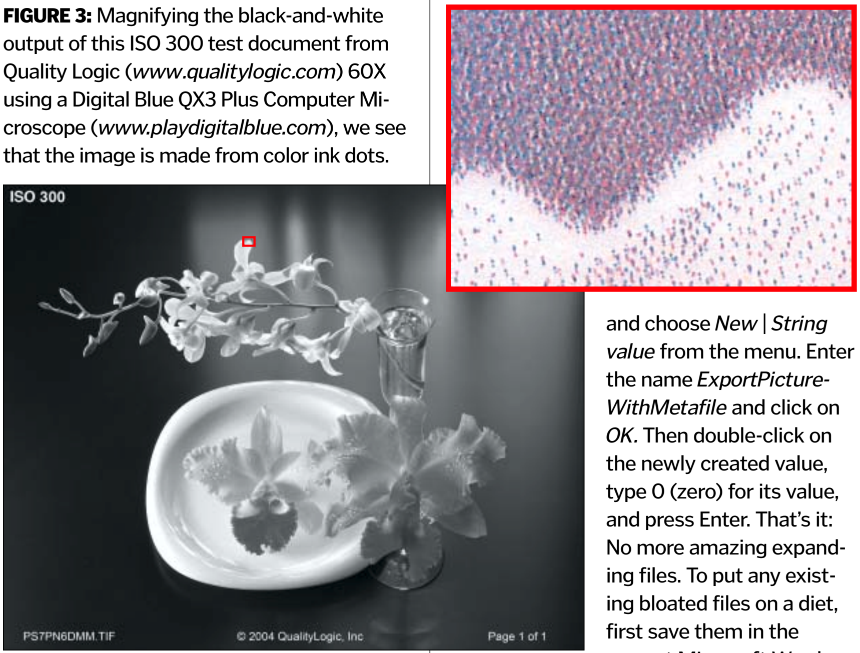
Format code	Description
&L	Left aligns the characters that follow.
&C	Centers the characters that follow.
&R	Right aligns the characters that follow.
&E	Turns double-underline printing on or off.
&X	Turns superscript printing on or off.
&Y	Turns subscript printing on or off.
&B	Turns bold printing on or off.
&I	Turns italic printing on or off.
&U	Turns underline printing on or off.
&S	Turns strikethrough printing on or off.
&D	Prints the current date.
&T	Prints the current time.
&F	Prints the name of the document.
&A	Prints the name of the workbook tab.
&P	Prints the page number.
&P+number	Prints the page number plus the specified number.
&P-number	Prints the page number minus the specified number.
&&	Prints a single ampersand.
& "fontname"	Prints the characters that follow in the specified font. Be sure to include the double quotation marks.
&nn	Prints the characters that follow in the specified font size. Use a two-digit number to specify a size in points.
&N	Prints the total number of pages in the document.

FIGURE 2: In Excel, the ampersand is a control code used in formatting headers and footers.

The Windows NT family doesn't provide an option to have all users share the same settings.

Most ink jet printers can't use their black ink on glossy paper.

FIGURE 3: Magnifying the black-and-white output of this ISO 300 test document from Quality Logic (*www.qualitylogic.com*) 60X using a Digital Blue QX3 Plus Computer Microscope (*www.playdigitalblue.com*), we see that the image is made from color ink dots.



According to Microsoft, this is actually a feature. When the document is exported to one of those two specific formats, two copies of the image are included. One is the original image; the other is the same image converted to Windows Metafile (WMF) format. The WMF format is designed to describe resizable vector-type drawings—line drawings—and it's very efficient for those. But it's hideously inefficient at storing photographic images pixel by pixel.

Fortunately, a simple Registry tweak can turn off this "feature." Close all open instances of Word and launch REGEDIT from the *Start* menu's *Run* dialog. For Word 2003, navigate to the key *HKEY_CURRENT_USER\Software\Microsoft\Office\11.0\Word\Options.* Word 2002 users should change 11.0 to 10.0; Word 2000 users should change it to 9.0. Look in the right-hand pane for a value named *ExportPictureWithMetafile;* you probably won't find it. If the value is not present, right-click in the right-hand pane and choose *New* | *String value* from the menu. Enter the name *ExportPictureWithMetafile* and click on *OK*. Then double-click on the newly created value, type 0 (zero) for its value, and press Enter. That's it: No more amazing expanding files. To put any existing bloated files on a diet, first save them in the current Microsoft Word format and then, if necessary, resave in the other format.—*NJR*

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If we print your tip, you'll receive a PC Magazine *T-shirt. We regret that we cannot answer letters individually.*

Printing in Black, Revisited

In the item "Printing in Black" (*http://go.pcmag.com/black*), we mentioned that most ink jets can't use their black ink on glossy paper. One reader insisted that no printer he has seen has to mix colors to print black, except for three-color printers that don't have black ink. We thought it would be useful to look at this issue in just a little more depth.

First, note that we referred to *most* ink jets. If you think your printer actually prints with black ink on glossy paper, you may have one of the exceptions. More likely, however, you haven't compared the output with a truly neutral version of the same image, and you haven't looked at the output with a high enough magnification to see the individual dots. Take a look at the screenshot that shows a section of a gray-scale image printed with an Epson Stylus C66, both life size and at 60X magnification (inset). The unmagnified version looks like a suitably neutral gray and black. But the magnified version clearly shows different color dots.

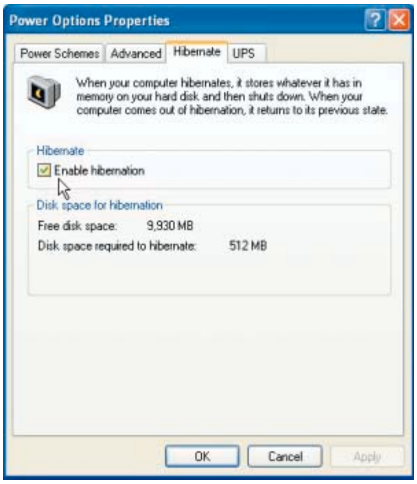
We don't have room here to discuss all the issues involved in creating neutral grays and blacks, but it's worth mentioning that even printers with black ink that work with glossy paper don't necessarily use only black ink for blacks and grays. The black ink by itself may have a slight tinge, in which case the printer may add other color inks to create a neutral look. For example, John Lamb, senior marketing manager at Canon U.S.A.'s Printer Group, says, "All of our printers use more than one color of ink to create gray-scale photos on glossy paper. Even the i9900, which has a dye-based black ink so it can use primarily black on glossy paper, adds yellow and magenta to yield a more neutral tone for gray-scale colors." The bottom line is that most ink jet printers don't use black ink on glossy paper, and you'll generally get better-looking monochrome photos from those few that do.—*M. David Stone*

A Desktop Shortcut to Hibernation

I want to program a shortcut key that puts the computer into hibernation mode. The problem is, I can't seem to find a command that will make the computer go into hibernation. Shutdown.exe doesn't seem to have that option. Will Rundll32.exe do this? Is there another solution? I look forward to your advice, which I appreciate very much.

JOSEPH VOS

The shutdown.exe command can shut down or restart the computer, optionally forcing it to shut down even if some programs attempt to prevent it. See the article "Windows XP Shutdown Shortcut" (*http://go.pcmag.com/shutdown*) for more. But, as noted, it doesn't include an option to hibernate. The correct command is *rundll32.exe PowrProf.dll, SetSuspendState.* You can

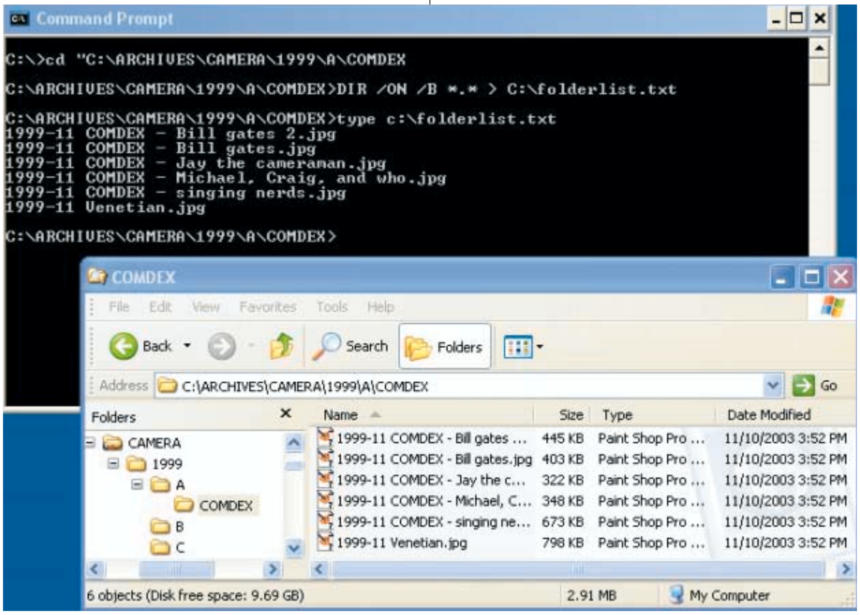


When your computer hibernates, it stores whatever it has in memory on your hard disk and then shuts down. When your computer comes out of hibernation, it returns to its previous state.

Hibernate
☑ Enable hibernation

Disk space for hibernation
Free disk space: 9,930 MB
Disk space required to hibernate: 512 MB

FIGURE 4: Make sure to enable hibernation on your system before trying the shortcut.



```
C:\>cd "C:\ARCHIVES\CAMERA\1999\A\COMDEX

C:\ARCHIVES\CAMERA\1999\A\COMDEX>DIR /ON /B *.* > C:\folderlist.txt

C:\ARCHIVES\CAMERA\1999\A\COMDEX>type c:\folderlist.txt
1999-11 COMDEX - Bill gates 2.jpg
1999-11 COMDEX - Bill gates.jpg
1999-11 COMDEX - Jay the cameraman.jpg
1999-11 COMDEX - Michael, Craig, and who.jpg
1999-11 COMDEX - singing nerds.jpg
1999-11 Venetian.jpg

C:\ARCHIVES\CAMERA\1999\A\COMDEX>
```

C:\ARCHIVES\CAMERA\1999\A\COMDEX

Name	Size	Type	Date Modified
1999-11 COMDEX - Bill gates ...	445 KB	Paint Shop Pro ...	11/10/2003 3:52 PM
1999-11 COMDEX - Bill gates.jpg	403 KB	Paint Shop Pro ...	11/10/2003 3:52 PM
1999-11 COMDEX - Jay the c...	322 KB	Paint Shop Pro ...	11/10/2003 3:52 PM
1999-11 COMDEX - Michael, C...	348 KB	Paint Shop Pro ...	11/10/2003 3:52 PM
1999-11 COMDEX - singing ne...	673 KB	Paint Shop Pro ...	11/10/2003 3:52 PM
1999-11 Venetian.jpg	798 KB	Paint Shop Pro ...	11/10/2003 3:52 PM

6 objects (Disk free space: 9.69 GB) 2.91 MB

FIGURE 5: Use the Command Prompt to create a file containing a list of filenames.

create a shortcut key combination to this command or assign it to a key on a programmable keyboard. Be sure to enter *SetSuspendState* exactly as shown, including the uppercase letters.

Of course, you must configure your system to allow hibernation. If you're not sure that your system has hibernation enabled, launch *Power Options* from the Control Panel, click on the *Hibernate* tab, and make sure that *Enable hibernation* is checked.—*NJR*

Putting the List of a Folder's Contents into Word

Is there a way to copy a list of filenames in a folder, as viewed in Windows Explorer, into a Word document without having to copy and paste each filename individually? If you open a folder and then highlight and copy a list of pictures, for example, and then paste into Word, all of the pictures are actually inserted. I want to copy just a list of the filenames of the pictures instead.

JEFFREY PICKLE

Yes, you can do it with a little help from the Command Prompt. First open the folder in Windows Explorer. Highlight its name in the Address bar and copy it to the clipboard. Now launch Command Prompt from the *Start* menu. Type *CD "* (that's *C, D, space, double quote*), then right-click, choose *Paste*, and press Enter. If the folder of pictures is on a different drive from the Windows drive, type the drive letter and a colon and press Enter. The prompt string in the Command Prompt window should be displaying the name of your folder; for example, "G:\Photos\Concert>". Now enter the command below exactly as shown:

```
DIR /ON /B *.* > C:\folderlist.txt
```

The /ON switch means *Order by Name;* in other words, sort the listing. The /B switch yields a "Bare" listing of just the filenames without the size and date/time stamp. And the "greater than" sign redirects the output of this command into the file C:\folderlist.txt. Open the folderlist.txt file in Word and you've got just what you were looking for.

If you don't mind spending a few bucks, TechSmith's SnagIt ($39.95; *www.snagit.com*), our favorite screen capture tool, does this also—and a lot more. See our review of SnagIt at http://go.pcmag.com/snagit.

You may also want to test-drive Kleptomania 2.5 (*www.structurise.com*). Kleptomania is designed for exactly this application. It takes screenshots and converts any text in the graphic to usable text. There's a 21-day trial version, then it's $29.95 for the Private version, $49.95 for the Commercial version.—*NJR*

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COVER STORY

Choose Your

You may not have bottomless pockets or an insatiable appetite for consumer goods, yet every year, when the latest desktops and notebooks appear, you keep your eyes peeled for what's new, what's hot, and what will fulfill your computing needs now and later.

Maybe you're in the market for a desktop or notebook you can use to upload your digital videos or download your favorite songs. Or you're an avid gamer looking for the fastest, phattest gaming box. Perhaps you need a reasonably priced midrange system for your home that doesn't skimp on the niceties. Or you want to regain precious real estate on your desk but are loath to relinquish any PC functionality. Maybe you just want to take your files everywhere but don't want to lug a cumbersome setup around.

With the myriad desktop and notebook PCs arriving on the market, somewhere is a system with your name on it. We're here to help you find it. We gathered 23 of the hottest desktops and 24 of the best notebooks and put them through their paces. We poked and prodded them and ran numerous benchmark tests to determine their capabilities.

In fact, the testing we performed on the PCs in this story marks a monumental change for *PC Magazine;* we introduce a new set of tests, SYSmark 2004, and retire the Winstone suite we've used for 11 years. (For more details on our move from Winstone to SYSmark, go to *www.pcmag.com/benchmarks*. For specifics on how the SYSmark tests work, see page 94.)

From gaming and multimedia to price- and space-conscious setups, from the heaviest to the lightest, we just may have the system for you. Read on and let us help you pick your next PC.

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By Laarni Almendrala Ragaza

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Desktops

This year's systems have kept PC evolution in full forward motion by kicking up performance, refining design, and adding slick new components. Last year's bleeding-edge multimedia features are now standard fixtures on midrange desktops. And new technologies have added another dimension to the consumer PC experience.

One of the most promising new additions to PC technology is **PCI Express** (PCIe). Approved as a standard in April, PCIe is a two-way serial interface that is designed to replace the original PCI and AGP and has double the transfer rate of AGP 8X (upstream and downstream). PCIe has the bandwidth for today's latest and tomorrow's graphics cards, as well as data throughput–intensive apps like Gigabit—and faster—Ethernet, video I/O, and more. Cards for these apps have yet to be developed; for now, PCIe is all about improving 3D graphics performance.

For gamers, nVidia recently came out with **Scalable Link Interface (SLI)** technology. Two nVidia-based, SLI-ready graphics cards (like the 256MB nVidia GeForce 6800 Ultra) are linked to a pair of x16 slots on a PCIe motherboard (although one slot runs at x8 speed), allowing the two cards to split the workload and power up to four monitors. The result is incredibly fast performance on a multi-GPU desktop.

Dual-layer DVD burners are the hottest new components available. Dual-layer (DL) describes two-layer DVD media—not to be confused with dual-format, which refers to a DVD±RW drive. The dual-layer format increases the disc's capacity from 4.37GB to 8.5GB while remaining compatible with existing DVD players and DVD drives. Dual-layer applies only to DVD+R drives and media, but expect two-layer media for DVD-R drives in the future. (See our September 7 issue for a roundup of dual-layer DVD drives.)

Dual-layer DVD burners have made a splash in many high-end PCs and even in a few recent midrange desktops. But dual-layer DVD+R discs are still hard to find and cost about $10. We expect pricing and availability to improve. Here's a look at other features and components you can find in this year's high-end, midrange, and all-in-one desktops.

THE SKY'S THE LIMIT

When money is no object, we expect to see the latest technology and fastest components out there, not to mention sleek, innovative design. And this year's high-end desktops didn't disappoint. Some feature the first 64-bit processors available for consumer desktops, including the AMD Athlon 64 FX-55, the Apple PowerPC G5, and even Intel Xeon processors.

Some high-end PCs also feature Serial ATA (SATA) hard drives in a RAID 0 configuration (a must for multitrack audio recording, among other things), scads of storage space (a terabyte in the MPC Millennia 940i Dream Machine), and high-resolution displays—some widescreen, and some as large as 30 inches. A select group of LCDs offers 16-millisecond pixel response rates, good enough for playing this year's hottest games and taking on fast-motion multimedia loads.

The new SLI and PCIe technologies have brought screaming-fast graphics to the high-end market, and dual-layer DVD burners take data recording several steps

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forward. Even single-layer DVD burners, mainstays in high-end systems for the past couple of years, are now surpassing 12X speed.

MORE FOR YOUR MONEY

For midrange desktops, $1,000 goes farther than ever. That amount buys you a system with a 3.2-GHz Intel Pentium 4, 1.25-GHz PowerPC G4, or Athlon 64 3200+ processor, and a 17-inch CRT (1,280-by-1,024 screen resolution) or 15-inch LCD (1,024-by-768 native resolution). We even saw midrange systems with a 160GB SATA hard drive, and in the case of the Velocity Micro Vector SV-X, an eVGA GeForce 6600 graphics card (with PCIe capabilities).

The 3.2-GHz P4 processor featured in the Vector SV-X and Dell Dimension 4700 helped both systems garner SYSmark scores that came close to those of some of the high-end desktops we tested.

DESIGN INNOVATION: ALL-IN-ONES

Design is paramount in all-in-one desktops, in which the CPU is housed either behind the monitor or in its base. Squeezing useful features into a sleek, compact package is the hallmark of a good all-in-one desktop. Where those features are placed is equally important; USB ports tucked under an LCD bezel aren't exactly user-friendly.

This year, we saw systems with screens that could swivel both horizontally and vertically. We were delighted with the addition of media card readers and with the way some of the all-in-ones can be mounted on a wall or on an optional swing-arm mount. Apple once again proved its prowess in this category with the iMac G5's innovative design.

In every desktop PC category, this year's technology and design innovations are sure to excite even the most jaded PC consumer. —*LAR*

More on the Web

Log on to www.pcmag.com to compare the specs of the desktops in this story with our detailed features tables. You'll also find an expanded explanation of our recent adoption of the SYSmark benchmark testing suite, as well as a farewell to our Winstone tests.

Is a Media Center PC Right for You?

One day, all of our multimedia content—photos, music, movies, even television shows—will flow through our PCs. And that day may be closer than we think. In fact, according to New York–based research firm NOP World, 4 percent of the 120 million households in the U.S. already use their PCs to watch TV, 24 percent to play music, and 22 percent to view photos or videos.

Naturally, many of the multimedia PCs we review in this story are specifically designed for such tasks. The Dell Dimension 8400, for example, with its six Klipsch speakers and Media Experience software, makes a great stereo. And unlike stereos of the past, it can download songs straight from the Internet. The all-in-one MPC ClientPro 414, with its TV tuner and WinDVR software, doubles as a television and a personal video recorder (PVR).

But if you want your PC to do *everything,* you should consider a Media Center PC. These systems, which use the Microsoft Windows XP Media Center Edition OS, juggle photos, videos, music, movies, and television from a single interface. And that interface is couch-friendly, meaning you can navigate it with a remote control from 10 feet away.

Microsoft introduced the OS in 2002, and in October, it rolled out the third iteration, Media Center Edition 2005. (For more on MCE 2005 and reviews of new Media Center PCs, see our First Looks roundup "The Home PC Perfected" in our issue of November 16.) MCE 2005 boasts a few significant improvements, notably the inclusion of multiple TV tuners so you can watch one show and record another at the same time.

The OS also offers built-in CD- and DVD-authoring software to burn music, photos, and video from the same interface you use to play such media. There's even a built-in chat client. As you're flipping through a friend's digital photos, for example, the two of you can trade instant messages.

Finally, MCE 2005 offers support for the new Microsoft Media Center Extender—a set-top networking device that allows you to stream content on your MCE PC to televisions, stereos, and other devices throughout the house, with or without wires. Up to five devices on your network can access MCE PC files via the Extender at the same time.

PCs with MCE 2005 are now available from Alienware, Dell, Gateway, HP, and Sony for between $800 and $2,000 (the low-end versions lack TV tuners). Extenders are available from HP and Linksys.

As with most newer technologies, we see early adopters embracing Media Center PCs, with novices and first-time buyers following once they see the benefits. If you're serious about digital media and know your way around a home network, the latest Media Center family is certainly worth a try. Consolidating all your digital entertainment is a not-so-distant dream worth chasing.—*Cade Metz*

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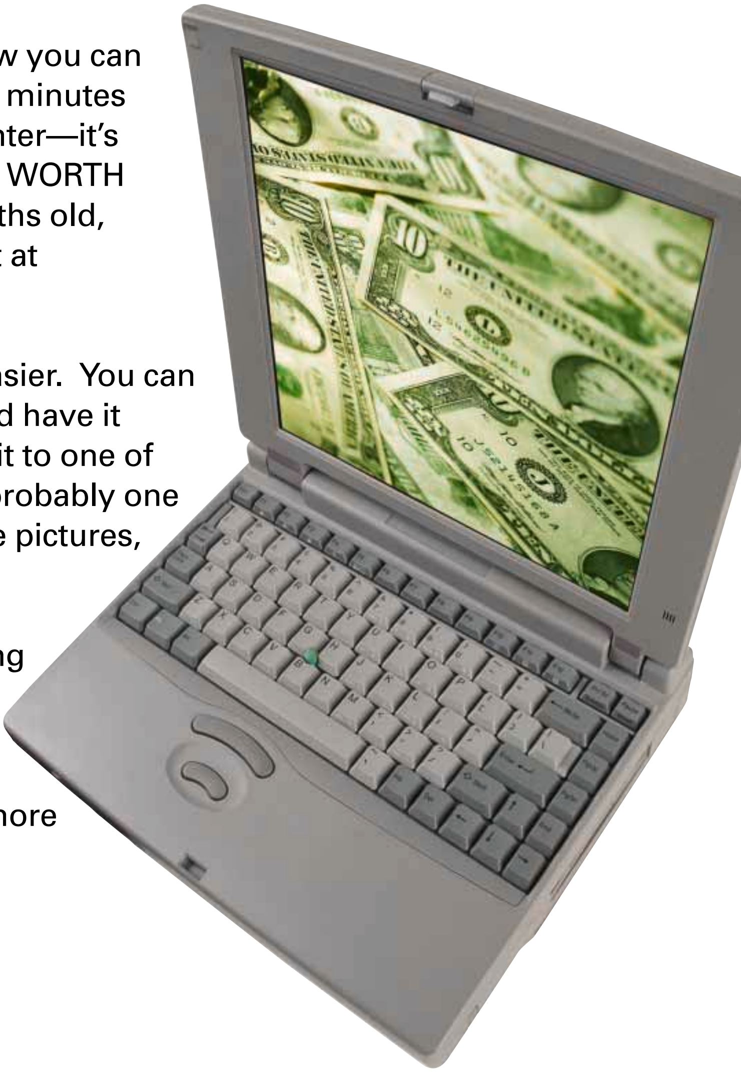

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HIGH-END DESKTOPS

ABS Ultimate M6

2.6-GHz Athlon 64 FX-55, 1GB DDR400 SDRAM, dual 74GB SATA (RAID 0) and one 200GB hard drive, 256MB eVGA GeForce 6800 Ultra, 19-inch LCD, DVD±RW and DVD-ROM drives, six USB 2.0 and two FireWire, $3,799 direct. ABS Computer Technologies Inc., www.abspc.com.
OVERALL RATING: ●●●●○

Play a game on the ABS Ultimate M6, and you'll feel the roar from the Logitech Z-680 5.1 speakers and see the noise meter on the front of the silver case pumping along. And inside the M6 lies an AMD Athlon 64 FX-55 and components that make for a notable gaming experience.

Two 74GB 10,000-rpm drives help with pep; a third 200GB unit is for storage. These drives, the FireWire ports, and DVD burner are great for video editing, but there's no video-editing software. The media card reader helps pull content from peripherals.

The M6 has some competition, however. The other FX-55–based system in our roundup, the Polywell Poly 939N-FX55, has a CRT rather than an LCD, but it has a dual-layer DVD burner and costs $800 less.

Between the worlds of affordable and ultrapricey gaming machines, the ABS Ultimate M6 is a solid choice.
—*Konstantinos Karagiannis*

➤ **MULTIMEDIA: Music:** 85 **Photos:** 70 **Video:** 75 **Gaming:** 86*

➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** N/A**
SYSmark 2004 Internet Content Creation: 223

➤ **SUPPORT:** The standard warranty is one year for parts and labor, including two on-site service visits. Toll-free tech support is 24/7 for the life of the warranty.

* All multimedia scores are out of 100. ** N/A: We were not able to complete the test on this system.

Apple Power Mac G5

Dual 2.5-GHz PowerPC G5, 1GB DDR400 SDRAM, 160GB SATA (RAID 0) hard drive, 256MB ATI Radeon 9800 XT, 23-inch Apple Cinema HD LCD, DVD-R/CD-RW SuperDrive, three USB 2.0, two FireWire 400, and one FireWire 800, $5,448 direct. Apple Computer Inc., www.apple.com. ●●●●○

The latest Apple Power Mac G5 has a few new tricks: dual 2.5-GHz G5 processors and Apple's brilliant new Cinema HD Display, which knocked our socks off.

The processors—a noticeable step up from the 2.0-GHz processors of the previous top-end Macs—have a new heat-pipe system that uses thermally conductive liquid to carry heat from the processor surface to heat-dissipating fins. And there are separate air channels for the CPUs, memory and cards, and hard drives.

The Power Mac also has room for expansion. You can upgrade from the 160GB SATA to a 250GB drive ($100), or even the dual 250GB SATA drive ($425). The 23-inch display is bright and sharp and offers extremely high resolution. Its 16-millisecond pixel response rate is ideal for video content and even playing 3D games.

Users who need the fastest available speed will want to move to the new configuration. But those with recent-vintage G5 machines (especially dual 2.0-GHz models) won't need to jump on this upgrade.—*Joel Santo Domingo*

➤ **MULTIMEDIA: Music:** 87 **Photos:** 87 **Video:** 70 **Gaming:** 69

➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** N/A
SYSmark 2004 Internet Content Creation: N/A

➤ **SUPPORT:** The warranty is one year for parts and labor. On-site service is extra. Toll-free tech support is available from 9:00–9:00 eastern time daily.

Compaq X GX5000Z

2.4-GHz Athlon 64 FX-53, 1GB DDR400 SDRAM, dual 74GB SATA (RAID 0) hard drives, 256MB nVidia GeForce 6800 Ultra, 23-inch LCD, dual-layer DVD+RW and DVD/CD-RW, six USB 2.0 and two FireWire, $5,583 direct. Hewlett-Packard Development Co., www.hp.com. ●●●○○

The widescreen LCD is the first thing you notice about the Compaq X GX5000Z. The 23-inch beauty leads you to believe there's a multimedia machine attached. Instead, you get a gaming machine that's mediocre when compared with similarly priced systems from boutique vendors.

Even with the latest graphics card, the GX5000Z finished at the bottom of the high-end PC pack on 3DMark03. It did a little better on the Doom 3 gaming test, however, getting closer to or beating some cheaper systems. Perhaps having the latest Athlon 64 FX-55 processor like our top scorers would have helped its performance.

Its multimedia capabilities largely miss the mark. The 148GB of storage just don't stack up to the hard drive space of the other gaming machines reviewed here. The Klipsch ProMedia Ultra 5.1 speakers and 16X dual-layer DVD burner were a nice touch.

The gorgeous display would have made the GX5000Z a hit as a gaming box or even a video-editing machine. Unfortunately, with its lack of storage and high price, you're better off looking at similarly priced gaming systems with more oomph.—*KK*

➤ **MULTIMEDIA: Music:** 84 **Photos:** 75 **Video:** 84 **Gaming:** 84

➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 175
SYSmark 2004 Internet Content Creation: 215

➤ **SUPPORT:** The warranty is one year for parts and labor. On-site repair for three years is $169 per visit. Toll-free technical support is available 24/7.

Dell Dimension 8400

3.6-GHz Pentium 4 560, 1GB DDR2 533 SDRAM, dual 250GB SATA (RAID 0) hard drives, 256MB ATI Radeon X800 XT, 20-inch LCD, dual-layer DVD±RW and CD-RW, eight USB 2.0 and one FireWire, $2,999 direct (E-Value code 6V411-840RPW). Dell Inc., www.dell.com. ●●●●○

Though priced just under $3,000, the Dell Dimension 8400 offers enough high-end hardware to satisfy the most discerning audiovisual aficionado. With a 3.6-GHz Pentium 4 processor, DDR2 memory, and a PCIe-capable ATI Radeon X800 XT graphics card, it tied with the Gateway 7200XL for first place on the SYSmark ICC test. It also has a 20-inch LCD and an unusually adept six-piece Klipsch speaker set. All these helped earn the system our Editors' Choice.

The 8400 lacks video-editing applications and PVR capabilities, but it handled digital video with aplomb, and it scored well on our multimedia tests. With the Dell Media Experience software, you can listen to music, view photos, and watch DVDs much as you can with Microsoft Windows XP Media Center Edition.

You can always spend more on a high-end desktop, like the MPC Millennia 940i Dream Machine, with its 30-inch LCD and eight-piece speaker set. But the Dell Dimension 8400 is a multimedia system that's right on the money.—*Cade Metz*

➤ **MULTIMEDIA: Music:** 95 **Photos:** 92 **Video:** 84 **Gaming:** 90

➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 171
SYSmark 2004 Internet Content Creation: 241

➤ **SUPPORT** The warranty is one year for parts and labor with on-site service. Toll-free technical support is available 24/7 for one year.

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GAMING | Falcon Northwest Mach V and Polywell Poly 939N-FX55 **MULTIMEDIA** | Dell Dimension 8400 **MIDRANGE** | Velocity Micro Vector SX-V **ALL-IN-ONE** | Apple iMac G5

Among **gaming** systems, the **Falcon Northwest Mach V** amply displayed the gaming capabilities of a Xeon processor– and SLI-equipped, multiple-GPU system. And with dual 300GB SATA hard drives, a 20-inch LCD, Klipsch ProMedia Ultra 5.1 speakers, and dual-layer DVD±RW, its multimedia capabilities are unquestionable. The **Polywell Poly 939N-FX55** also earns our Editors' Choice in gaming. This Athlon 64 FX-55 system may lack the sexiest monitor and the fastest 3D test scores, but it performed surprisingly well, given its low price.

As a **multimedia** system, the **Dell Dimension 8400** has first-rate hardware, forward-thinking technologies, such as DDR2 and PCI Express, and a stellar software bundle—at a great price. The Velocity Micro Vision 64LX earns an honorable mention for impressive components, including 10,000-rpm drives and an AMD Athlon 64 3800+ processor.

The **Velocity Micro Vector SX-V,** our pick among **midrange** systems, has the power to be your multimedia workhorse: It rated highly on music and video tests and was the top scorer among midrange desktops on the SYSmark tests. Our honorable mention, the Dell Dimension 4700, features dual-layer DVD burning and DDR2 memory, and scored admirably on the SYSmark and 3D benchmark tests.

For **all-in-one** desktops, the **Apple iMac G5** is all about design innovation, from its sleek white Lucite exterior to its almost wireless design. It can even handle fairly strenuous 3D games, with its nVidia GeForce FX 5200 Ultra graphics card. Honorable mention goes to the MPC ClientPro 414, for its dual optical drives—rare in this category—and DVR software.

PC MAGAZINE EDITORS' CHOICE

Falcon Northwest Mach V

3.6-GHz Xeon, 1GB DDR2 400 SDRAM, dual 300GB SATA (RAID 0) hard drives, two 256MB nVidia GeForce 6800 Ultra, 20-inch LCD, dual-layer DVD±RW and DVD-ROM, four USB 2.0 and one FireWire, $7,545 direct. Falcon Northwest, www.falcon-nw.com. ●●●●◐

Though pricey, the Falcon Northwest Mach V blew us away as a gaming machine. It's based on a 64-bit–capable, 3.6-GHz Xeon processor, so that the matching Intel E7525 chipset can support SLI. This Editors' Choice more than lives up to its promise.

Connected to a pair of PCIe x16 slots (although one runs at x8 speed), the nVidia GeForce FX 6800 Ultra graphics cards use up the entire PCIe x24 bandwidth of the E7525. SLI technology uses two identical graphics cards to share the load during 3D graphics processing, which helps render intense graphics at previously unattainable frame rates. This made for some impressive 3DMark03 numbers for the Mach V.

The only other SLI system in this roundup is the VoodooPC Rage F:5 SLI, which costs $450 more and comes with far less storage. If money is no object, you won't be able to resist this state-of-the-art gaming box.—*KK*

➤ **MULTIMEDIA: Music:** 85 **Photos:** 65 **Video:** 90 **Gaming:** 100

➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 165
SYSmark 2004 Internet Content Creation: 235

➤ **SUPPORT:** The warranty is three years for parts and labor. On-site service is not included. Toll-free tech support is available from noon–9:00 eastern time.

Gateway 7200XL

3.4-GHz Pentium 4 550, 1GB DDR400 SDRAM, 250GB SATA hard drive, 256MB ATI Radeon X800 XT, 17-inch LCD, dual-layer DVD±RW and DVD-ROM, three USB 2.0 and two FireWire, $2,299 direct. Gateway Inc., www.gateway.com. ●●●●○

The Gateway 7200XL's silver and black chassis will spice up any home office. More important, it has a slew of high-end multimedia hardware at a very low price. And although it doesn't quite stack up against much more expensive systems here, it's a good choice if you're pinching pennies.

The 7200XL includes a dual-layer multiformat DVD burner. For moving photos and video from your digital camera or camcorder, its front bezel offers USB and FireWire ports, as well as a 5-in-1 memory card reader.

The system's monitor and speaker set are adequate. And benchmark performance was respectably average. Our only major complaints are the old-school roller-ball mouse and the software bundle. Although the 7200XL is otherwise well equipped for audio, video, and photo tasks, it doesn't include any high-end multimedia packages.

If you can't spend more than $3,000, the Gateway will suit you just fine. If you have a little more cash, consider the Dell or Velocity Micro high-end systems, which offer better performance, more hard drive space, and larger monitors.—*CM*

➤ **MULTIMEDIA: Music:** 65 **Photos:** 60 **Video:** 72 **Gaming:** 80

➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 176
SYSmark 2004 Internet Content Creation: 227

➤ **SUPPORT:** The warranty for parts and labor is one year, and on-site service is an additional $110. Long-distance technical support is available 24/7 for three years.

MPC Millennia 940i Dream Machine

3.6-GHz Pentium 4 560, 1GB DDR2 533 SDRAM, one 250GB and two 400GB SATA (RAID 0) hard drives, 256MB nVidia GeForce 6800 Ultra, 30-inch LCD, dual-layer DVD±RW and CD-RW, eight USB 2.0 and two FireWire, $5,999 direct. MPC Computers LLC, www.buympc.com. ●●●●○

The first thing you notice on the MPC Millennia 940i Dream Machine is the 30-inch LCD. Along with an integrated FireWire port (a second port is on the audio card), some speedy hardware, tons of storage, a dual-layer DVD burner, and Pinnacle Studio bundled in, it's a solid system for those looking to create their own DVD movies. The rub? It costs $6,000 and lacks a TV tuner, which is a must-have feature for any system with a 30-inch display.

Equipped with a 3.6-GHz Pentium 4, the 940i is an impressive performer in this category, tying with the Dell Dimension 8400 for first place on the SYSmark ICC test. Too bad it bundles little more than Pinnacle and Nero Express. The 940i comes with a three-year warranty, which includes on-site service.

If you're into movie authoring, this may be your dream machine. If not, consider a system like the Dimension 8400, which is just as well equipped for other tasks and much less expensive.—*CM*

➤ **MULTIMEDIA: Music:** 67 **Photos:** 69 **Video:** 92 **Gaming:** 97

➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 189
SYSmark 2004 Internet Content Creation: 241

➤ **SUPPORT:** The warranty is three years for parts, labor, and on-site service. Toll-free technical support is available 24/7.

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Overdrive PC Torque.FX

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Painted an automotive candy red, the Overdrive PC Torque.FX is an eye-catching system with thrilling performance. The only downside is that for $6,199 you're not getting the latest SLI dual graphics card technology.

By overclocking the AMD Athlon FX-53 to an FX-55–like 2.6 GHz and overclocking the X800 XT graphics card, the Torque.FX turned in the best non-SLI-based system numbers on 3DMark03. On Doom 3 , however, it just kept up with the other single-card systems.

At the top of the tower's front panel is a handle to pull out the removable 300GB deep storage drive, an innovative touch. This is ideal for taking multimedia projects with you. The Creative Sound Blaster Audigy 2 ZS Platinum card, with front panel I/O, is complemented by decent software, including Cubasis VST, and Klipsch ProMedia GMX D-5.1 speakers.

Among the systems with single graphics cards, the Torque.FX leads the way in 3D performance. If you have a cool $6,200 to spare, you'll be happy with this system for some time.—*KK*

➤ **MULTIMEDIA: Music:** 100 **Photos:** 70 **Video:** 90 **Gaming:** 93

➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 210
SYSmark 2004 Internet Content Creation: 234

➤ **SUPPORT:** The warranty for parts and labor is one year, with no on-site service. Toll-free technical support is available 9:00–5:00 eastern time M–F.

Polywell Poly 939N-FX55

2.6-GHz Athlon 64 FX-55, 1GB DDR400 SDRAM, dual 74GB SATA (RAID 0) hard drives, 256MB eVGA GeForce 6800 Ultra, 19-inch CRT, dual-layer DVD±RW and DVD/CD-RW, six USB 2.0 and two FireWire, $2,995 direct. Polywell Computers Inc., www.polywell.com. ●●●●○

Though the Polywell Poly 939N-FX55's exterior won't attract the most ardent gamers, the power and features you get for such a low price make it an Editors' Choice.

A few things about the Poly make it stand out as a value gaming system. The software bundle includes NTI CD & DVD-Maker 6.7 Gold Suite and games like Far Cry. We also like the Creative Inspire T7700 7.1 speakers.

The Polywell system's overall performance was on a par with that of the ABS Ultimate M6. It even ranked first on SYSmark OP and came in a close second on SYSmark ICC, making it more of a multimedia desktop than the other gaming machines in our roundup.

The Polywell Poly 939N-FX55 is definitely a good bargain, and if you can live without the flash, it's a wonderful choice.—*KK*

➤ **MULTIMEDIA: Music:** 86 **Photos:** 71 **Video:** 80 **Gaming:** 89

➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 217
SYSmark 2004 Internet Content Creation: 237

➤ **SUPPORT:** The warranty is three years for parts and five years for labor. On-site service is extra. Toll-free technical support is 24/7.

Velocity Micro Vision 64LX

2.4-GHz Athlon 64 3800+, 1GB DDR400 SDRAM, dual 74GB (RAID 0) and one 250GB hard drive, 256MB eVGA GeForce 6800 Ultra, 20-inch LCD, dual layer DVD±RW and DVD/CD-RW, eight USB 2.0 and two FireWire, $3,879 direct. Velocity Micro Inc., www.velocitymicro.com. ●●●●○

You'll love the see-through case on the Velocity Micro Vision 64LX. The system also boasts enough high-end hardware and bundled software to handle most multimedia tasks. And few machines scored as high on our multimedia tests.

On our other tests, the Vision 64LX was little more than an average performer, though the margin between its scores and those of the leading systems was small. The system is fast enough to handle most applications adequately, and its hardware includes a beautiful 20-inch LCD and superb Creative GigaWorks S750 7.1 speakers. Its software bundle includes a number of video and photo tools from Ulead.

All you multimedia enthusiasts will love the many ways you can feed it movies, photos, and video. Its front bezel has FireWire and USB ports, as well as a 6-in-1 memory card reader.

Multimedia newbies should probably opt for Dell or Apple systems, but hard-core computer geeks will love the Vision 64LX.—*CM*

➤ **MULTIMEDIA: Music:** 99 **Photos:** 92 **Video:** 91 **Gaming:** 97

➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 195
SYSmark 2004 Internet Content Creation: 218

➤ **SUPPORT:** The warranty is three years for parts and labor, including one year of on-site service. Toll-free technical support is available 24/7.

VoodooPC Rage F:5 SLI

3.4-GHz Xeon, 1GB DDR400 SDRAM, dual 36GB SATA (RAID 0) hard drives, two 256MB nVidia GeForce 6800 Ultra, 20-inch LCD, DVD±RW drive, six USB 2.0 and one FireWire, $7,995 direct. Voodoo Computers Ltd., www.voodoopc.com. ●●●●○

Standing like a black monolith built to honor ancient gods, complete with a glowing red tribal mask on top, the VoodooPC Rage F:5 SLI is awe-inspiring. But Voodoo's decision not to include certain components puzzles us, given the system's high price.

Gaming is exhilarating on the F:5. Thanks to its dual nVidia GeForce 6800 Ultra cards, 3.4-GHz Xeon and Intel E7525 chipset–based motherboard, the F:5 managed to share 3D performance honors with the higher-clocked and slightly cheaper Falcon Northwest system on most gaming tests. But it trailed the Falcon slightly on our Doom 3 tests.

Although the F:5 comes with basic video-editing apps, the single-layer DVD±RW and 72GB hard drive dampen the F:5's abilities. Considering its mammoth price, we can't explain the lack of a deep storage drive and an extra dual-layer burner, especially since 7.1 speakers are included.

The VoodooPC Rage F:5 SLI's beauty could boost egos and slaughter most competition—with our recommended upgrades, that is. Just be ready to pay the hefty price.—*KK*

➤ **MULTIMEDIA: Music:** 78 **Photos:** 68 **Video:** 81 **Gaming:** 91

➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 180
SYSmark 2004 Internet Content Creation: 226

➤ **SUPPORT:** Warranty is three years for parts and labor, with on-site service for one year. Toll-free tech support is 9:30–8:30 eastern time M–F, noon–7:00 Sat.

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How We Tested

With this feature story, we're debuting a new series of benchmark tests created by the Business Applications Performance Corporation (BAPCo): SYSmark 2004. The SYSmark tests replace the Business Winstone and Content Creation Winstone tests we have used in the past.

Like Winstone, SYSmark includes office productivity and Internet content creation benchmark tests. The two scores are combined and given a weighted average to produce an overall performance rating. Both SYSmark tests derive scores by using real-world applications to run a preset script of user-driven workloads and usage models developed by application experts.

The **SYSmark 2004 Internet Content Creation** (ICC) test is organized as scenarios that are designed to simulate an Internet content creator's day. ICC incorporates such applications as Adobe Photoshop 7.01, Discreet's 3ds max 5.0, and Macromedia's Dreamweaver MX. (For a full list of the apps used in ICC, visit *www.bapco.com*.)

The **SYSmark 2004 Office Productivity** (OP) test follows ICC's blueprint by mimicking the usage patterns of today's desktop and mobile business users, including the concurrent execution of multiple programs. Applications such as Adobe Acrobat 5.0.5, McAfee VirusScan 7.0, and the Microsoft Office suite are used. Each SYSmark test measures the response time of the app to user input. Both scores are combined using a geometric mean to get an overall score. (Visit *www.pcmag.com* for more information on the SYSmark tests and the retiring of our Winstone tests.)

BAPCo also makes MobileMark, a notebook benchmark test for measuring battery life. We have decided to move to MobileMark when the next version is released later this year. Until then, we will continue using **Business Winstone 2004 BatteryMark.**

For the desktop systems, we ran the SYSmark tests at 1,024-by-768 resolution and 32-bit color. This matches the native resolution of many 15-inch LCD monitors and is one of the standard resolutions for which Web designers format sites.

For notebook systems, we ran BAPCo's SYSmark and our BatteryMark tests at native resolution, since notebook users are likely to use their systems this way.

Futuremark's 3DMark03 is a set of tests we use to evaluate a system's gaming performance. (Futuremark did not release 3DMark05 in time for our testing.) To ensure that all systems could complete 3DMark03 testing, we set anti-aliasing (AA) and anisotropic filtering (AF) at application preference and set the AA and AF settings in 3DMark03 to default. For our high-end desktop systems only, we ran a second test at 1,600-by-1,200 resolution, 4-sample anti-aliasing (4XAA), and 8-sample anisotropic filtering (8XAF). For high-end notebooks, we tested with native resolution and 4XAA and 8XAF.

Doom 3 has a self-contained benchmark test that uses OpenGL for all rendering. We tested the game on all high-end systems at two quality levels: first at 1,024-by-768 using the Medium quality setting, with anti-aliasing set to Off. This simulates a user trying to get good resolution but forgoing higher-quality textures in exchange for assured faster frame rates.

BRAVE NEW WORLD The Labs staff run SYSmark 2004 and gaming tests on desktops and notebooks.

We also tested Doom 3 at 1,600-by-1,200 (desktops) or native resolution (notebooks) at the High quality setting, with anti-aliasing set to 4X. The High quality setting automatically sets anisotropic filtering to 8X and uses more of the bells and whistles in the game engine, including uncompressed textures. We used this setting to simulate players who want a very detailed playing experience. There is an Ultra quality setting, but none of the current graphics cards can use this setting effectively.

We used the built-in **Halo: Combat Evolved** timedemo test with Pixel Shaders 2.0 (DX9) enabled. Since Halo's game engine doesn't use anisotropic filtering or anti-aliasing, they were turned off. We used Halo as a cross-platform test, because it has a Mac OS X–compatible version from MacSoft.

We ran **wireless tests** using a Linksys 802.11g access point to measure the throughput of each notebook's built-in wireless card and how far it can keep a stable connection. We ran our throughput tests with NetIQ's Chariot and a turntable provided by Intersil. The turntable is moved through four markers, at distances of 1 foot, 60, 120, and 160 feet.

We ran a series of **multimedia scripts** to determine how well equipped each system is for multimedia tasks. For music, we looked at speakers, sound cards, USB 2.0 ports, memory card slots, multimedia controls, as well as bundled software that allows the system to rip, burn, copy, and play audio files. For photos, we focused on USB 2.0 ports and memory card slots, along with software for cropping, eliminating red-eye, creating slide shows, and manipulating color and brightness. In rating video, we took into account FireWire ports, hard drive size, RAM, DVD burners, processors, video and TV inputs and outputs, monitor size, and speakers. We also looked at DVD playback and authoring, PVR software, and video-editing packages. For gaming, we looked at USB 2.0 ports, hard drives, graphics cards, processors, and speakers, and cool cosmetics like windowed cases and internal lighting.—*Cisco Cheng, Richard Fisco, and Joel Santo Domingo*

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How They Scored

Each of the SYSmark 2004 benchmark tests is calibrated to 100 points. The reference point is a 2.0-GHz Pentium 4 system with an 845G chipset, 512MB of memory, an ATI Radeon 9700 Pro graphics card, and an 80GB 7,200-rpm hard drive with 2MB cache, which would get a 100-point score on the test.

The high-end systems in this roundup (most of which have Microsoft Windows XP SP2 installed) all approached or surpassed the 200-point mark on SYSmark; the exceptions were the Power Mac, which cannot run Windows-based tests, and the ABS Ultimate M6, which couldn't complete the tests owing to glitches between the SYSmark OP test and Windows Service Pack 2. (We ran the SYSmark tests on the Gateway 7200XL and the midrange HP Pavilion a750y using SP1.) By scoring 200 points or more, these systems proved that they can perform office productivity and content creation tasks with aplomb.

A BETTER VALUE

Among the midrange systems, the Velocity Micro Vector SX-V and Dell Dimension 4700, each with a 3.2-GHz Pentium 4, produced SYSmark scores nearing those of the high-end systems.

The Compaq Presario SR1010Z, with the AMD Athlon 64 3200+ processor, outperformed the eMachines T3256, with the AMD Athlon XP 3200+, by about 22 percent on the SYSmark overall score. Though the Athlon 64 3200+ has a slower clock speed (2.0 GHz) than the Athlon XP 3200+ (2.2 GHz), the Athlon 64's integrated DDR memory controller and SSE2 optimizations helped it outperform the Athlon XP.

ALL-IN-ONES

The Gateway Profile 5.5 and MPC ClientPro 414, both equipped with 3.2-GHz P4s, led the pack among the all-in-one desktops. The ClientPro had a slight edge on the Profile because of its memory advantage (1GB versus 512MB) and more advanced graphics chipset. That said, the 6 percent difference between the two machines should be negligible in daily operations. As in the midrange space, the all-in-one leaders' SYSmark performance approached that of the high-end units. The Pelham Sloane PS1500 brought up the rear, suffering from smaller memory (256MB, which can be upgraded) and a slower 2.4-GHz P4 (which can't).

APPLE IS ON A PAR

As a Photoshop/digital creation workstation, the Apple Power Mac G5 earns its stripes, matching, and in some cases beating, the MPC all-in-one we tested for comparison. On our cross-platform tests with our usual 58MB file, the two desktops ran virtually neck and neck, proving that the Power Mac G5 is equal in performance

BENCHMARK TESTS

High scores are best.
Bold type denotes first place within each category.

			SYSMARK 2004		
	Processor	Graphics chipset	Office Productivity	Internet Content Creation	OVERALL
Resolution ▶ *Anti-aliasing/Anisotropic filtering* ▶					
HIGH-END DESKTOPS					
ABS Ultimate M6	Athlon 64 FX-55 (2.6 GHz)	eVGA GeForce 6800 Ultra	N/A[1]	223	N/A[1]
Compaq X GX5000Z	Athlon 64 FX-53 (2.4 GHz)	nVidia GeForce 6800 Ultra	175	215	194
Dell Dimension 8400	Pentium 4 560 (3.6 GHz)	ATI Radeon X800 XT	171	**241**	203
Falcon Northwest Mach V	Xeon (3.6 GHz)	Dual nVidia GeForce 6800 Ultra	165	235	197
Gateway 7200XL*	Pentium 4 550 (3.4 GHz)	ATI Radeon X800 XT	176	227	200
MPC Millennia 940i Dream Machine	Pentium 4 560 (3.6 GHz)	nVidia GeForce 6800 Ultra	189	**241**	213
Overdrive PC Torque.FX	Athlon 64 FX-53 (2.6 GHz, overclocked)	ATI Radeon X800 XT	210	234	222
Polywell Poly 939N-FX55	Athlon 64 FX-55 (2.6 GHz)	eVGA GeForce 6800 Ultra	**217**	237	**227**
Velocity Micro Vision 64LX	Athlon 64 3800+ (2.4 GHz)	nVidia GeForce 6800 Ultra	195	218	206
VoodooPC Rage F:5 SLI	Xeon (3.4 GHz)	Dual nVidia GeForce 6800 Ultra	180	226	202
MIDRANGE DESKTOPS					
ABS Explorer 1100	Sempron 2800+ (2.0 GHz)	nVidia GeForce FX 5200	110	139	124
Compaq Presario SR1010Z	Athlon 64 3200+ (2.2 GHz)	nVidia GeForce FX 5200	145	172	158
Dell Dimension 4700	Pentium 4 540 (3.2 GHz)	Intel GMA 900	160	206	182
eMachines T3256	Athlon XP 3200+ (2.2 GHz)	nVidia GeForce4 MX	109	152	129
HP Pavilion a750y*	Pentium 4 (2.8 GHz)	Intel GMA 900	151	186	168
Velocity Micro Vector SX-V	Pentium 4 (3.2 GHz)	eVGA GeForce 6600	**166**	**209**	**186**
WinBook PowerSpec 8736	Pentium 4 (2.8 GHz)	VIA AGP S3 Pro Savage 8	93	135	112
ALL-IN-ONE DESKTOPS					
Gateway Profile 5.5	Pentium 4 540 (3.2 GHz)	ATI Radeon X300 LE	161	206	182
MPC ClientPro 414	Pentium 4 540 (3.2 GHz)	ATI Mobility Radeon X600	**176**	**212**	**193**
Pelham Sloane PS1500	Pentium 4 (2.4 GHz)	Intel 845GV	96	117	106

RED denotes Editors' Choice. N/A[1]—Not applicable: The ABS Ultimate M6 could not complete the SYSmark tests because of technical problems. N/A[2]—Not applicable: We did not run this test on this system. We could not test the Apple Power Mac G5, eMac, or iMac G5 because our SYSmark, 3DMark, and Doom 3 tests are not compatible with Mac OS X. * Tested with Windows Service Pack 1 installed.

to high-end Windows-based multimedia PCs.

In the midrange space, the casual user is unlikely to notice the 2 to 5 seconds that separated the Apple eMac from the Velocity Micro Vector SX-V on our Unsharp Mask test. There is a similar performance gap in the all-in-one category between the Apple iMac G5 and Gateway Profile 5.5.

3DMARK03 PERFORMANCE

As expected, the two systems with nVidia GeForce 6800 Ultra graphics cards with Scalable Link Interface (SLI) technology—the Falcon Northwest Mach V and Voodoo PC Rage F:5 SLI—earned the top 3DMark03 scores, with previously unseen 20,000+ marks at 1,024-by-768 resolution. When we pushed the limits at 1,600-by-1,200 and 4XAA and 8XAF, the Mach V approached the 7,000 mark and the F:5 (barely) broke it. Both use a pair of GeForce 6800 Ultra cards, linked by an SLI connector. The connector doesn't pass graphics data, just timing and traffic control information.

CROSS-PLATFORM TESTS

▲ High scores are best. ▼ Low scores are best. Bold type denotes first place within each category.	PHOTOSHOP TESTS (seconds)				GAMING TESTS	
	Gaussian Blur Pixel=100 ▼	Unsharp Mask ▼	Lighting Effects ▼	Resize 200% ▼	Halo: Combat Evolved (fps) ▲ 1,024 x 768	1,600 x 1,200
HIGH-END DESKTOPS						
Apple Power Mac G5	**2.8**	1.6	4	**3.5**	35	21
MPC Millennia 940i Dream Machine	**2.8**	**1.9**	**5.9**	2.7	**84**	**56**
MIDRANGE DESKTOPS						
Apple eMac	**8**	**5**	**16**	**22**	N/A[1]	N/A[1]
Velocity Micro Vector SX-V	3	2	7	21	N/A[2]	N/A[2]
ALL-IN-ONE DESKTOPS						
Apple iMac G5	**6**	**4**	**11**	**20**	13	N/A[1]
Gateway Profile 5.5	3	2	7	**20**	**23**	N/A[1]

RED denotes Editors' Choice. N/A[1]—Not applicable: The product could not complete this test. N/A[2]—Not applicable: We did not run this test on this system. Each desktop was tested with 1GB of RAM. The MPC, Velocity Micro, and Gateway systems were tested for comparison.

The heavy lifting is done by the PCIe interface connecting the graphics cards to the motherboard. With two GPUs crunching the graphics data, these two systems win hands down: They have about a 41 percent advantage (at 1,600-by-1,200) over the fastest single-card solution, the Overdrive PC Torque.FX, which uses an overclocked ATI Radeon X800 XT AGP card.

MAKING A PLAY

Doom 3, one of the most anticipated games of 2004, was designed to run best at 60 frames per second (fps), so any system and settings combo that runs at that rate can be considered a perfectly capable gaming box. At the less stressful 1,024-by-768 resolution, all of our high-end PCs can play. But if you want to turn on all the bells and whistles, like anti-aliasing and anisotropic filtering, at high quality, there are currently only two choices: the VoodooPC Rage F:5 and the Falcon Northwest Mach V. Each of these SLI-powered systems can manage 60 fps or more at our most challenging setting.

3D BENCHMARK TESTS		GAMING TESTS			
3DMark03	3DMark03	Doom 3 (Medium quality, fps)	Doom 3 (High quality, fps)	Halo: Combat Evolved (fps)	Halo: Combat Evolved (fps)
1,024 x 768 *Default*	1,600 x 1,200[4] *X/8X*	1,024 x 768 *Off/Off*	1,600 x 1,200[4] *X/8X*	1,024 x 768 *Off/Off*	1,600 x 1,200 *Off/Off*
13,383	3,922	115	42	**111**	71
11,914	3,414	102	39	86	61
12,090	4,276	83	34	88	61
20,429	6,943	80	63	100	90
11,696	4,120	78	32	80	58
12,073	3,522	90	38	84	56
14,087	4,922	108	38	**111**	71
12,353	3,942	113	42	**111**	71
13,211	3,881	97	43	101	73
20,368	**7,003**	76	**60**	96	**91**
792	N/A[2]	N/A[2]	N/A[2]	N/A[2]	N/A[2]
1,062	N/A[2]	N/A[2]	N/A[2]	N/A[2]	N/A[2]
1,357	N/A[2]	N/A[2]	N/A[2]	N/A[2]	N/A[2]
165	N/A[2]	N/A[2]	N/A[2]	N/A[2]	N/A[2]
1,342	N/A[2]	N/A[2]	N/A[2]	N/A[2]	N/A[2]
5,850	N/A[2]	N/A[2]	N/A[2]	N/A[2]	N/A[2]
50	N/A[2]	N/A[2]	N/A[2]	N/A[2]	N/A[2]
2,320	N/A[2]	N/A[2]	N/A[2]	N/A[2]	N/A[2]
3,369	N/A[2]	N/A[2]	N/A[2]	N/A[2]	N/A[2]
71	N/A[2]	N/A[2]	N/A[2]	N/A[2]	N/A[2]

The other high-end systems' 32- to 42-fps scores mean the game will still be somewhat playable at this resolution, but you'll probably want to switch to a lower quality setting or resolution. We did not use the Ultra setting during testing, because we found that you really need a single 512MB graphics card to handle it.

Halo: Combat Evolved was designed to play best at 30 fps. In our 3D testing, all high-end Windows PCs easily passed the Halo test, running much faster than 30 fps. The Power Mac G5 was able to muster a 35-fps score at the lower 1,024-by-768 resolution. At 1,600-by-1,200 resolution, the Power Mac's older ATI Radeon 9800XT card kept it from gaining a smooth frame rate of more than 30 fps. While still a powerful card, the Radeon 9800 XT is outclassed by the Radeon X800 XT and GeForce 6800 Ultra in the Windows PCs. There is a GeForce 6800 Ultra DDL build-to-order option for the Power Mac G5, but it wasn't available during our testing.

We attempted to run the two 3D game tests on the midrange and all-in-one systems, but only one could play these games at decent frame rates with our settings: the Velocity Micro Vector SX-V, with an eVGA GeForce 6600 card. The games are still playable on the other systems, including Halo on the Macs, but you'll have to turn the resolution down, or turn off some of the cool lighting, particle, and texturing effects in the games.
—*Analysis written by Joel Santo Domingo*

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MIDRANGE DESKTOPS

ABS Explorer 1100

2.0-GHz Sempron 2800+, 512MB DDR SDRAM, 80GB SATA hard drive, 128MB nVidia GeForce FX 5200, 17-inch CRT, DVD±RW and DVD-ROM, six USB 2.0 and two FireWire, $999 direct. ABS Computer Technologies Inc., www.abspc.com. ●●●○○

The ABS Explorer 1100 looks like a high-performance system, thanks to its shiny silver case. On the inside, however, its components fall a little shy of the latest technology.

The 1100 has enough power for basic multimedia tasks, and its nVidia nForce2 chipset supports dual FireWire ports. But the 1100 skimps on certain features: The 80GB hard drive is insufficient for storing large video files. You also may want to spend an extra $13 for a memory card reader. The included Logitech X-220 three-piece speaker set provides enough bass for dynamic playback.

The 1100 has dual LAN ports, an 802.11b adapter, and an external antenna. With three PCI slots and four drive bays, the 1100 is ripe for expansion, though the motherboard doesn't support PCIe.

Unlike the Athlon-based Compaq and eMachines midrange systems, the Explorer includes the low-cost, low-end Sempron, which explains its mediocre performance on our tests.

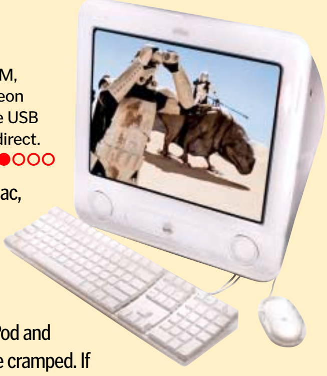
The 1100 will suffice as a general-purpose system, but its intermediate components are outmatched by most other systems here.—*John Delaney*

➤ **MULTIMEDIA: Music:** 66 **Photos:** 39 **Video:** 45 **Gaming:** 45

➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 110
SYSmark 2004 Internet Content Creation: 139

➤ **SUPPORT:** The warranty is one year on parts and labor, and two service visits. Toll-free technical support is from 11:30–8:30 eastern time daily for one year.

Apple eMac



1.25-GHz PowerPC G4, 512MB DDR SDRAM, 40GB ATA/100 hard drive, 32MB ATI Radeon 9200, 17-inch flat CRT, DVD/CD-RW; three USB 2.0, two USB 1.1, and two FireWire; $874 direct. Apple Computer Inc., www.apple.com. ●●○○○

Apple's entry-level desktop, the Apple eMac, is adequate for school kids and adults with basic computing needs. But its features lag behind those of the other midrange systems here.

While it can serve as a base for your iPod and digital pictures, its 40GB drive will soon be cramped. If you want to edit your vacation photos and put them on DVD, consider upgrading to the higher-end eMac ($999 and up), which has a larger hard drive and the DVD-R/CD-RW SuperDrive.

Adobe Photoshop performance on the eMac was helped by the 512MB of RAM loaded on our system (256MB is standard), but 3D performance was still lacking: The eMac's 32MB ATI Radeon 9200 graphics card couldn't run the Halo gaming test with pixel shaders enabled, so we weren't able to record an official score.

If your household or school is Mac-centric, we suggest spending a few more bucks to get the high-end eMac or even splurging on the 17-inch iMac ($1,374 with 512MB of memory). For everyone else, there are simply better $999 systems out there, such as those from Dell and Velocity Micro.—*JSD*

➤ **MULTIMEDIA: Music:** 63 **Photos:** 46 **Video:** 29 **Gaming:** 22

➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** N/A
SYSmark 2004 Internet Content Creation: N/A

➤ **SUPPORT:** The standard warranty is one year for parts and labor. Toll-free technical support is available 7:00–7:00 eastern time daily for 90 days.

Compaq Presario SR1010Z

2.2-GHz Athlon 64 3200+, 512MB DDR SDRAM, 160GB SATA hard drive, 128MB nVidia GeForce FX 5200, 17-inch CRT, DVD/CD-RW, seven USB 2.0 and two FireWire, $999 direct. Hewlett-Packard Development Co., www.hp.com. ●●●◐○

The Compaq Presario SR1010Z is a solid performer, and it's the only Windows-based system in the midrange roundup that's ready for 64-bit computing with the Athlon 64 3200+ processor. But it's also one of only three systems here to exclude a recordable DVD drive. (The others are the Apple eMac and HP Pavilion a750y.) This is a puzzling omission, considering the reasonable prices of such drives.

For music tasks, however, the DVD/CD-RW combo drive works fine, and the iTunes software and sizable hard drive come in handy. Photo editing is turnkey with the memory card reader and HP Photosmart software. But for video editing and gaming, you'll need a more robust graphics card.

The SR1010Z handled our SYSmark OP tests better than most of the midrange systems here, coming in just behind the Velocity Micro and Dell systems. It also turned in good scores on the SYSmark ICC and 3D benchmark tests.

Despite its lack of a writable DVD drive, the SR1010Z is a good choice for users seeking an affordable system with some chops.—*JD*

➤ **MULTIMEDIA: Music:** 93 **Photos:** 74 **Video:** 39 **Gaming:** 44

➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 145
SYSmark 2004 Internet Content Creation: 172

➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7 for one year.

Dell Dimension 4700

3.2-GHz Pentium 4 540, 512MB DDR2 SDRAM, 160GB SATA hard drive, 128MB Intel GMA 900, 17-inch CRT, dual-layer DVD±RW and DVD/CD-RW drives, eight USB 2.0, $999 direct (E-Value code 6V411-470RPW). Dell Inc., www.dell.com. ●●●●○

The Dell Dimension 4700 exemplifies value without compromise. With a 3.2-GHz processor, Intel GMA 900 graphics, a dual-layer DVD+RW drive, and DDR2 memory, this system gives users the latest technology at an affordable price.

With a 160GB SATA hard drive, the 4700 provides ample storage for multimedia files, and the dual-layer DVD+RW drive is ideal for producing DVD video projects. There are eight USB but no FireWire ports.

The Intel integrated graphics is adequate for most 3D apps, but gamers and video fans may want to upgrade to a PCIe graphics card and a set of 5.1 speakers (though the included 2.1 set was surprisingly rich in tone). The 4700 comes with several apps, such as Musicmatch Jukebox Basic, Jasc Paint Shop Photo Album, and Dell Media Experience Deluxe software for ripping music, basic photo editing, and video capture.

The 4700 turned in admirable results on our SYSmark and 3D benchmark tests. It offers value-seekers a solid combination of new technology and performance, with plenty of room for expansion. While not as feature-rich as the Velocity Micro Vector SX-V, the 4700 is a good buy for under $1,000.—*JD*

➤ **MULTIMEDIA: Music:** 78 **Photos:** 69 **Video:** 50 **Gaming:** 60

➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 160
SYSmark 2004 Internet Content Creation: 206

➤ **SUPPORT:** The warranty is one year for parts and labor, including on-site service. Toll-free technical support is available 24/7.

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eMachines T3256

2.2-GHz Athlon XP 3200+, 512MB DDR SDRAM, 160GB hard drive, 64MB nVidia GeForce4 MX, 15-inch LCD, dual-layer DVD±RW and CD-ROM drives, five USB 2.0, $1,099 direct. eMachines Inc., www.emachines.com. ●●●○○

The eMachines T3256 gives multimedia users several options for transferring and burning digital projects, but it lacks a few key features found in others in this roundup.

With the exception of a dual-layer DVD±RW drive, the T3 256 offers nothing by way of new technology—though it includes some notable components. A 160GB ATA hard drive and 8-in-1 memory card reader provide a simple method for storing and archiving most digital content, but DV camera users need to add a FireWire card. The nForce2 chipset supports 5.1 digital sound, but the T3256 ships with a pair of basic speakers that are subpar at best. The 15-inch LCD and integrated video solution are adequate for most apps, and an AGP 8X slot is available for upgrading to a higher-end graphics card.

The T3256 lagged behind most midrange systems on our 3D benchmark tests, due in part to its use of integrated graphics. It produced mediocre scores on all other tests.

The T3256 provides a decent bundle of consumer apps, but it lacks the software of other midrange desktops we reviewed. Music and DV enthusiasts may want to consider a desktop with more features than this system has to offer.—*JD*

- ➤ **MULTIMEDIA: Music:** 72 **Photos:** 69 **Video:** 38 **Gaming:** 43
- ➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 109 **SYSmark 2004 Internet Content Creation:** 152
- ➤ **SUPPORT:** The warranty is one year on parts and labor. Two years of on-site service are $99. Long-distance tech support is from 9:00–1:00 eastern time.

HP Pavilion a750y

2.8-GHz Pentium 4, 512MB DDR SDRAM, 160GB SATA hard drive, 128MB Intel GMA 900, 17-inch CRT, DVD/CD-RW, seven USB 2.0 and two FireWire, $999 direct. Hewlett-Packard Development Co., www.hp.com. ●●●○○

The HP Pavilion a750y has what you need to process your digital photos, including a memory card reader, lots of storage, and a decent software suite. But with a low-end processor and no DVD burner, it doesn't measure up to similarly priced value systems.

HP's Image Zone Plus lets you manage your photos, and Apple's iTunes and Sonic's RecordNow! is for music lovers. The included 160GB drive gives users lots of storage, and the Altec Lansing VS2121 2.1 speaker system is loud and distortion-free.

The a750y uses the 2.8-GHz Pentium 4, but you'll need a more powerful processor and graphics card for gaming and a recordable DVD drive for DVD authoring. With seven USB and two FireWire ports, there is ample room for connecting peripherals. And its benchmark test scores were adequate (with excellent 3D scores).

A few features short of ideal, the a750y offers a nice blend of hardware and software and is ready for expansion.—*JD*

- ➤ **MULTIMEDIA: Music:** 89 **Photos:** 69 **Video:** 44 **Gaming:** 30
- ➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 151 **SYSmark 2004 Internet Content Creation:** 186
- ➤ **SUPPORT:** The warranty is one year for parts, labor, and on-site service. Toll-free technical support is available 24/7 for one year.

Velocity Micro Vector SX-V

3.2-GHz Pentium 4 540, 512MB DDR400 SDRAM, 120GB SATA hard drive, 128MB eVGA GeForce 6600, 17-inch CRT, dual-layer DVD±RW, six USB 2.0 and three FireWire, $999 direct. Velocity Micro Inc., www.velocitymicro.com. ●●●●◐

The Velocity Micro Vector SX-V, our Editors' Choice, raises the bar for midrange desktops. For less than $1,000, you get a new-generation motherboard, a powerful graphics card, a 6.1 speaker system, and expansion slots galore.

Music and photo aficionados will appreciate the 120GB SATA hard drive, multiple USB and FireWire connections, and the memory card reader, as well as the full-blown video, photo, and music apps from Ulead and others. Also included are full versions of the games Far Cry and Battlefield 1942. The 6.1 Creative Inspire 5800 speakers are clearly superior to the 2.1 and basic two-speaker setups in other systems. The SX-V boasts a dual-layer DVD±RW drive, but a secondary optical drive would be ideal.

Still, the SX-V led the pack in performance, turning in the highest SYSmark and 3D benchmark test scores across the board. This, along with its impressive feature set, places it at the top of our list of midrange systems.—*JD*

- ➤ **MULTIMEDIA: Music:** 85 **Photos:** 76 **Video:** 65 **Gaming:** 70
- ➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 166 **SYSmark 2004 Internet Content Creation:** 209
- ➤ **SUPPORT:** The warranty is one year for parts and labor. One year of on-site service is $79. Toll-free technical support is available 24/7 for one year.

WinBook PowerSpec 8736

2.8-GHz Pentium 4, 512MB DDR SDRAM, 80GB hard drive, 32MB VIA AGP S3 Pro Savage 8, 17-inch CRT, dual-layer DVD±RW and CD-RW, four USB 2.0, $998 direct. WinBook Computer Corp., www.winbook.com. ●●○○○

Although the WinBook PowerSpec 8736 has the latest recordable DVD drive and a wireless mouse and keyboard, it lacks the necessary components, such as a SATA hard drive, to compete with this year's crop of midrange desktop systems.

With only one 3.5-inch drive bay, one DIMM slot, and two PCI slots available, there isn't a lot of room for expansion, although there is an open AGP slot, should you want to upgrade to more powerful graphics.

Photo enthusiasts will appreciate Roxio's PhotoSuite 5 editing and album creation software, but a memory card reader would be a welcome addition. Not surprisingly, the 8736's 2.8-GHz Pentium 4 processor and integrated VIA S3 graphics card combination turned in the lowest performance scores in the roundup, and the unit was left in the dust by the Dell and Velocity Micro systems on 3DMark03.

The 8736 would fare better as a value (sub-$500) system than a midrange desktop. We can't recommend it when most other vendors offer newer technology, more powerful processors, dedicated graphics, and better performance for the same price.—*JD*

- ➤ **MULTIMEDIA: Music:** 65 **Photos:** 59 **Video:** 41 **Gaming:** 36
- ➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 93 **SYSmark 2004 Internet Content Creation:** 135
- ➤ **SUPPORT:** The warranty for parts and labor, with on-site service included. Toll-free technical support is available 24/7.

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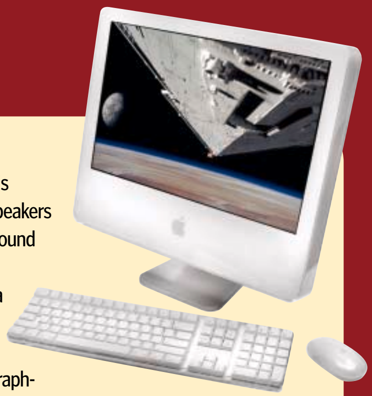


Apple iMac G5

1.8-GHz PowerPC G5, 512MB DDR SDRAM, 160GB SATA hard drive, 64MB nVidia GeForce FX 5200 Ultra, 802.11g, 20-inch LCD, DVD-R/CD-RW SuperDrive; three USB 2.0, two USB 1.1, and two FireWire; $2,103 direct. Apple Computer Inc., www.apple.com. ●●●●●

The Apple iMac G5 is no less sublime than its predecessors, but it's a lot more subtle. The system's CPU, motherboard, and drives are mounted in the same 2-inch thick monitor chassis. With optional Bluetooth and AirPort Extreme, this system comes close to a desktop replacement notebook without the battery.

The iMac G5's fans pull air in from the bottom and let the warm air rise and exhaust through the top. The front panel is devoid of speakers, control buttons, and ports. The I/O ports are lined up vertically on the back panel, and a VGA/video-out jack is present but requires a dongle adapter. The speakers are in the bottom of the chassis, producing sound quality that's decent but with weak bass.

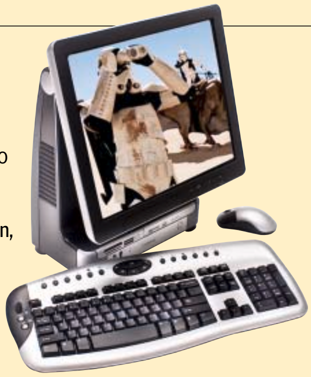
The iMac G5's faster processor delivered a speed boost over the iMac G4, completing three of four Photoshop tests more quickly. And with the nVidia GeForce FX 5200 Ultra graphics, the system can play fairly strenuous 3D games.

The iMac G5 gives Mac fans another reason to stay in the fold, and it could attract Windows PC buyers.—*JSD*

➤ **MULTIMEDIA: Music:** 88 **Photos:** 76 **Video:** 59 **Gaming:** 59

➤ **PERFORMANCE: SYSmark Office Productivity:** N/A
SYSmark Internet Content Creation: N/A

➤ **SUPPORT:** The warranty for parts and labor is one year. On-site service is $169. Toll-free technical support is available from 9:00–9:00 eastern time daily.



Gateway Profile 5.5

3.2-GHz Pentium 4 540, 512MB DDR RAM, 160GB SATA hard drive, 64MB ATI Radeon X300 LE, 17-inch LCD, DVD±RW, six USB 2.0 and two FireWire, $1,919 direct. Gateway Inc., www.gateway.com. ●●●●○

Unlike other all-in-one systems we've seen, the Gateway Profile 5.5 uses the monitor base to house components that are usually mounted on the side of the screen, making access to them easier.

The Profile includes a wireless keyboard and mouse and 802.11g connectivity. Its 17-inch display looks great from all angles, but unlike the Pelham Sloane display, it has limited height adjustment (3 inches) and can't swivel from side to side.

The integrated speakers aren't much better than your basic two-piece desktop set, so you may want to purchase a 2.1 speaker system for better listening; this system doesn't support 5.1 sound capabilities. And while the Profile won't satisfy hard-core gamers, its storage capacity and memory card reader will appeal to photo-imaging fans.

The Profile turned in respectable scores on the SYSmark OP and ICC benchmark tests, blowing past the Pelham Sloane system but slightly trailing the MPC all-in-one.

With its wireless features, small footprint, and three-year warranty, the Profile is a safe bet for home or office users, particularly when desk space is at a premium.—*JD*

➤ **MULTIMEDIA: Music:** 89 **Photos:** 67 **Video:** 55 **Gaming:** 65

➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 161
SYSmark 2004 Internet Content Creation: 206

➤ **SUPPORT:** The warranty is three years for parts and labor. One year of on-site service is $100. Toll-free technical support is available 24/7 for three years.

MPC ClientPro 414

3.2-GHz Pentium 4 540, 1GB DDR2 SDRAM, 250GB SATA hard drive, 128MB ATI Mobility Radeon X600, 17-inch LCD, DVD±RW and CD-ROM drives, six USB 2.0 and one FireWire, $2,499 direct. MPC Computers LLC, www.buympc.com. ●●●●◐

The MPC ClientPro 414 is a powerful business desktop, but with its TV tuner, DVR software, and dual optical drives, it's also ready to entertain.

The 414 has dual optical drives—rare for an all-in-one system. AV connections include optical audio, S-Video ports, a TV tuner with dual video-in jacks, and an antenna jack. MPC bundles InterVideo's WinDVR software for recording and storing TV shows. There's also a wireless remote, keyboard, and mouse, as well as an integrated 802.11g adapter. You can change TV channels with buttons on the monitor bezel.

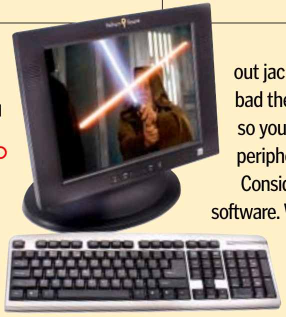
The 17-inch LCD is bright, but you can't adjust the height or horizontal viewing angle without moving the entire system. MPC compensates for the mediocre built-in speakers by including the Creative I-Trigue 2.1 speaker system.

The 414 outperformed the others here on both SYSmark tests, and its 3D scores were above average. Although the most expensive all-in-one system here, its performance and features are first-rate.—*JD*

➤ **MULTIMEDIA: Music:** 61 **Photos:** 43 **Video:** 75 **Gaming:** 60

➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 176
SYSmark 2004 Internet Content Creation: 212

➤ **SUPPORT:** The warranty is three years for parts, labor, and on-site service. Toll-free technical support is available 24/7.



Pelham Sloane PS1500

2.4-GHz Pentium 4, 1GB DDR SDRAM, 80GB hard drive, 64MB Intel 845GV, 15-inch LCD, DVD±RW, two USB 2.0 and one FireWire, $2,375 list. Pelham Sloane Ltd., www.pelhamsloane.com. ●●◐○○

When compared with the other all-in-ones here, the Pelham Sloane PS1500 stands out for all the wrong reasons. It has a small screen, too many wires, and dismal performance on our benchmark tests.

The PS1500's 15-inch screen is its best feature; though its maximum resolution is only 1,024-by-768, it is bright and clear. We also like that the screen can swivel horizontally and vertically and has a 5-inch height adjustment.

USB and FireWire connections, dual TV-out jacks, an S/PDIF audio port, and two PC Card slots are all included; too bad they're all nearly impossible to reach. The openings are on the bottom, so you practically need to turn the entire unit upside down to connect your peripherals.

Considering the system's steep price, we are surprised by the lack of bundled software. We also think a wireless keyboard and mouse should be included.

Performance-wise, the PS1500 trailed the MPC and Gateway systems, both of which have a more powerful 3.2-GHz processor, much larger hard drives, and PCIe graphics cards.

It's hard to recommend the PS1500 when systems from Gateway and MPC offer so much more in terms of performance, features, warranty, and bang for the buck.—*JD*

➤ **MULTIMEDIA: Music:** 63 **Photos:** 45 **Video:** 29 **Gaming:** 25

➤ **PERFORMANCE: SYSmark 2004 Office Productivity:** 96
SYSmark 2004 Internet Content Creation: 117

➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 8:00–8:00 eastern time M–F for one year.

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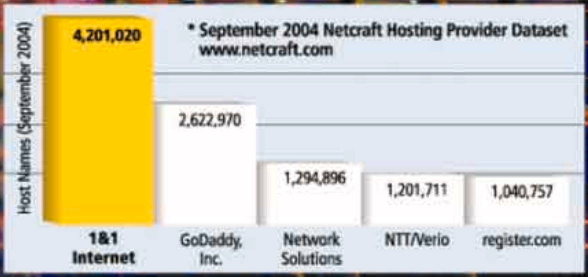

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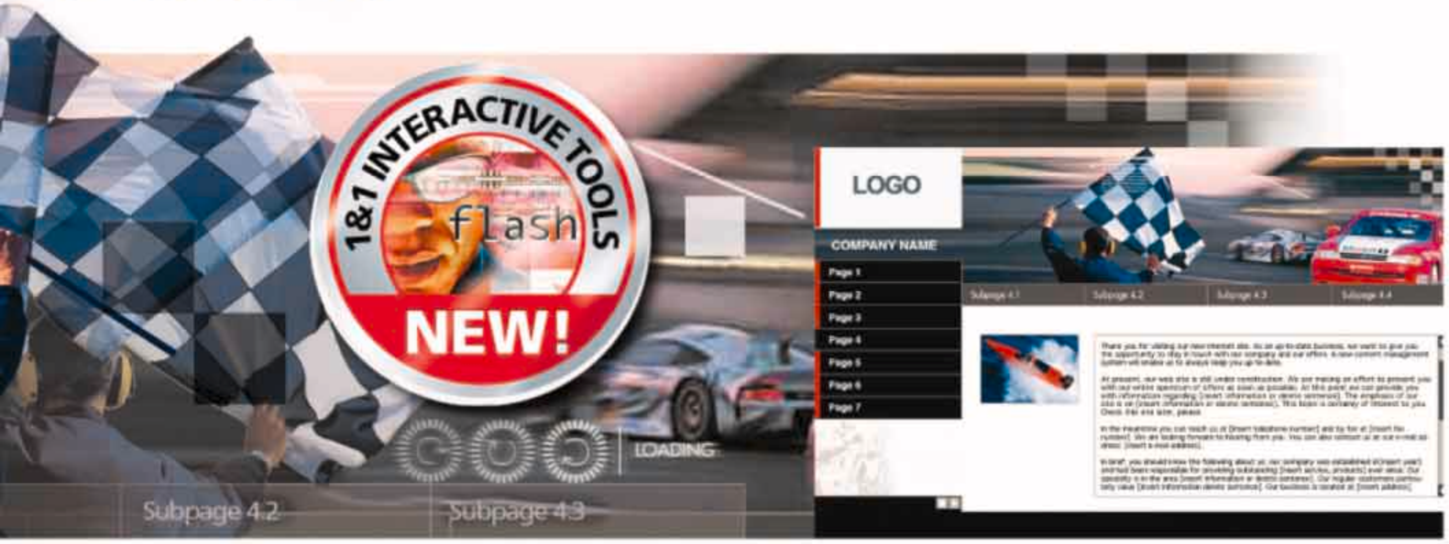

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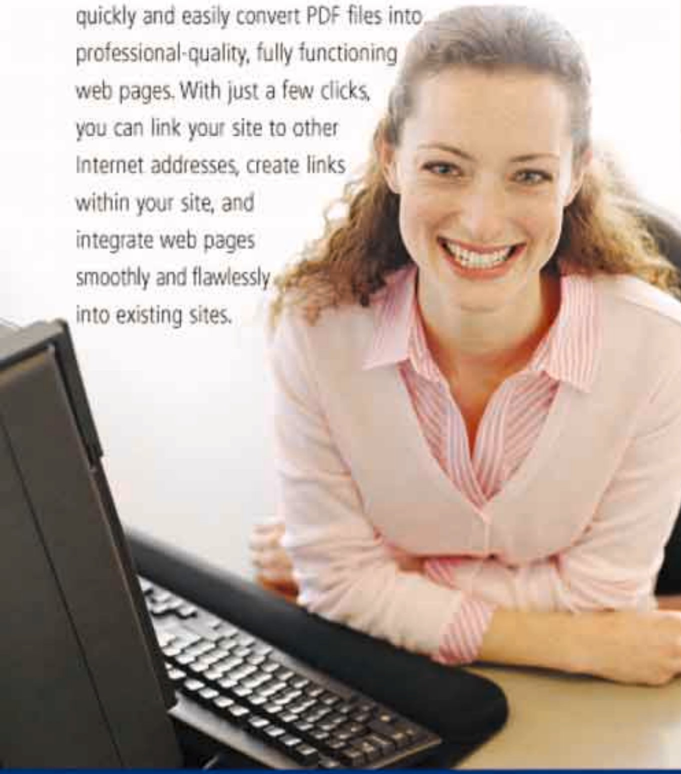

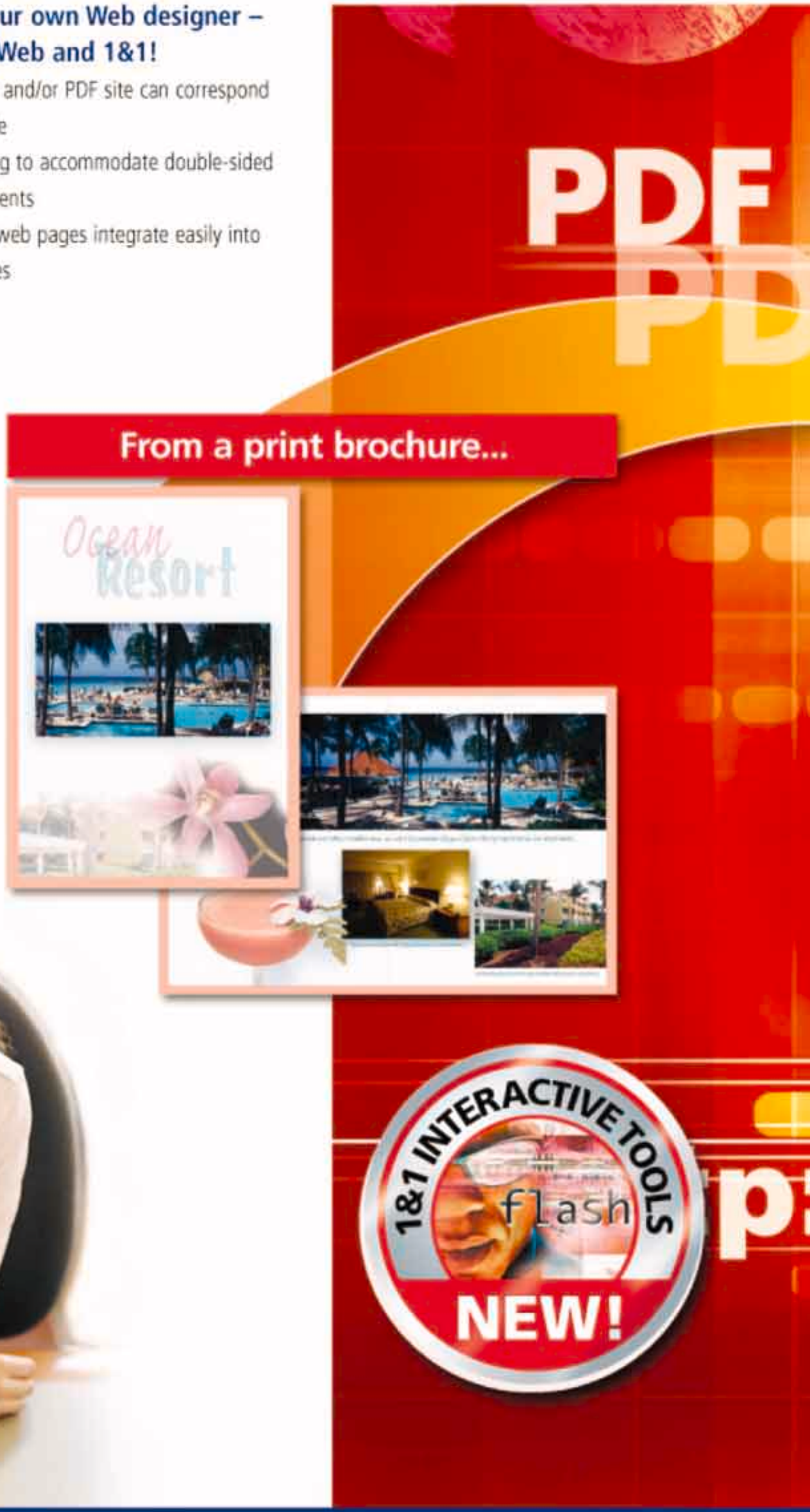

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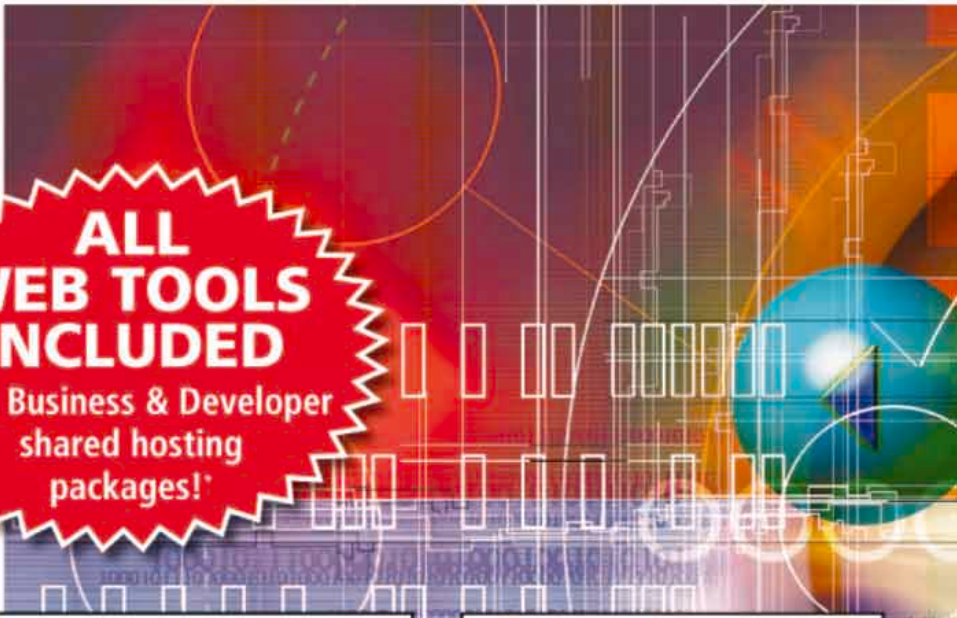
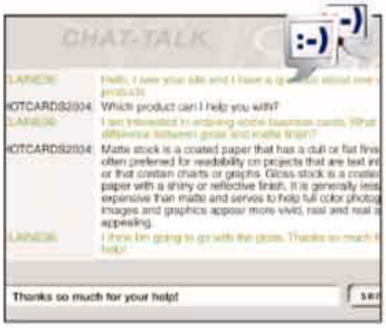


ALL WEB TOOLS INCLUDED
with Business & Developer shared hosting packages!*



OTCARDS2004 Which product can I help you with?

OTCARDS2004 Matte stock is a coated paper that has a dull or flat fini
often preferred for readability on projects that are text in
or that contain charts or graphs. Gloss stock is a coated
paper with a shiny or reflective finish. It is generally less
expensive than matte and serves to help full color photog
images and graphics appear more vivid, real and real a
appealing.

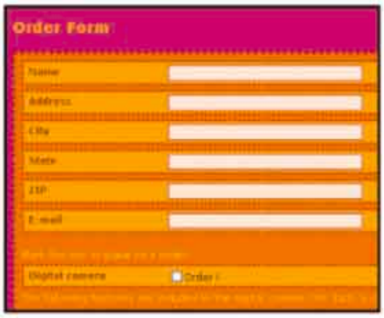
Thanks so much for your help!

Chat Channels

Provide a meeting place for your customers and add entertainment value to your site. Unlike other chat programs, with Chat Channels your guests won't have to download any software, so they can check in from anywhere. And, your users won't be bombarded with advertisements! What you get is a place to talk to others with no added hassles.

In2site Live Dialogue

Wouldn't it be great if you could talk to your visitors while they are using your website – live and in real time? You can with In2site Live Dialogue from 1&1! In2site Live Dialogue allows for quick and easy communication with your visitors, making it an invaluable tool for sales, support and consulting professionals.



Order Form

Name

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E-mail

Digital camera ☐ Order

1&1 WebElements

Adding template-driven contact forms, online polls, event registrations and more to your site is a breeze with 1&1 WebElements. Adapt the templates to fit your site or be creative and easily build your own forms for any purpose! The information that your visitors enter is saved in a special Internet database, so you can view the results at any time.

*Chat Channels and 1&1 WebStatistics are included with Home packages

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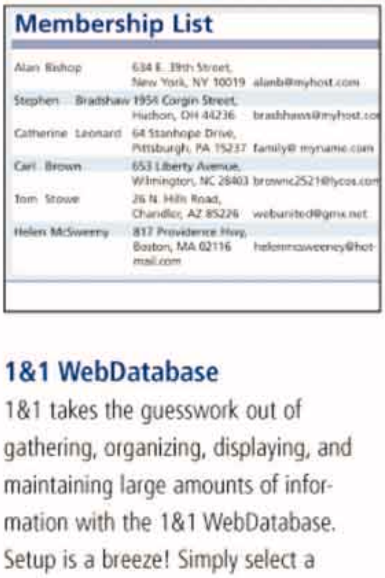
newsletter

1&1 Newsletter Tool

E-mail newsletters provide an easy, cost-effective way to build and maintain relationships with your site visitors. The 1&1 Newsletter Tool lets you create and send professional-looking e-mails – with no programming hassles! You'll get everything you need to build your own mailing list, manage recipients' addresses, track results and more.



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Page Views

1&1 WebStatistics

Understand visitor dynamics with 1&1 WebStatistics. Gather all of the information you need and generate a detailed analysis of how your website is performing. Display the information in the format you choose – pie charts, bar graphs, or simple numerical output. Use the data to improve navigation and maximize the success of your site!

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Affordable, all-inclusive, feature-packed hosting from 1&1.

1&1's Microsoft and Linux shared hosting packages offer the best value for your money. Whether you're a novice Internet user or operate a heavily trafficked site, 1&1 has a hosting package that will help you make the most of your web experience.

With all 1&1 shared hosting plans, e-mail is built right in. And now, 1&1 can help you improve your e-mail communications with our enhanced features! Mailbox space has been increased to a massive 1 GB. In addition to POP, the IMAP mail protocol is now supported, allowing you to access your mail no matter where you are. Plus, since we know that you depend on the security of your e-mail, we're proud to offer Spam filtering and Virus Protection for ALL accounts. Get the protection you need from the company you can trust.

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ranking toolbox
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🐧 – Linux packages

🪟 – Microsoft packages

HOME PACKAGE

FROM $4.99 PER MONTH

INCLUDES 1 DOMAIN

	🐧	🪟
PACKAGE FEATURES		
Web space	1,000 MB	1,000 MB
FTP accounts	1	1
Monthly Transfer Volume	25 GB	25 GB
1&1 Control Panel	✓	✓
Logfiles	✓	✓
MARKETING TOOLS		
Chat channels	1	1
1&1 WebStatistics	✓	✓
SITE-BUILDING TOOLS		
NEW PDF2Web Converter	✓	✓
NEW DynamicSiteCreator	✓	✓
NEW Graphic archive	✓	✓
WebsiteCreator	12 pages	12 pages
Software suite worth $600	✓	✓
FrontPage extensions	✓	✓
CGI library	✓	✓
Active Server Pages	–	✓
DOMAIN NAMES		
Included Domains	1	1
Subdomains	10	10
Run multiple independant sites	✓	✓
Full DNS management	✓	✓
E-MAIL		
E-mail accounts w/ 1 GB space each	200	200
Aliases, auto-responders, forwarding	✓	✓
1&1 WebMail	✓	✓
Spam filtering for all accounts	✓	✓
Virus Protection for all accounts	✓	✓
SECURITY FEATURES		
Protected by up-to-date firewall	✓	✓
Daily backups	✓	✓
Password protected directories	✓	✓
Dedicated SSL Certificate	optional	optional
PER MONTH	$4.99	$6.99

BUSINESS PACKAGE

FROM $9.99 PER MONTH

INCLUDES 3 DOMAINS

	🐧	🪟
PACKAGE FEATURES		
Web space	2,000 MB	2,000 MB
FTP accounts	5	5
Monthly Transfer Volume	50 GB	50 GB
1&1 Control Panel	✓	✓
Logfiles	✓	✓
MARKETING TOOLS		
Chat channels	5	5
1&1 WebStatistics	✓	✓
In2site Live Dialogue	✓	✓
1&1 Newsletter Tool	✓	✓
1&1 WebElements	✓	✓
SITE-BUILDING TOOLS		
NEW PDF2Web Converter	✓	✓
NEW DynamicSiteCreator	✓	✓
NEW Graphic archive	✓	✓
WebsiteCreator	18 pages	18 pages
Software suite worth $600	✓	✓
FrontPage extensions	✓	✓
CGI library	✓	✓
Active Server Pages	–	✓
ASP.NET, .NET Framework	–	✓
Perl, PHP3, PHP4, and PHP5	✓	–
1&1 WebDatabase	✓	✓
Database	1 MySQL	MS Access
Cron Jobs	✓	–
SSI (Server side includes)	✓	✓
DOMAIN NAMES		
Included Domains	3	3
Subdomains	50	50
Run multiple independant sites	✓	✓
Full DNS management	✓	✓
E-MAIL		
E-mail accounts w/ 1 GB space each	500	500
Aliases, auto-responders, forwarding	✓	✓
1&1 WebMail	✓	✓
Spam filtering for all accounts	✓	✓
Virus Protection for all accounts	✓	✓
SECURITY FEATURES		
Protected by up-to-date firewall	✓	✓
Daily backups	✓	✓
Password protected directories	✓	✓
SSH Secure Shell Access	✓	–
Dedicated SSL Certificate	optional	optional
PER MONTH	$9.99	$12.99

DEVELOPER PACKAGE

FROM $19.99 PER MONTH

INCLUDES 5 DOMAINS

	🐧	🪟
PACKAGE FEATURES		
Web space	4,000 MB	4,000 MB
FTP accounts	25	25
Monthly Transfer Volume	100 GB	100 GB
1&1 Control Panel	✓	✓
Logfiles	✓	✓
MARKETING TOOLS		
Chat channels	10	10
1&1 WebStatistics	✓	✓
In2site Live Dialogue	✓	✓
1&1 Newsletter Tool	✓	✓
1&1 WebElements	✓	✓
SITE-BUILDING TOOLS		
NEW PDF2Web Converter	✓	✓
NEW DynamicSiteCreator	✓	✓
NEW Graphic archive	✓	✓
WebsiteCreator	25 pages	25 pages
Software suite worth $600	✓	✓
FrontPage extensions	✓	✓
CGI library	✓	✓
Active Server Pages	–	✓
ASP.NET, .NET Framework	–	✓
Perl, PHP3, PHP4, and PHP5	✓	–
1&1 WebDatabase	✓	✓
Database	3 MySQL	MS Access, MS SQL
Cron Jobs	✓	–
SSI (Server side includes)	✓	✓
Advanced Developer Tools	✓	–
DOMAIN NAMES		
Included Domains	5	5
Subdomains	200	200
Run multiple independant sites	✓	✓
Full DNS management	✓	✓
E-MAIL		
E-mail accounts w/ 1 GB space each	1,000	1,000
Aliases, auto-responders, forwarding	✓	✓
1&1 WebMail	✓	✓
Spam filtering for all accounts	✓	✓
Virus Protection for all accounts	✓	✓
SECURITY FEATURES		
Protected by up-to-date firewall	✓	✓
Daily backups	✓	✓
Password protected directories	✓	✓
SSH Secure Shell Access	✓	–
Dedicated SSL Certificate	✓	✓
PER MONTH	$19.99	$24.99

Includes 24/7 support • No setup fee

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Dedicated servers from 1&1 offer a broad range of functionality so you can choose the solution that best fits your needs and experience level. From a fully maintained Managed Server, to a Root Server with maximum flexibility and control, to a solid and secure Windows Server, 1&1 will help you take your web presence to the next level.

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- 18,000 MBit connectivity
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Fully Managed Servers

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- New innovative interactive tools included

Windows Server: Web Edition

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- Designed for dedicated web serving and hosting
- Remote Desktop Control
- ASP, ASP.NET, MSDE

Windows Server: Standard Edition

- Included with Server III
- Designed to support sophisticated and demanding applications
- Exchange Server installable
- Includes Active Directory, Streaming Media Server, Terminal Services

Plesk 7 Reloaded Included with All Root Servers

- Use, create and manage your Linux-based system
- Create new e-mail accounts
- Manage web spaces plus up to 100 domains
- Become your own host by partitioning your server into shared web space

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"Moving to 1&1's Managed Server III has made our business much more efficient. 1&1 gives us our own dedicated server, but we still get the seamless, maintenance-free service of a shared hosting site. Plus, we get all the space we need for our high resolution graphics files and print samples."

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- Advanced Recovery Tool lets you instantly reboot

PLESK7 RELOADED

1&1 MANAGED SERVERS

For Performance and Convenience

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- Continuously updated firewall protection
- 1&1 user-friendly Control Panel for easy administration
- Includes Dedicated SSL Certificate at no extra cost

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1&1 WINDOWS SERVER 2003

For Security and Reliability

- Windows Server 2003 Standard Edition with Server III (Web Edition with Server I & II)
- Unlimited administration access
- .NET Framework already integrated

Windows Server 2003

	1&1 ROOT SERVERS	1&1 MANAGED SERVERS	1&1 WINDOWS SERVER 2003
SERVER I Intel Celeron 2.0 GHz 256 MB DDR-RAM 40 GB IDE hard drive 500 GB bandwidth included	$49 PER MONTH	$59 PER MONTH	$69 PER MONTH
SERVER II Intel Pentium 4, 2.4 GHz 512 MB DDR-RAM 40 GB IDE hard drive 500 GB bandwidth included	$69 PER MONTH	$79 PER MONTH	$89 PER MONTH
SERVER III Intel Pentium 4, 3.06 GHz Processor with Hyper-Threading 1 GB DDR-RAM 120 GB IDE hard drive 500 GB bandwidth included	$99 PER MONTH	$109 PER MONTH	$129 PER MONTH

*$6.99 shipping & processing fee applies

Includes 24/7 support • $99 one-time setup fee

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Easy, yet sophisticated e-commerce solutions.

1&1 eShops are as powerful as any major online retailer, but with no software or hardware to install. Online wizards and a wide range of professionally designed templates offer such simplicity that your online shop can be up and running in less than an hour. Plus, 1&1 eShops are fully compatible with your current site, regardless of which hosting provider you use. 1&1 eShops include all the web space and bandwidth you need and require no additional hosting plan to get your online storefront open for business.

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30+ professional shop templates

- Ready to be loaded with your products
- Customizable with different fonts, colors and positioning

Secure online payments via PayPal and WorldPay

- No merchant account necessary with PayPal
- Connect with 35,000 loyal PayPal users – with no paperwork or bank application

8 easy-to-use wizards

- Step-by-step guides
- Quickly and simply configure:
  - Shopping basket
  - Order processing
  - Tax clearing
  - Delivery methods
  - Payment settings

SSL secured

- All shop-based settings created in SSL secured pages
- Maximum integrity of confidential data
- Fully protected from third-party access

Easy order processing

- Choice of shipping methods
- Multiple currencies supported
- Tax clearing server included

Dedicated SSL Certificate

A Dedicated SSL Certificate from 1&1 shows your customers that your site is secure and they can conduct transactions with confidence. The certificate is included with the Developer eShop and can be added to the Business or Professional eShop for just $49 per year.

Hosting Included

With all 1&1 eShops, no additional hosting package is needed because web space, traffic and even e-mail accounts are all included! Plus, there's no software to install and 1&1 handles all the maintenance and updates so you can focus 100% on your online business.

And more!

- Google Conversion Tracking
- Froogle Product Search
- Customer account administration
- Easy account management for your customers

payment methods
Payment modules
basic settings
Merchant's Address

BUSINESS eSHOP

- 50 MB web space
- 10 GB monthly transfer volume
- 50 item product catalog
- Choice of 2 shipping methods

$9.99 PER MONTH

PROFESSIONAL eSHOP

- 300 MB web space
- 30 GB monthly transfer volume
- 200 item product catalog
- Unlimited item variants
- Choice of 5 shipping methods
- Multi-currency support
- Import/export customer data
- Online credit card clearing with PayPal and WorldPay
- Tax clearing server (calculates taxes by state, county and city)

$29.99 PER MONTH

DEVELOPER eSHOP

- 1200 MB web space
- 60 GB monthly transfer volume
- Unlimited item product catalog
- Unlimited number and depth of sub-categories
- Unlimited shipping methods
- Multi-currency support
- Import/export customer data
- Online credit card clearing with PayPal and WorldPay
- Tax clearing server (calculates taxes by state, county and city)
- FTP access
- Customer account management
- Fully customizable templates
- Dedicated SSL Certificate included
- In2site Live Dialogue

$49.99 PER MONTH

Includes 24/7 support • No setup fee

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1&1 MAIL

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1&1 gives you two great ways to get mail.

Whether you need e-mail for personal use or business use, 1&1 has your perfect solution. 1&1 Instant Mail is ideal for private users, allowing you to send and receive personalized mail from your own domain. 1&1 Microsoft Exchange Hosting gives you or your entire business reliable, affordable, up-to-date access to your critical information – anytime, anywhere.

And now, 1&1 offers even more features and more space for improved e-mail communications! Mailbox space has been increased to a massive 1 GB. 1&1 Instant Mail now supports the IMAP protocol, allowing you access to your mail no matter where you are. Plus, Spam filtering and Virus Protection are now included.

1&1 INSTANT MAIL

Mail in an instant!

What does your ambiguous e-mail address say about you? Are you ready to take your personal e-mail to a more professional level? Then 1&1 has your solution. Simply sign up for 1&1 Instant Mail and then add on your domain. In just minutes you'll have the power to send and receive e-mail from your own domain name.

- **5 e-mail accounts with 1 GB space each – IMAP & POP supported**
- **NEW Spam filter included for all 5 accounts**
- **NEW Virus protection for all 5 accounts**
- **10 e-mail aliases**
- **Includes 1&1 WebMail – access mail anytime from anywhere**
- **Send and receive e-mail from your domain**
- **Easy setup via the 1&1 Control Panel**

Now with 1GB MAILBOX SPACE

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Exchange made easy!

Your Microsoft Exchange Hosting Plan from 1&1 lets you enjoy the communication and collaboration features and benefits of Microsoft Exchange without the hassles of maintaining your own Microsoft Exchange server. Read, send and receive e-mail and access your public folders, contacts and calendars at anytime, from anywhere via Microsoft Outlook or any web browser.

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- **NEW 1 GB e-mail storage space**
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- **Outlook® Web Access**
- **Synchronize your data with ActiveSync**
- **Virus Scanner installed on the Exchange Server**
- **Spam filter included in Outlook 2003**

Microsoft Office Outlook 2003

OUTLOOK® 2003 INCLUDED* with all Exchange accounts

$6 99 PER MONTH

*$6.99 shipping & processing fee applies

Includes 24/7 support • No setup fee

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Notebooks

The big news for notebooks this year is that thanks to a growing focus on multimedia, people can enjoy their music, movies, games, and photos in newer, better ways. Here's a look at what features you can expect to find in each category of notebook: high-end, mainstream, value, and ultraportable.

HIGH-END

At 7 to 10 pounds, these desktop replacements have 15.1- to 17-inch LCDs, many with wide screens and high-gloss treatments that deliver crisp images and deep colors.

High-end graphics processors, such as the ATI Radeon Mobility 9700, have up to 256MB of memory—ideal for passionate gamers. High-end video systems come with DVD±RW drives, TV tuners and remote controls for watching TV on your notebook. Good speakers round out the experience.

Hard drives have stepped up to meet the demands of multimedia. Most hold about 80GB, with speeds ranging from 5,400 to 7,200 rpm.

As for processors, you'll find some of the fastest chips here, with speeds up to 3.4 GHz. Some systems include the Intel Pentium M chip. Designed specifically for notebooks, it has lower clock speeds (the highest is 2.1 GHz) but still offers high performance and extended battery life.

MAINSTREAM

Aimed at the person who values mobility and productivity equally, these 4- to 7-pound notebooks are outfitted primarily with power-conserving processors like the Pentium M. Hard-drive sizes currently measure about 80GB, and graphics, usually from ATI or nVidia, are mainly midrange. That is fine for DVD watching and recording TV, which don't require heavy graphics.

Many mainstream notebooks now have wide screens, from 14.1 to 15.4 inches. Optical drives are more of a mixed bag, from DVD/CD-RW combo drives to more impressive DVD±RW drives.

VALUE

These notebooks cost under $1,000, and their weight ranges from 5.4 to 7.5 pounds. For processing power, Celeron chips generally dominate this group, but you can find other chips, such as the new AMD Sempron.

Other goodies include widescreen displays, DVD/CD-RW combo drives, and 802.11g.

ULTRAPORTABLE

In systems weighing less than 4 pounds, it's amazing what manufacturers manage to squeeze in year after year.

Processors range from a sluggish Pentium 1.0 GHz to a fast 1.8-GHz Pentium M, and hard drives have ballooned to 60GB. Graphics are almost always embedded, which is more than adequate for the tasks these systems are asked to perform: e-mail, Internet browsing, and DVD watching.

Screen sizes range from 8.9 inches to 12.1 inches, and some are widescreens. Keyboard sizes range from a 16-mm pitch to a full-size 19 mm. Battery life also varies widely, from 2 to 6 hours.

Following are 24 of the hottest new notebooks. Whether weight, power, price, or multimedia features are your top priority, we have the right system for you.

More on the Web

To find out more about what's behind the latest LCD screens, and for a convenient, quick scan of all the notebooks' features go to go.pcmag.com/yournextnotebook.

HIGH-END NOTEBOOKS

Dell Inspiron 9200

2.1-GHz Pentium M 765, 1GB DDR SDRAM, 80GB hard drive, 128MB ATI Mobility Radeon 9700, 17-inch LCD, 802.11g, 8.0 pounds, DVD±RW, four USB 2.0 and one FireWire, Windows XP Home, $2,399 direct (with Dell E-Value code D81123z). Dell Inc., www.dell.com. ●●●●○

The Inspiron 9200 boasts a bright 17-inch display, the fastest Pentium M 765 (2.1 GHz) currently available, and the longest battery life we've seen in a desktop replacement—all for a very good price. On top of that, customers will be thrilled to know that Dell has included a multiformat DVD±RW drive, instead of one that can handle only DVD+RW discs.

We were very impressed with the image quality on the Dell UltraSharp screen when we played a DVD. We also like the convenient DVD-play and volume-control buttons and the Dell Media Experience 2.1 Deluxe software package, which makes editing and archiving photos and organizing music a breeze.

Thanks in part to the latest 2.1-GHz Pentium M 765, the Inspiron 9200's battery-life score was off the charts, at 4:59. The normal life for a desktop replacement is 2 to 3 hours.

If TV tuning is important to you, you may want to look at the Toshiba Qosmio or the HP Pavilion zd8000. If it's not, the Dell Inspiron 9200 is a great multimedia buy at a deal of a price.—*Cisco Cheng*

- ➤ **MULTIMEDIA: Music:** 69 **Photos:** 85 **Video:** 54 **Gaming:** 64
- ➤ **PERFORMANCE: SYSmark Office Productivity:** 127 **SYSmark Internet Content Creation:** 189 **BatteryMark:** 4:59
- ➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.

Gateway M675XL

3.4-GHz Pentium 4, 1GB DDR SDRAM, 80GB hard drive, 128MB ATI Mobility Radeon 9700, 17-inch LCD, 802.11g, 8.9 pounds, DVD±RW, four USB 2.0 ports and one FireWire, Windows XP Pro, $2,799 direct. Gateway Inc., www.gateway.com. ●●●○○

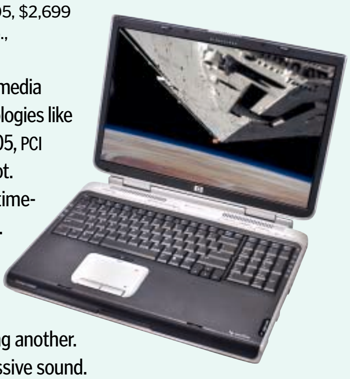
The Gateway M675XL is a respectable multimedia system with strong performance and impressive hardware, such as a 17-inch display and a 6-in-1 memory card reader. But for $2,799, we expected a little more. The high-resolution 17-inch screen doesn't trump the Toshiba Qosmio's screen in brightness, but it's more than adequate for DVD watching. Multimedia lovers will appreciate the DVD±RW drive, memory-card reader, audio-out port, and the CD/DVD hardware controls (play, stop, rewind, forward, volume up, and volume down). Unfortunately, the M675XL's speaker quality was weak; the HP zd8000 had the best sound in the group that we tested.

The M675XL held its own on performance tests, particularly on content creation and, surprisingly, gaming tasks. Overall, it's a decent system, with a good screen and a fine feature set. But for those more interested in photos, video, and music, the HP zd8000 and the Toshiba Qosmio might be the better bets.—*CC*

- ➤ **MULTIMEDIA: Music:** 71 **Photos:** 70 **Video:** 44 **Gaming:** 54
- ➤ **PERFORMANCE: SYSmark Office Productivity:** 132 **SYSmark Internet Content Creation:** 203 **BatteryMark:** 1:50
- ➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.

HP Pavilion zd8000

3.4-GHz Pentium 4, 1GB DDR SDRAM, 80GB hard drive, 256MB ATI Mobility Radeon X600, 17-inch LCD, 802.11g, 9.5 pounds, DVD±RW drive, four USB 2.0 ports and one FireWire, Windows XP Media Center 2005, $2,699 direct. Hewlett-Packard Development Co., www.hp.com. ●●●●○



The HP Pavilion zd8000 is a terrific multimedia notebook that's packed with new technologies like Microsoft Windows XP Media Center 2005, PCI Express graphics, and an ExpressCard slot.

The zd8000 scored the highest multimedia ratings we've seen on any notebook. It also has a gorgeous BrightView 17-inch widescreen display and an external HP USB Dual TV tuner, which lets you watch one show while recording another. Its Harman Kardon speakers had impressive sound.

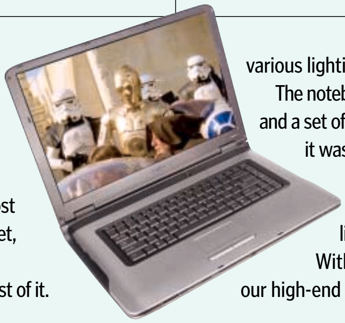
The zd8000 comes with the new ExpressCard/54 PC Card slot—which offers high-speed transfers of 250 Mbps each way—and PCI Express graphics from the 256MB ATI Mobility Radeon X600 card. But its gaming test scores were average, because of its basic X600 GPU.

HP should be applauded for including new technologies in the zd8000 and for producing a top-rated system that is sure to please many multimedia enthusiasts.—*CC*

- ➤ **MULTIMEDIA: Music:** 96 **Photos:** 95 **Video:** 75 **Gaming:** 80
- ➤ **PERFORMANCE: SYSmark Office Productivity:** 144 **SYSmark Internet Content Creation:** 208 **BatteryMark:** 1:45
- ➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.

Sony VAIO VGN-A190

1.7-GHz Pentium M 735, 512MB DDR SDRAM, 80GB hard drive, 64MB ATI Mobility Radeon 9700, 17-inch LCD, 802.11g, 8.4 pounds, DVD±RW, three USB 2.0 ports and one FireWire, Windows XP Home, $2,699 direct. Sony Electronics Inc., www.sonystyle.com. ●●●○○



Despite a gorgeous screen, the Sony VAIO VGN-A190 needs a boost in hardware, and its proprietary multimedia software, GigaPocket, could use a rev. If you just have to have this system, buy it with Microsoft Windows Media Center Edition 2005 to make the most of it.

The XBrite 17-inch widescreen display is fantastic, with high resolution (1,920-by-1,200). An ambient light sensor, ErgoBright, automatically adjusts the screen's brightness to accommodate various lighting conditions.

The notebook comes with a docking station, where the TV tuner resides, and a set of sleek, triangular external speakers. When we used GigaPocket, it was hard to manage and unresponsive at times. For example, when we played back recorded video, one of the recordings had audio but no video. When we toggled from the recorded material to live television, we sometimes lost the picture altogether.

With the least memory and slowest processor and hard drive in our high-end notebook roundup, the A190 was at the bottom of the heap on our SYSmark tests.

The VGN-A190 has the look, but to get the most from its multimedia offerings, get the Windows MCE 2005 OS instead of GigaPocket.—*CC*

- ➤ **MULTIMEDIA: Music:** 69 **Photos:** 79 **Video:** 56 **Gaming:** 48
- ➤ **PERFORMANCE: SYSmark Office Productivity:** 96 **SYSmark Internet Content Creation:** 142 **BatteryMark:** 2:33
- ➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.

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HIGH-END | Toshiba Qosmio E15 MAINSTREAM | HP Pavilion dv1000
VALUE | eMachines M5405 ULTRAPORTABLE | IBM ThinkPad X40

The **Toshiba Qosmio E15** is a sleek portable with the most multimedia features of any system here. It's the only **high-end** system that gives you Instant-on—a feature that lets you watch DVDs and play music without booting up the system. Honorable mention in this category goes to the **HP Pavilion zd8000.** Larger than the Qosmio, it has a 17-inch widescreen display and an external TV tuner, and it yielded strong overall performance. It also debuts new technologies, like PCIe and the latest Windows XP Media Center 2005 Edition.

The **HP Pavilion dv1000** is a slick, lightweight multimedia gem, and is our choice in the **mainstream** category. Its 14.1-inch widescreen display is bright and clear. Instant-on and a 6-in-1 memory card reader make this a sure winner. The **Compaq Presario R3000Z** is a heavy system, at almost nine pounds, but its power and connectivity options earn it an honorable mention.

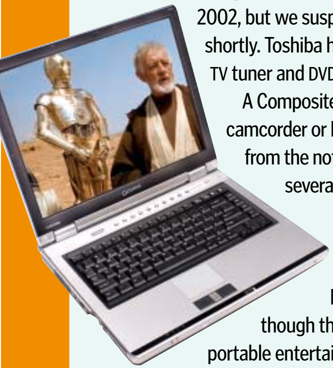
The **eMachines M5405** is a jam-packed **value** system for $999. It has a gorgeous 15.4-inch widescreen display and good multimedia features and yields top performance. Honorable mention goes to the **Compaq Presario V2000,** a fantastic-looking, smaller system with a 14.1-inch screen and great performance. If portability is your primary concern, opt for the V2000.

Will anyone dethrone our reigning **ultraportable** champion, the **IBM ThinkPad X40?** It's compact, sturdy, and light, with a full-size keyboard, and its battery can last 6 hours. The **Dell Inspiron 700m** has incredible performance, but short battery life. Carry an extra on the road.

Toshiba Qosmio E15

1.7-GHz Pentium M 735, 1GB DDR SDRAM, 80GB hard drive, 64MB nVidia GeForce FX Go5200, 15.1-inch LCD, 802.11g, 7.8 pounds, DVD±RW, four USB 2.0 and one FireWire, Windows XP Media Center 2002, $2,699 direct. Toshiba America Inc., www.toshiba.com.
●●●●◐

The Toshiba Qosmio E15 is a true entertainment center, with its gorgeous 15.1-inch Tru-Brite screen, good speakers, and built-in TV tuner. The best part: You can enjoy videos, music, and photos without booting up your system—a feature unique in this roundup. The Qosmio retains the Editors' Choice in this category.



At press time, the E15 was running Microsoft Windows Media Center 2002, but we suspect it will be running the 2005 updated version shortly. Toshiba has included several quick-play buttons to launch the TV tuner and DVD player.

A Composite-In button lets you switch quickly to your connected camcorder or Microsoft Xbox, while the TV-Out button routes images from the notebook to a monitor or TV. You can also use one of several AV ports, like S-Video-out and Component-out.

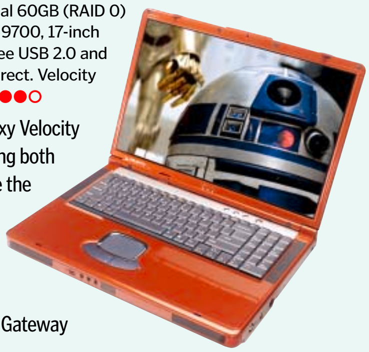
The E15's performance wasn't earth-shattering. This system isn't for 3D gamers, but it works fine for watching DVDs and recording video.

No multimedia portable can match the Qosmio, though the HP Pavilion zd8000 comes close. This is a true portable entertainment center.—*CC*

- ➤ **MULTIMEDIA: Music:** 88 **Photos:** 89 **Video:** 64 **Gaming:** 49
- ➤ **PERFORMANCE: SYSmark Office Productivity:** 122 **SYSmark Internet Content Creation:** 152 **BatteryMark:** 2:12
- ➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.

Velocity Micro NoteMagix S90

3.4-GHz Pentium 4, 1GB DDR SDRAM, dual 60GB (RAID 0) hard drives, 256MB ATI Mobility Radeon 9700, 17-inch LCD, 802.11g, 10.9 pounds, DVD±RW, three USB 2.0 and one FireWire, Windows XP Pro, $3,875 direct. Velocity Micro Inc., www.velocitymicro.com. ●●●●○



If portable gaming tops your list, the sexy Velocity Micro NoteMagix S90 fills the bill, offering both great gaming and rich components, like the dual 60GB RAID 0 hard drives.

The S90 sports a splashy, eye-catching red paint job, though you can forgo that and save $300. Its 17-inch widescreen display is on a par with the Gateway M675XL's screen, though it feels flimsier.

The S90 includes a built-in TV tuner, for routing TV programming to your notebook, and S-Video-in to accommodate your camcorder. There's also a DVD±RW burner and a 6-in-1 card reader.

The S90's SYSmark 2004 scores overall were top in the group, partly because of its RAID 0 configuration. The 256MB ATI Mobility Radeon 9700 graphics helped it deliver a divine gaming experience.

The S90 is slick, expensive, and powerful—a combination that lures dedicated gamers. But if gaming is more your hobby than your passion, look to the Dell Inspiron 9200 as a less expensive option.—*CC*

- ➤ **MULTIMEDIA: Music:** 67 **Photos:** 87 **Video:** 56 **Gaming:** 60
- ➤ **PERFORMANCE: SYSmark Office Productivity:** 211 **SYSmark Internet Content Creation:** 147 **BatteryMark:** 1:01
- ➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.

VoodooPC Envy m:380

2.0-GHz Pentium M 755, 1GB DDR SDRAM, 60GB hard drive, 128MB ATI Mobility Radeon 9700, 15.4-inch LCD, 802.11g, 7.3 pounds, DVD-RW, three USB 2.0 and one FireWire, Windows XP Pro, $4,395 direct. VoodooPC, www.voodoopc.com.
●●○○○

With the VoodooPC Envy m:380, you don't get what you pay for. The system includes an Intel Pentium M 755 (2.0 GHz) processor and a very good graphics chipset, but the components and vividly colored finish can't justify the outrageous price tag of $4,395.

Sleek and svelte, the m:380 is the lightest of the high-end systems we reviewed, with a 15.4-inch widescreen display and a system weight of just 7.3 pounds. It sports VoodooPC's signature tattoo insignia set against a scarlet finish.

The system comes with a fast 7,200-rpm, 60GB hard drive and a 128MB ATI Mobility Radeon 9700. The Velocity Micro NoteMagix S90 trumps this configuration, with dual RAID 0 hard drives and double the memory in the same graphics chip.

The m:380 ranked near the bottom of our roundup (along with the Sony VAIO A190) on our SYSmark tests, but it did well on our Doom 3 gaming and 3DMark03 tests.

Although the m:380 has some decent components and a flashy design, we expect more for the money. If you want a top gaming machine, consider the Velocity Micro system instead.—*CC*

- ➤ **MULTIMEDIA: Music:** 57 **Photos:** 70 **Video:** 41 **Gaming:** 48
- ➤ **PERFORMANCE: SYSmark Office Productivity:** 104 **SYSmark Internet Content Creation:** 139 **BatteryMark:** 2:09
- ➤ **SUPPORT:** The warranty is three years for parts and labor. Toll-free technical support is available 24/7.

Battery life goes longer, processors get stronger, and screens go wide.

Notebooks are all about mobility, and some of the best new technologies capitalize on this freedom. We saw longer battery lives this year, thanks mostly to the Pentium M; stronger mainstream performance from mobile processors like the Mobile AMD Athlon 64; and stronger high-end performance from the 3.4GHz P4. On the high end, we saw more graphics memory and a RAID 0 hard drive configuration to enhance the gaming experience.

In the high-end category, the Dell Inspiron 9200 came with the latest Intel Pentium M 765 processor (2.1 GHz). Pentium M processors consume less power and possess advanced power-saving capabilities, as opposed to their desktop counterparts. Here, the Pentium 765 led to the best overall BatteryMark score (4:59). In addition, the 128MB ATI Mobility Radeon 9700 helped the 9200 achieve top scores on the 3DMark03 and Halo benchmark tests.

Perhaps the biggest new technology we saw in notebooks—PCI Express (PCIe)—debuted on the HP Pavilion zd8000. Borrowed from the desktop side, it is used with the Intel 915 desktop chipset. (This is not the much anticipated mobile chipset from Intel, code-named Alviso, which is set to debut in the first quarter of 2005.) PCIe opens the door for better and greater graphics data transfer by scaling bandwidth beyond 4GB per second bidirectionally.

HIGH-END, HIGH PERFORMANCE: HP AND VELOCITY MICRO

The zd8000 garnered first place on Internet Content Creation (ICC) at 208, and top scores on SYSmark Office Productivity (OP) at 144.

But despite its PCIe graphics, the zd8000 did not dominate in the gaming arena, because its 256MB ATI Mobility Radeon X600 is just not that powerful a graphics processor. (Think of it as being on a par with the ATI Mobility Radeon 9600.) And although the zd8000 has the Mobility Radeon X600, it lacks AXIOM, ATI's modular design for upgradability. AXIOM gives the user more flexibility to change and upgrade to future graphics lines.

The Velocity Micro NoteMagix S90 achieved the best SYSmark OP score (211). Credit goes mostly to the twin 60GB, 7,200-rpm hard drives, which are striped in a RAID 0 configuration, optimizing performance and storage capacity.

Unfortunately, the Sony VAIO VGN-A190 came with only 512MB of system memory and 64MB of graphics memory, whereas most systems in the high-end category had at least 1GB and 128MB, respectively. The VGN-A190 could not generate Doom 3 scores on medium to high-quality settings and yielded the lowest scores, beating only the Toshiba Qosmio E15, on both 3DMark03 and Halo.

Many of the systems in our high-end and mainstream categories could not complete the gaming benchmark tests at their native resolution because the games were unable to support various widescreen resolutions (16:10 and 16:9 aspect ratios). In the mainstream category, the graphics hardware and memory limitations account for the "N/A" results at 1,024-by-768 resolution. The systems failed to run 75 percent of the tests.

COMPAQ, DELL DOMINATE MAINSTREAMS

The Compaq Presario R3000Z is the only system in the mainstream category with the Mobile AMD Athlon 64 3400+ processor. With its 1MB of L2 cache, the R3000Z garnered very good SYSmark scores (119 on OP and 180 on ICC) and the second-best BatteryMark score (3:49), thanks to its 98-Wh battery.

WIRELESS TESTS

High scores are best.
Bold type denotes first place within each category.

	802.11B (Mbps)				802.11G (Mbps)			
	Distance to router (feet)				Distance to router (feet)			
	1	60	120	160	1	60	120	160
HIGH-END NOTEBOOKS								
Dell Inspiron 9200	5.3	5.3	5.6	4.2	20	16.4	8.3	3.6
Gateway M675XL	6.1	6	3.8	1.4	20.5	14.5	2.9	1.2
HP Pavilion zd8000	**6.3**	**6.3**	**5.9**	**5.8**	**21.8**	17.7	**10.5**	**6.5**
Sony VAIO VGN-A190	5.3	4.1	4.7	2.5	20.8	**21**	10.3	2.5
Toshiba Qosmio E15	5.5	5.5	5.3	4.2	21.1	18.5	9	3.4
Velocity Micro NoteMagix S90	5.5	5.4	4.9	1.8	20.8	18.5	4	1.1
VoodooPC Envy m:380	5.5	5.3	4.5	1.9	11.1	8.9	2.4	1.1
MAINSTREAM NOTEBOOKS								
Compaq Presario R3000Z	**6.3**	**6.3**	1.7	–	22.3	18.4	2.1	–
Dell Inspiron 8600	5.5	5.4	5.2	2.9	20	18.6	6.5	1.1
HP Pavilion dv1000	5.5	5.4	5.3	4.7	21.7	19.1	7	–
IBM ThinkPad R51	5.3	5.5	5.1	4.8	19.8	18.8	7.7	5.6
Sony VAIO PCG-K27	6.2	5.3	**5.4**	**5.9**	**23.8**	**22.4**	**12.9**	**9.5**
WinBook W362	3.1	5.3	1.6	–	18	14.9	0.9	–
VALUE NOTEBOOKS								
Compaq Presario V2000	5.5	5.5	5.4	5.1	21.5	18.2	7.8	5.4
eMachines M5405	**6.3**	**6.3**	**5.8**	4.3	**22.2**	18.9	7	4.1
Gateway M520CS Plus	5.9	5.9	5.6	**4.6**	20.2	15.7	8.2	4.4
HP Pavilion ze4900	**6.3**	**6.3**	5.6	3.4	21.4	17.1	6.7	3.1
Toshiba Satellite A65	5.9	5.9	5.7	5.7	23	**22.3**	**12.9**	**9.5**
ULTRAPORTABLE NOTEBOOKS								
Dell Inspiron 700m	5.4	5.4	**5.4**	**5.2**	22.2	16.9	**9.7**	3.4
Fujitsu LifeBook P7010D	**5.6**	**5.9**	5.2	3.6	**25.3**	**25.3**	8.2	4.6
IBM ThinkPad X40	5.2	5.2	5.2	4.8	21.6	18.4	8.3	4.3
JVC MP-XV841 Mini Note PC	5.1	5.1	5	4.9	21.5	19.1	7.6	**5.2**

RED denotes Editors' Choice. A dash indicates that no signal was received at this range.

That four of the seven units in the mainstream category came with an Intel Pentium M highlights the strong performance and success of this processor line. The Dell Inspiron 8600 and the WinBook W362 have the highest-clocked Pentium M processors (2.0 GHz), and the 8600 placed first on battery life (4:21). With 128MB of graphics memory—the largest amount in this category—the 8600 was able to run 3DMark03 in its native resolution. Certain tests in 3DMark03, especially in higher resolutions with filtering and anti-aliasing turned on, require at least 128MB to render scenes.

EMACHINES MAKES ITS MARK

In the value category, the eMachines M5405 had the first AMD Sempron processor we've seen. The Mobile AMD Sempron 2800+ has 256KB of L2 cache (half the amount of L2 cache found on Athlon XP chips) and has the same chip design as the Mobile AMD Athlon 64 (K8 core) counterparts, but without the 64-bit support. Rated at 1.6 GHz, the Sempron 2800+ helped push the M5405 to first place on SYSmark ICC (131) and second place (97) on SYSmark OP (just 2 percent shy of first place).

But the M5405 came up short on BatteryMark (2:38) compared with the Celeron M systems: the Compaq Presario V2000 (3:26) and the HP Pavilion ze4900 (3:13). Based on their BatteryMark scores, the units with Celeron M processors had slightly better thermal and power management capabilities. The eMachines system has the better battery (65 Wh versus 47.5 Wh and 49 Wh on the two Celeron M value systems), yet on battery life, it came up 44 minutes short of the Compaq system.

DESKTOP VS. MOBILE CHIPS

The Gateway M520CS Plus was built with a 2.53-GHz Intel Celeron D 350, which is a desktop chip. In contrast, the Toshiba Satellite A65 is built with the 2.8-GHz Mobile Intel Celeron. The Gateway dominated the Toshiba on SYSmark tests, even though the Mobile Intel Celeron had the higher clock frequency. With its Celeron D, the Gateway outscored the Toshiba system by a large margin on both SYSmark OP (99 versus 53) and ICC (124 versus

continued on page 126

BENCHMARK TESTS

				SYSMARK 2004			3-D BENCHMARK TESTS		GAMING TESTS			
High scores are best. Bold type denotes first place within each category.	Processor	System weight (pounds)	Business Winstone 2004 BatteryMark	Office Productivity	Internet Content Creation	OVERALL	3DMark03		Doom 3		Halo	
Resolution ▶ *Anti-aliasing/Anisotropic filtering* ▶							10x7 *0X/0X*	Native *4X/8X*	10x7 *0X/0X*	Native *4X/8X*	10x7 *0X/0X*	Native *4X/8X*
HIGH-END NOTEBOOKS												
Dell Inspiron 9200	Pentium M 765 (2.1 GHz)	8	**4:59**	127	189	155	**3,438**	1,015	20.5	N/A	28.3	N/A
Gateway M675XL	Pentium 4 (3.4 GHz)	8.9	1:50	132	203	164	3,348	1,371	**22.8**	N/A	27.3	N/A
HP Pavilion zd8000	Pentium 4 (3.4 GHz)	9.5	1:45	144	**208**	173	3,140	627	21.5	N/A	26	N/A
Sony VAIO VGN-A190	Pentium M 735 (1.7 GHz)	8.4	2:33	96	142	117	2,764	N/A	N/A	N/A	25.6	N/A
Toshiba Qosmio E15	Pentium M 735 (1.7 GHz)	7.8	2:12	122	152	136	1,317	494	4.9	4.9	11.6	**11.6**
Velocity Micro NoteMagix S90	Pentium 4 (3.4 GHz)	10.9	1:01	**211**	147	**176**	3,309	**1,382**	18.6	N/A	**33.3**	N/A
VoodooPC Envy m:380	Pentium M 755 (2.0 GHz)	7.3	2:09	104	139	120	3,339	372	22.1	N/A	27.8	N/A
MAINSTREAM NOTEBOOKS												
Compaq Presario R3000Z	Mobile Athlon 64 3400+ (2.2 GHz)	8.7	3:49	119	**180**	147	N/A	N/A	**16.1**	N/A	27	N/A
Dell Inspiron 8600	Pentium M 755 (2.0 GHz)	7.1	**4:21**	**139**	175	**156**	**2,667**	**1,015**	13.2	N/A	**22.7**	N/A
HP Pavilion dv1000	Pentium M 745 (1.8 GHz)	5.5	3:10	110	153	130	N/A	N/A	2.6	N/A	11.3	N/A
IBM ThinkPad R51	Pentium M 725 (1.6 GHz)	6.5	2:56	83	124	101	629	N/A	7	N/A	11.4	N/A
Sony VAIO PCG-K27	Mobile Pentium 4 (3.06 GHz)	8	2:53	92	142	115	N/A	N/A	2.4	N/A	12	N/A
WinBook W362	Pentium M 755 (2.0)	6.3	3:14	114	162	136	N/A	N/A	N/A	N/A	20.9	N/A
VALUE NOTEBOOKS												
Compaq Presario V2000	Celeron M 340 (1.5 GHz)	5.4	**3:26**	85	115	99	N/A	N/A	N/A	N/A	N/A	N/A
eMachines M5405	Mobile Sempron 2800+ (1.6 GHz)	6.6	2:38	97	**131**	**113**	N/A	N/A	N/A	N/A	N/A	N/A
Gateway M520CS Plus	Celeron D (2.53 GHz)	7.5	2:04	**99**	124	111	N/A	N/A	N/A	N/A	N/A	N/A
HP Pavilion ze4900	Celeron M 340 (1.5 GHz)	6.5	3:13	79	108	92	N/A	N/A	N/A	N/A	N/A	N/A
Toshiba Satellite A65	Mobile Celeron (2.8 GHz)	7	2:01	53	73	62	N/A	N/A	N/A	N/A	N/A	N/A
ULTRAPORTABLE NOTEBOOKS												
Dell Inspiron 700m	Pentium M 745 (1.8 GHz)	4	2:01	**112**	**153**	**131**	N/A	N/A	N/A	N/A	N/A	N/A
Fujitsu LifeBook P7010D	Pentium M ULV (1.1 GHz)	3.3	3:41	N/A	88	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IBM ThinkPad X40	Pentium M (1.3 GHz)	3.2	**5:56**	84	105	94	N/A	N/A	N/A	N/A	N/A	N/A
JVC MP-XV841 Mini Note PC	Pentium M ULV (1.0 GHz)	3.2	4:39	67	80	73	N/A	N/A	N/A	N/A	N/A	N/A

RED denotes Editors' Choice. N/A—Not applicable: The notebook could not complete the test.
We could not test the Apple PowerBook G4 (15-inch) or the Apple iBook (12-inch) because our benchmark tests are not compatible with Mac OS X.

continued from page 125

73). It also placed second on SYSmark ICC against the eMachines system. The Celeron D is built around a 90-nm process (a different core from that of the Mobile Intel Celeron) and has a larger L2 cache (256MB versus 128MB).

DELL OUTPERFORMS IN ULTRAPORTABLES

In the ultraportable category, the Dell Inspiron 700m had the fastest processor (Pentium M 735, 1.8 GHz). It outperformed the competition on both SYSmark OP and ICC . But since the Dell system's 32-Wh battery is the smallest in the group, it scored poorly on BatteryMark (2:01) compared with the IBM ThinkPad X40, whose 62-Wh battery clocked nearly 6 hours.

The Fujitsu LifeBook P7010D was the only unit to have the Atheros 802.11a/g wireless module with the Super G enhanced "g" mode. When the notebook was paired with a D-Link 802.11a/g router with Super G mode, the system achieved a phenomenal throughput of 57.1 Mbps at 1 foot and 60 feet (not shown), but this rate can be achieved only if you have an access point enabled with a Super G mode. When we tested in standard 802.11g mode, the LifeBook's test scores were still tops: 25.3 Mbps at both 1 and 60 feet.

For a more in-depth look at our testing procedure, as well as a detailed discussion of our move to the SYSmark benchmark testing suite, see the sidebar "How We Tested" in the Desktops section of this story.—*Analysis by Cisco Cheng*

MAINSTREAM NOTEBOOKS

Apple PowerBook G4 (15-inch)

1.5-GHz PowerPC G4, 512MB DDR SDRAM, 80GB hard drive, 64MB ATI Mobility Radeon 9700, 15.2-inch LCD, 802.11g, 5.7 pounds, DVD-R/CD-RW SuperDrive, two USB, one FireWire 400, and one FireWire 800, Mac OS X 10.3.5, $2,499 direct. Apple Computer Inc., www.apple.com. ●●●◐○

Apple designs very sexy machines, and the Apple PowerBook G4 is a fine example, though you'll spend a pretty penny for such design.

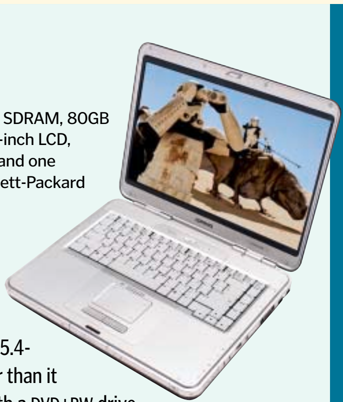
Though crisp, the G4's 15.2-inch TFT widescreen display lacks the luster of some comparable displays. As a self-proclaimed multimedia pioneer, Apple needs to think about adding extra-bright screens into its lineup. The G4 is the only system here to have both FireWire 400 and 800 ports. It also includes a DVD-R/CD-RW SuperDrive and an AirPort Extreme 802.11g.

The G4 scored the highest points in our mainstream category for video and gaming on our multimedia scripts. But the HP Pavilion dv1000 edged it out on our DVD rundown tests and on our Photoshop 7.0 Lighting Effects test, turning in a time of 12 seconds versus the G4's 14 seconds.

Apple fans will spend what it takes to get a PowerBook, but if you're deciding between a PC and a Mac and you're tight on cash, save $800 and go with the multimedia-centric HP dv1000.—*CC*

- ➤ **MULTIMEDIA: Music:** 80 **Photos:** 78 **Video:** 40 **Gaming:** 33
- ➤ **PERFORMANCE: SYSmark Office Productivity:** N/A **SYSmark Internet Content Creation:** N/A **DVD rundown:** 2:10
- ➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7 for 90 days.

Compaq Presario R3000Z



2.2-GHz Mobile Athlon 64 3400+, 512MB DDR SDRAM, 80GB hard drive, 64MB nVidia GeForce 440 Go, 15.4-inch LCD, 802.11g, 8.7 pounds, DVD+RW, three USB 2.0 and one FireWire, Windows XP Pro, $1,854 direct. Hewlett-Packard Development Co., www.hp.com. ●●●●○

The Compaq Presario R3000Z isn't the sleekest laptop, but its impressive performance (especially on our gaming tests) and many connectivity options earn it an honorable mention. Its impressively bright 15.4-inch screen might make you think it's lighter than it really is (8.7 pounds). The R3000Z comes with a DVD+RW drive instead of a dual-format DVD drive, though it does include a 6-in-1 card reader and three USB ports.

Its performance was also excellent, just a bit behind the top-performing Dell Inspiron 8600 on most of our tests.The R3000Z makes for a good gaming machine, as it got the top scores on our Doom 3 and Halo gaming tests. It was also at the top of the heap, alongside the HP dv1000, on our multimedia tests for music and photo.

The R3000Z packs a powerful punch and is the best mainstream gaming system here. There are better multimedia notebooks, but for gaming, the R3000z is the one.—*CC*

- ➤ **MULTIMEDIA: Music:** 71 **Photos:** 76 **Video:** 40 **Gaming:** 48
- ➤ **PERFORMANCE: SYSmark Office Productivity:** 119 **SYSmark Internet Content Creation:** 180 **BatteryMark:** 3:49
- ➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.

Dell Inspiron 8600

2.0-GHz Pentium M 755, 512MB DDR SDRAM, 60GB hard drive, 128MB ATI Mobility Radeon 9600, 15.4-inch LCD, 802.11g, 7.1 pounds, DVD±RW, two USB 2.0 and one FireWire, Windows XP Home, $1,749 direct (with Dell E-Value code D81117z). Dell Inc., www.dell.com. ●●●◐○

If you're looking for a powerhouse notebook, the Dell Inspiron 8600 offers amazing performance. But it doesn't have as large a hard drive or as many USB ports as its competitiors, hurting its overall rating.

The design is different from Dell's latest Inspiron models, like the high-end Inspiron 9200 and ultraportable Inspiron 700m. The 15.4-inch widescreen display is large enough, but not as bright as that of the HP Pavilion dv1000. And the 8600's 60GB hard drive is the smallest of the mainstream notebooks in our roundup. The other notebooks here all have 80GB.

The 8600 also doesn't include enough connectivity options—only two USB ports and no memory card reader, though there is FireWire. The best news: Dell has finally moved to a DVD±RW drive.

The 8600 performed exceptionally well on our tests, turning in the best scores on SYSmark Office Productivity and BatteryMark. Thanks to the 128MB ATI Radeon 9600 graphics card, this system also did well on 3DMark03.

All in all, the Dell 8600 is a powerful system. But for greater gaming power and better connectivity, check out the Compaq Presario R3000Z.—*CC*

- ➤ **MULTIMEDIA: Music:** 57 **Photos:** 64 **Video:** 40 **Gaming:** 47
- ➤ **PERFORMANCE: SYSmark Office Productivity:** 139 **SYSmark Internet Content Creation:** 175 **BatteryMark:** 4:21
- ➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.

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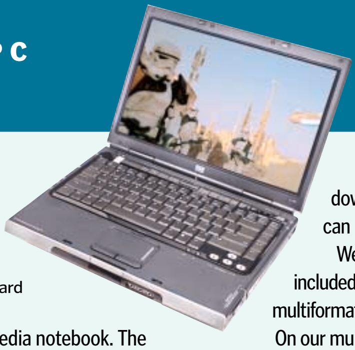


HP Pavilion dv1000

1.8-GHz Pentium M 745, 512MB DDR SDRAM, 80GB hard drive, 64MB Intel 82855 GME, 14.1-inch LCD, 802.11g, 5.5 pounds, DVD/CD-RW, three USB 2.0 and one FireWire, Windows XP Home, $1,699 direct. Hewlett-Packard Development Co., www.hp.com. ●●●●○

Stop! Look no further if you want a lightweight multimedia notebook. The 5.5-pound HP Pavilion dv1000 plays DVD movies flawlessly on the 14.1-inch BrightView widescreen display—and doesn't even need to boot up to do so. It's a clear Editors' Choice winner.

The compact profile is striking in design. You'll immediately notice the big, blue LED buttons that are marked as DVD and music QuickPlay buttons. When shut down, the dv1000 is the only mainstream system in our roundup that can instantly launch your DVD player or HP's MP3 player utility.

We were a little disappointed to see only a DVD/CD-RW combo drive included, though. For a true multimedia experience, you should bump up to the multiformat DVD-burning drive ($99).

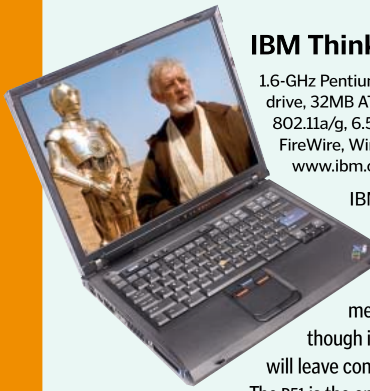
On our multimedia tests, the dv1000 tied with the Compaq R3000Z for first in music and finished just behind the Compaq in photos. Though its performance in other areas was average, the dv1000 can run everyday applications just fine.

If pure performance is a priority, consider the Compaq R3000Z or the Dell Inspiron 8600. But for the sleekest, coolest multimedia experience, it's the dv1000, bar none.—*CC*

➤ **MULTIMEDIA: Music:** 71 **Photos:** 74 **Video:** 41 **Gaming:** 28

➤ **PERFORMANCE: SYSmark Office Productivity:** 110 **SYSmark Internet Content Creation:** 153 **BatteryMark:** 3:10

➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.



IBM ThinkPad R51

1.6-GHz Pentium M 725, 512MB DDR SDRAM, 80GB hard drive, 32MB ATI Mobility Radeon 9000, 15-inch LCD, 802.11a/g, 6.5 pounds, DVD-RW, two USB ports and one FireWire, Windows XP Pro, $1,999 list. IBM Corp., www.ibm.com. ●●◐○○

IBM is known for making reliable business-class notebooks with outstanding construction and keyboards. (The company tends to shy away from multimedia features.) The R51 fits this description, though its lackluster performance and battery life will leave consumers wanting more.

The R51 is the only mainstream notebook here to have dual pointing devices; we have always been fans of IBM's patented TrackPoint and full-size keyboard. Also unique in our roundup is the R51's inclusion of a dual 802.11a/g wireless solution, so you're covered in any wireless situation. Unfortunately, there are only two USB ports for connectivity, though there is a FireWire port.

On our SYSmark tests, IBM scored dead last among mainstream notebooks. Its battery life was equally unimpressive, clocking in at 2:56.

ThinkPad notebooks traditionally are top-rated machines with a proven record of reliability. But the R51 is subpar. For a better business system, opt for one of IBM's T series notebooks, and for better multimedia systems, go with the HP Pavilion dv1000.—*CC*

➤ **MULTIMEDIA: Music:** 51 **Photos:** 49 **Video:** 31 **Gaming:** 31

➤ **PERFORMANCE: SYSmark Office Productivity:** 83 **SYSmark Internet Content Creation:** 124 **BatteryMark:** 2:56

➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.

Sony VAIO PCG-K27

3.06-GHz Mobile Pentium 4, 512MB DDR SDRAM, 80GB hard drive, 64MB ATI Mobility Radeon 345M, 15.4-inch LCD, 802.11g, 8.0 pounds, DVD±RW, three USB 2.0 and one FireWire, Windows XP Home, $1,800 street. Sony Electronics Inc., www.sonystyle.com. ●●●○○

Lacking Sony's signature craftsmanship, the Sony VAIO PCG-K27 doesn't exactly turn heads. The bulky frame packs in a few good features, but its performance proved little match for its competition.

Our initial reaction upon seeing the PCG-K27 was that this couldn't be a Sony notebook. The 8.0-pound system is neither sexy, slim, nor sleek. But it does have a bright 15.4-inch widescreen display with XBrite technology, as well as a DVD±RW drive and an 80GB hard drive.

Performance was not the PCG-K27's strong suit. Its SYSmark scores were far below those of the two performance leaders here, the HP Compaq Presario R3000Z and the Dell Inspiron 8600. The PCG-K27 did shine in wireless performance, however, leading all others in this group on 802.11g throughput.

Overall, the PCG-K27 is unimpressive. If you're looking for a portable multimedia notebook, you're better off with the HP Pavilion dv1000. If you're looking for a system that packs more of a wallop, the Compaq Presario R3000Z and Dell Inspiron 8600 are the stallions of the group.—*CC*

➤ **MULTIMEDIA: Music:** 70 **Photos:** 76 **Video:** 40 **Gaming:** 53

➤ **PERFORMANCE: SYSmark Office Productivity:** 92 **SYSmark Internet Content Creation:** 142 **BatteryMark:** 2:53

➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.

WinBook W362

2.0-GHz Pentium M 755, 512MB DDR SDRAM, 80GB hard drive, 64MB ATI Mobility Radeon 9600, 15.4-inch LCD, 802.11g, 6.3 pounds, DVD+RW, three USB 2.0 and one FireWire, Windows XP Pro, $1,799 list. WinBook Computer Corp., www.winbook.com. ●●◐○○

The WinBook W362 may look like the Apple PowerBook G4 from a distance; it even has the single, enlarged mouse button. But this is no Apple. Although it has decent features, overall the system is fair at best.

The W362's weight (6.3 pounds) is light compared with the other mainstream systems here, coming in after the PowerBook and the HP Pavilion dv1000. The 15.4-inch widescreen display was a bit dull, not as bright as others.

The W362 comes with a speedy 5,400-rpm, 80GB hard drive, a DVD+RW drive, and a 3-in-1 memory card reader. Despite the fast Pentium M processor and hard drive, the W362's SYSmark scores were in the middle of the pack.

The ATI Radeon 9600 graphics chipset had a lot of trouble on our 3DMark03 and Doom 3 tests, being unable to complete either. And its 802.11g wireless scores were the poorest across the board. Battery life was fine, at 3:14.

Overall, the W362 has average features and average performance, and simply doesn't cut it among the competition. Look to other notebooks here to get more for your money.—*CC*

➤ **MULTIMEDIA: Music:** 60 **Photos:** 71 **Video:** 35 **Gaming:** 35

➤ **PERFORMANCE: SYSmark Office Productivity:** 114 **SYSmark Internet Content Creation:** 162 **BatteryMark:** 3:14

➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.

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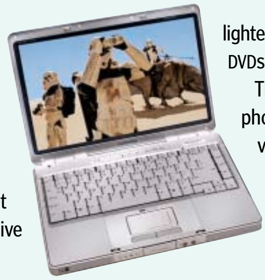
VALUE NOTEBOOKS

Compaq Presario V2000

1.5-GHz Celeron M, 512MB DDR RAM, 40GB hard drive, 64MB Intel 82855 GME, 14-inch LCD, 802.11g, 5.4 pounds, DVD/CD-RW, three USB 2.0 and one FireWire, Windows XP Home, $999 direct. Hewlett-Packard Development Co., www.hp.com. ●●●●○



The Compaq Presario V2000 packs a lot into its slender 5.4-pound frame, including a widescreen display, a good set of speakers, and well-placed connectivity ports. If inexpensive mobility is what you're after, the V2000 is your answer. It gets our honorable mention in this category.

At a system weight of 5.4 pounds, the V2000 is the lightest value notebook here. Its 14-inch widescreen display is ideal for viewing DVDs and the JBL Pro speakers sound better than most.

The USB, FireWire, and LAN ports are located on the sides, and the headphone and microphone jacks are on the front bezel for convenience. The volume control keys and mute button reside above the keyboard, along with a wireless on/off key.

The V2000 turned in average overall performance results, but it beat all the other value systems on our battery life tests, lasting 3 hours 36 minutes.

If you're looking for a sexy, lightweight notebook with solid performance for under $1,000, look no further. The Compaq Presario V2000 is the machine for you. *—John Delaney*

➤ **MULTIMEDIA: Music:** 58 **Photos:** 41 **Video:** 25 **Gaming:** 14

➤ **PERFORMANCE: SYSmark Office Productivity:** 85 **SYSmark Internet Content Creation:** 115 **BatteryMark:** 3:26

➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available24/7.

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eMachines M5405

1.6-GHz Sempron 2800+, 512MB DRR SDRAM, 60GB hard drive, 64MB SiS 760, 15.4-inch LCD, 802.11g, 6.6 pounds, DVD/CD-RW combo drive, three USB 2.0, Windows XP Home, $1,099 direct. eMachines Inc., www.emachines.com. ●●●●◐

Every so often a product comes along that raises the bar for the competition. In this case it's the eMachines M5405. This 6.6-pound beauty is sleek and powerful, a rare combination in a value notebook, and it's our Editors' Choice winner.

The M5405 incorporates the new Mobile AMD Sempron 2800+ processor, which helped it earn top scores in performance. It's also the only value notebook here to offer a 15.4-inch widescreen display—and it's an impressive one. The 1,280-by-800 resolution screen has an excellent viewing angle and rich colors. The three USB ports are all on the rear; we wish at least one were on the side.

Though its SYSmark scores and wireless range were impressive, the M5405's battery life was average: 2:38. The Compaq Presario V2000's battery lasted the longest at 3:26, though it does have a smaller screen.

Perhaps our only real complaint is that eMachines doesn't offer toll-free tech support, but the M5405 delivers. If you're looking for a high-performance widescreen beauty that doesn't cost a lot, don't hesitate to pick up this system.*—JD*

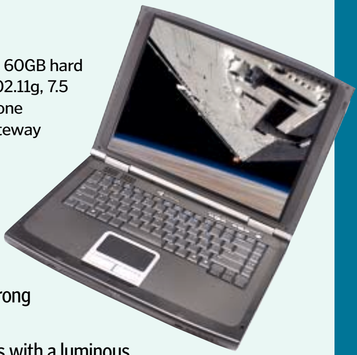
➤ **MULTIMEDIA: Music:** 43 **Photos:** 39 **Video:** 17 **Gaming:** 22

➤ **PERFORMANCE: SYSmark Office Productivity:** 97 **SYSmark Internet Content Creation:** 131 **BatteryMark:** 2:38

➤ **SUPPORT:** The warranty is one year for parts and labor. Technical support is available from 9:00a–1:00a, but the phone number is not toll-free.

Gateway M520CS Plus

2.53-GHz Celeron D 350, 512MB DDR SDRAM, 60GB hard drive, 64MB Intel 82855 GME, 15-inch LCD, 802.11g, 7.5 pounds, DVD/CD-RW, four USB 2.0 ports and one FireWire, Windows XP Home, $999 direct. Gateway Inc., www.gateway.com. ●●●●○



The Gateway M520CS Plus has excellent multimedia connectivity options, and it's a top performer, thanks to its desktop Intel Celeron D 350 processor. If you don't mind its 7.5-pound weight, the M520CS Plus is a strong multimedia value system.

Jam-packed with features, the unit comes with a luminous 15-inch display, which is bright but not as sharp as the widescreen display on the eMachines system. It has four USB ports and a FireWire port, and it's the only system in this roundup to offer a memory card reader (for CompactFlash and Secure Digital). One small gripe: The headphone and microphone jacks are inconveniently located on the rear of the system.

The M520CS turned in the highest score on our SYSmark Office Productivity benchmark tests and slightly trailed the leader, the eMachines M5405, on our SYSmark ICC tests. Battery life using a desktop Celeron was low at 2:04.

The Gateway M520CS Plus offers a lot of machine for the money, in more ways than one. With a full array of multimedia components and impressive performance, it's a solid choice for value seekers.*—JD*

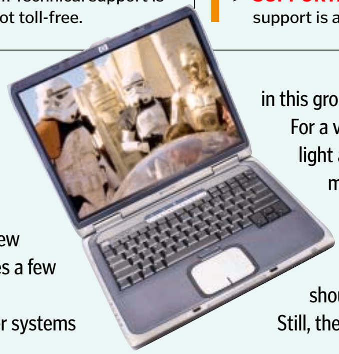
➤ **MULTIMEDIA: Music:** 54 **Photos:** 47 **Video:** 17 **Gaming:** 15

➤ **PERFORMANCE: SYSmark Office Productivity:** 99 **SYSmark Internet Content Creation:** 124 **BatteryMark:** 2:04

➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.

HP Pavilion ze4900

1.5-GHz Celeron M, 256MB DDR SDRAM, 40GB hard drive, 64MB Intel 82855 GME, 15-inch LCD, 802.11g, 6.5 pounds, DVD/CD-RW, two USB 2.0, Windows XP Home, $974 direct. Hewlett-Packard Development Co., www.hp.com. ●●●○○



The HP Pavilion ze4900 is a capable notebook that has a few multimedia extras, like excellent speakers. But it also leaves a few essentials out, like ample connectivity options.

The 6.5-pound notebook is decidely less sexy than other systems here. Two USB ports are just not enough. You'll need at least three, considering the many USB-compatible devices now available. Not as surprising is its lack of a FireWire port or a memory card reader; in this group, only the Gateway M520CS Plus has such features.

For a value notebook, its portability is better than most. While not as light as the 5.4-pound Compaq Presario V2000, the ze4900 is a manageable 6.5 pounds, and its battery lasted 3:13, bested only by the V2000.

The ze4900's performance on our SYSmark tests was subpar, though its wireless range was decent. But the unit should work fine in most everyday computing situations.

Still, the HP Pavilion ze4900 doesn't quite make the grade in the value category, where getting the most for your money is the bottom line. The Compaq, eMachines, and Gateway systems all offer more for about the same price.*—JD*

➤ **MULTIMEDIA: Music:** 58 **Photos:** 45 **Video:** 15 **Gaming:** 13

➤ **PERFORMANCE: SYSmark Office Productivity:** 79 **SYSmark Internet Content Creation:** 108 **BatteryMark:** 3:13

➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.

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Toshiba Satellite A65

2.8-GHz Mobile Celeron, 256MB DDR RAM, 60GB hard drive, 64MB ATI Mobility Radeon 7000, 15-inch LCD, 802.11g, 7.0 pounds, DVD/CD-RW, three USB 2.0, Windows XP Home, $999 direct. Toshiba America Inc., www.toshiba.com. ●●○○○

There's nothing fancy about the Toshiba Satellite A65, and its performance doesn't come close to that of the others here. It shines only on wireless range tests, delivering the strongest 802.11g signal at every distance. But that alone isn't enough to earn our recommendation.

When compared with the other value systems, the A65's design looks outdated, bulky, and unstylish. It is also the only value system here without multimedia or quick-launch buttons on the keyboard.

The A65 has two things going for it: A pretty good 15-inch screen, which delivers sharp, vibrant colors, and an S-Video port. But music lovers will have to invest in a pair of decent desktop speakers, as we can hardly stand listening to the A65's built-in set.

The system is powered by a 2.8-GHz Mobile Celeron processor and comes with only 256MB of memory, which may account for its last-place finish on our SYSmark tests. It also turned in a woeful 2:01 on our BatteryMark test.

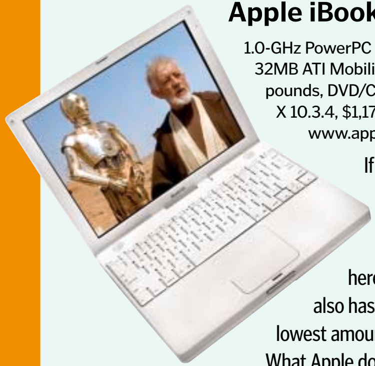
Simply put, all other notebooks in this value roundup deliver more than the Toshiba Satellite A65.—*JD*

➤ **MULTIMEDIA: Music:** 36 **Photos:** 31 **Video:** 16 **Gaming:** 16

➤ **PERFORMANCE: SYSmark Office Productivity:** 53 **SYSmark Internet Content Creation:** 73 **BatteryMark:** 2:01

➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.

ULTRAPORTABLE NOTEBOOKS



Apple iBook G4 (12-inch)

1.0-GHz PowerPC G4, 256MB DDR SDRAM, 30GB hard drive, 32MB ATI Mobility Radeon 9200, 12-inch LCD, 802.11g, 4.9 pounds, DVD/CD-RW, two USB 2.0 and one FireWire, Mac OS X 10.3.4, $1,178 direct. Apple Computer Inc., www.apple.com. ●●●◐○

If aesthetics are important to you, Apple's got you covered, once again. At 4.9 pounds, this is the smallest Apple out there. Still, when compared with the other ultraportables here, the iBook is the heaviest (4.9 pounds). It also has the smallest internal hard drive (30GB) and lowest amount of graphics memory (32MB).

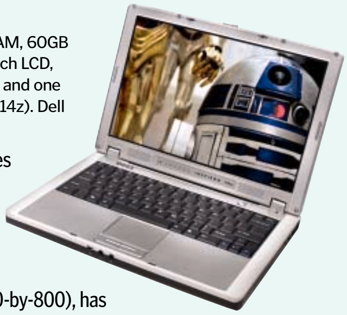
What Apple does give you, though, is iPhoto for digital pictures, iMovie for digital videos, and iTunes for digital music. The LCD delivers a sharp image and resists glare well. The iBook unit lasted 3:04 on our DVD rundown test when using the built-in DVD playback power scheme. (The JVC ultraportable fared best at 3:10.) The built-in AirPort Extreme 802.11g wireless network adapter easily connects to Wi-Fi networks nearby.

Although its weight and small hard drive keep it from being an ideal ultraportable, the iBook G4 is a good choice for Apple users who care about style and affordability. (At press time, the Apple's price was lowered to $999 for models with a 1.3 GHz processor and standard AirPort Express 802.11g.)—*Omar Cintron*

➤ **MULTIMEDIA: Music:** 58 **Photos:** 45 **Video:** 15 **Gaming:** 10

➤ **PERFORMANCE: SYSmark Office Productivity:** N/A **SYSmark Internet Content Creation:** N/A **DVD rundown:** 3:04

➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7 for 90 days.



Dell Inspiron 700m

1.8-GHz Pentium M 745, 512MB DDR SDRAM, 60GB hard drive, 64MB Intel 82855 GME, 12.1-inch LCD, 802.11g, 4 pounds, DVD+RW, two USB 2.0 and one FireWire, $1,499 direct (E-Value code D81114z). Dell Inc., www.dell.com. ●●●●○

The elegant Dell Inspiron 700m combines strong performance, style, and value that should please just about anyone. Just be sure to pack an extra battery when you're on the road.

The 12.1-inch widescreen LCD (1,280-by-800), has a high-contrast that makes a difference when watching DVDs or working in bright light. We also like the built-in 8X DVD+RW drive, even though it adds weight. Other features include a memory card slot and the standard ports: two USB 2.0, one FireWire, one VGA, and one S-Video. The keyboard's 17.5-mm key pitch (92 percent of full size) is small yet manageable.

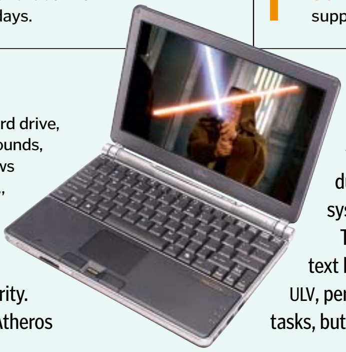
With the strongest processor and fastest hard drive here, the 700m streaked past the others in performance. Its weak spot is its poor battery life (2:01) with the four-cell battery. For travel, opt for the eight-cell battery ($110), which will double battery life.

Overall, the Dell Inspiron 700m offers a good combination of features in a small yet powerful package. And it's the least expensive Windows system in our ultraportables group.—*Joseph A. Guilbeau IV*

➤ **MULTIMEDIA: Music:** 64 **Photos:** 66 **Video:** 36 **Gaming:** 29

➤ **PERFORMANCE: SYSmark Office Productivity:** 112 **SYSmark Internet Content Creation:** 153 **BatteryMark:** 2:01

➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.



Fujitsu LifeBook P7010D

1.1-GHz Pentium M ULV, 512MB DDR SDRAM, 60GB hard drive, 64MB Intel 82855 GME, 10.6-inch LCD, 802.11g, 3.3 pounds, DVD/CD-RW, two USB ports and one FireWire, Windows XP Pro, $2,149 direct. Fujitsu Computer Systems Corp., www.fujitsu.com. ●●●○○

At 3.3 pounds, the Fujitsu has some promising features, such as a 3-in-1 memory card reader and a biometric fingerprint scanner for added security. It's also the first notebook we've seen to offer the Atheros proprietary Super G wireless receiver for enhanced 802.11g performance. But its poor performance on the SYSmark tests prevents us from giving it a high recommendation.

Super G is an enhanced mode that produces faster wireless throughput than standard 802.11g mode—but only if it's connecting to a Super G router. Wireless testing in plain 802.11g mode still produced top results, however, enabling the unit to beat out the other systems here.

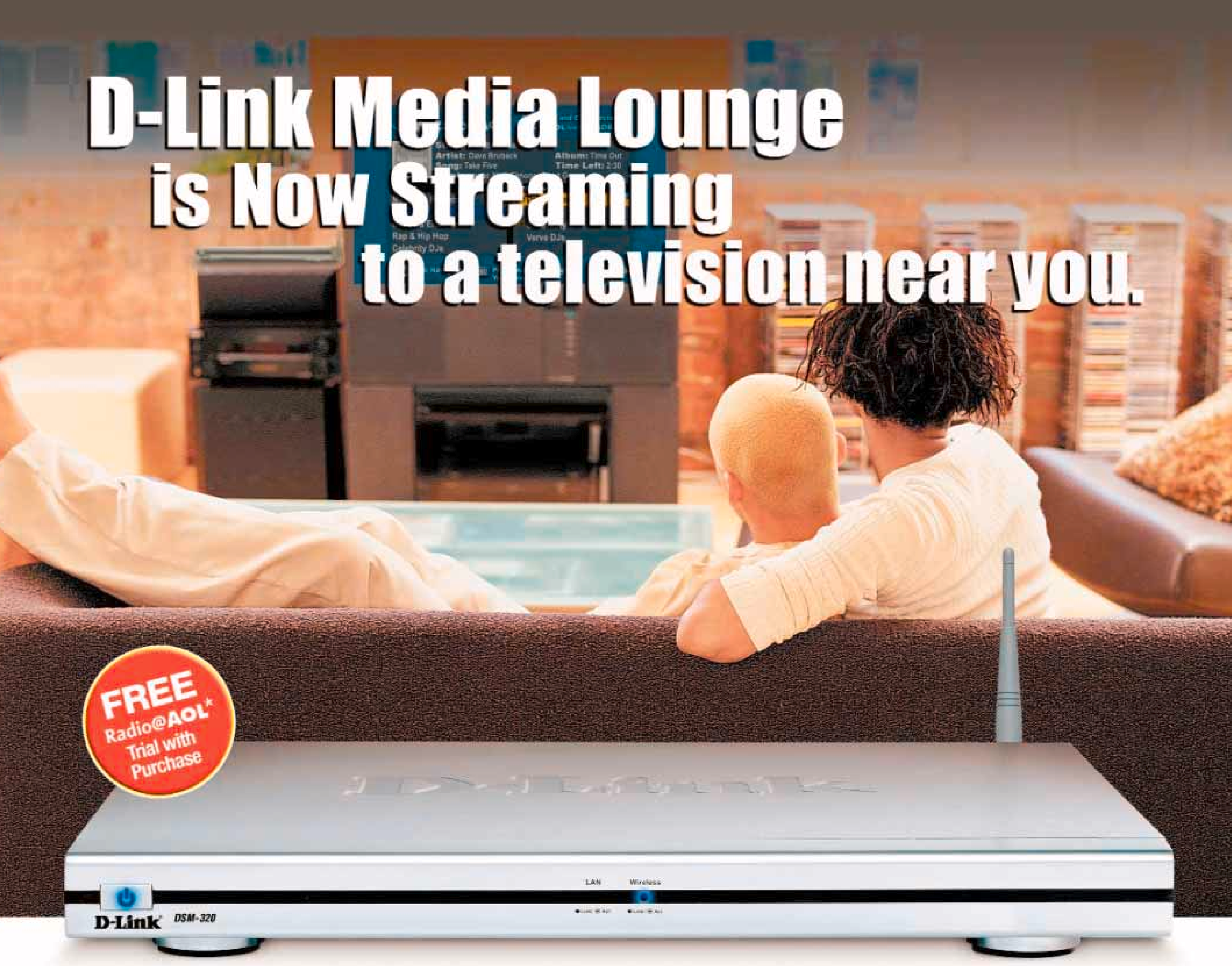
The 10.6-inch (1,280-by-768) Crystal View widescreen LCD is sharp, but text looks tiny because of the high resolution. With the 1.1-GHz Pentium M ULV, performance was at a group low. This system can perform day-to-day tasks, but with a noticeable lag. Battery life was in the middle of the pack at 3:41.

If you're after light weight and you'll mainly use your notebook for watching DVDs, the Fujitsu is it. But if you want performance as well as light weight, look to the IBM ThinkPad X40.—*JAG*

➤ **MULTIMEDIA: Music:** 58 **Photos:** 56 **Video:** 21 **Gaming:** 9

➤ **PERFORMANCE: SYSmark Office Productivity:** N/A **SYSmark Internet Content Creation:** 88 **BatteryMark:** 3:41

➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.



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IBM ThinkPad X40

1.3-GHz Pentium M LV, 512MB DDR SDRAM, 40GB hard drive, 64MB Intel 82855 GME, 12.1-inch LCD, 802.11g, 3.2 pounds, DVD/CD-RW, two USB 2.0 ports, Windows XP Home, $2,274 list. IBM Corp., www.ibm.com. ●●●●●

A tried-and-true favorite among business-class ultraportables, the IBM ThinkPad X40 is hard to compete with. Once again, it's our Editors' Choice winner in this space.

This IBM unit incorporates a 12.1-inch screen and a full-size keyboard. By contrast, the JVC and Fujitsu systems have smaller screens and keyboards, yet weigh almost the same as the X40.

The X40 performed well on the SYSmark Office Productivity and Internet Content Creation benchmark tests, with scores of 84 and 105, which is more than enough for business productivity on the road. And its battery life of 5:56 far exceeded all the others here.

The X40's software bundle is aimed at corporate travelers. It includes IBM Access Connections, a proprietary tool that personalizes computer settings such as network connections, e-mail, and programs. The Access IBM button on the keyboard provides quick access to system recovery.

The ThinkPad X40 is a longtime favorite among traveling users. Portability, power, and smart features have kept it a true winner.—*OC*

- ➤ **MULTIMEDIA: Music:** 38 **Photos:** 28 **Video:** 6 **Gaming:** 6
- ➤ **PERFORMANCE: SYSmark Office Productivity:** 84 **SYSmark Internet Content Creation:** 105 **BatteryMark:** 5:56
- ➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.

JVC MP-XV841 Mini Note PC

1.0-GHz-Pentium M ULV, 256MB DDR RAM, 40GB hard drive, 64MB Intel 82855 GME, 8.9-inch LCD, 802.11g, 3.2 pounds, DVD/CD-RW, two USB and one FireWire, Windows XP Pro, $2,399 list. JVC, www.jvc.com. ●●●○○

JVC, best known for its home-entertainment products, enters the U.S. ultraportable space with the JVC MP-XV841 Mini Note PC. It's compact, lightweight, attractive, and well made, though its very small keyboard and screen and poor performance make it unsuitable for serious traveling users.

Despite its small size (8.9 inches), the screen delivers a beautiful picture. Right below it is a button that activates Digital Dolby surround sound, which produces terrific audio for such a compact unit. But for business, the tight 16-mm key pitch isn't conducive to heavy typing, though the pointing stick is easy to use.

Every other notebook outperformed the Mini Note PC on our SYSmark tests, perhaps because of its low memory. It's the only Windows ultraportable in this group with less than 512MB of RAM. Still, it can handle everyday computing and DVD playback adequately.

All things considered, the JVC MP-XV841 Mini Note is a fun little ultraportable. In the niche of entertainment-oriented ultraportables, where DVD watching is key, the Mini Note is the one to watch.—*Alphonse Ragusa*

- ➤ **MULTIMEDIA: Music:** 46 **Photos:** 34 **Video:** 20 **Gaming:** 12
- ➤ **PERFORMANCE: SYSmark Office Productivity:** 67 **SYSmark Internet Content Creation:** 80 **BatteryMark:** 4:39
- ➤ **SUPPORT:** The warranty is one year for parts and labor. Toll-free technical support is available 24/7.

Portable Peripherals Ready to Travel

If you experience separation anxiety from your peripherals when you travel, but don't want your laptop bag to feel like a cinderblock, try some of these portable solutions.

WIRELESS MOUSE | For those of us who won't settle for a touch pad even when taking a trip, the BenQ M310 Wireless Optical Mouse is highly portable. When you're not using the RF USB key, it folds into the mouse and turns off. $39.99 list. BenQ America Corp., www.benq.com. ●●●●◐

PORTABLE SPEAKERS | With a bass booster and a compact design, the Sonic Impact SI-5 Generation 2 speakers are a good option for those on a tight budget. The two speakers snap together for travel and come apart for listening. And you get 20 hours of play time with four triple-A batteries.

$59 list. Sonic Impact Technologies LLC, www.si-5.com. ●●●◐○

PORTABLE HARD DRIVE | The Transcend 1.8" Portable Hard Drive is a nicely priced, USB-powered 40GB hard drive that can easily fit into your luggage. Our tests showed it to be a little slow, but its included software can do a complete backup and restore of your notebook's hard drive.

$293 list. Transcend Information Inc., www.transcendusa.com. ●●●●◐

APC TravelPower Backpack

PORTABLE LIGHT | Whether you're computing in a dimly lit room or on an overnight flight, the Kensington ClipNGlow Task Light and Copyholder helps reduce some of the eyestrain and stop you from squinting. One end has a lamp that clamps to your notebook's screen; the other acts as a document clip, suspending your papers in almost any position.

$20 street. Kensington Technology Group, www.kensington.com. ●●●●○

WIRELESS ROUTER | The 3Com Office Connect Wireless 54Mbps 11g Travel Router turns a hotel broadband connection into a wireless hot spot. About the size of a deck of cards, this 802.11g-based travel device can be tucked easily into any small carry-on case. Road warriors take note: This is the new "must have" for your travel bag.

$89.99 list. 3Com Corp., www.3com.com. ●●●●○

COMPUTER BAG | Can't decide whether to charge your gadgets before a long trip or pack them so you won't forget them? The APC TravelPower Backpack offers a solution. The 1.7-pound power brick inside lets you charge while you stow. The bag has comfy straps and plenty of pockets.

$120 street. American Power Conversion Corp., www.apc.com. ●●●●○

—Natalie Goel

JUMP TO NEXT PAGE >>

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with some existing drives and players; using DVD+R media provides maximum compatibility. Special media required, and third party software may also be required. **PURCHASE PLAN: Dell Preferred Account:** Offered by CIT Bank to qualified U.S. residents with approved credit. Taxes, fees and shipping charges are extra and vary. **Hard Drive:** For hard drives, GB means 1 billion bytes; actual capacity varies with preloaded material and operating environment and will be less. **Dell Printer Fax Capability:** Requires connection to computer with fax modem. **Trademarks/Copyright Notices:** Intel, Intel Inside, Intel Inside logo, IntelCentrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, Pentium and Pentium III Xeon and Intel XScale 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. ©2004 Dell Inc. All rights reserved.

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MEET THE SMITHS
MARY SMITH
JOHN SMITH
About Pinnacle
Ski
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Can the Pinnacle MediaCenter™ Put the FUN back in this Relationship?

The Smiths have a problem. They've got a PC and they use it for all of their work—the bills, the emails, the take home work. But all work and no play make the Smiths and their PC pretty dull. Isn't it about time they had a little fun with their PC?

Mary wants to be able to record her favorite reality shows so she doesn't have to worry about missing them while she puts the kids to bed.

John wants to watch Monday Night Football just once without interruption. He doesn't mind skipping the commercial breaks because he says they're adding a few too many "snack" pounds around his middle.

Mary wants to use the computer to keep her photos of the kids, the vacations and the birthday parties organized. She loves to kick back and watch a photo slideshow.

John has over 200 hours of digital music he'd like to be able to store in one place and access whenever he wants. He also likes to create his own playlists.

Mary likes to watch movies. She's a fanatic. Give her a few hours and she'll curl up with a good chick flick.

What do John and Mary agree on? They hate keyboards and wish there was one place to bring all their media dreams together.

Is it Hopeless? Are John and Mary doomed to a life of all PC work and no PC play?

For more information about the Pinnacle MediaCenter, **visit: www.pinnaclesys.com/mc**
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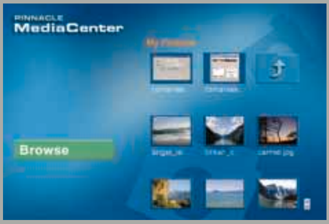
And a remote control let's John and Mary relax in front of the screen instead sitting in office posture. The MediaCenter provides one button access to everything.

Isn't it about time your PC started having a little fun?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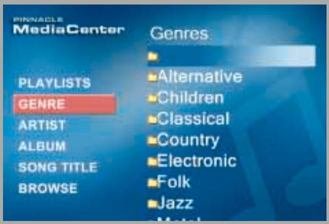
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Classical
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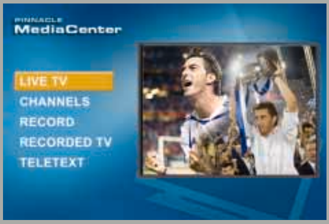
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[SMALL-BUSINESS]

SURVIVAL GUIDE

By John Clyman

Illustration by Christian Northeast

The software and services you need to tune up and turbocharge your business

Small businesses have plenty of things to worry about besides their computer systems. In an environment where every dollar of expense and every minute of productivity counts—and where dedicated IT staff are an impossible dream—taking time out to manage technology is a serious challenge. Still, that doesn't mean that mom-and-pop shops have to forgo software that can help their businesses run more smoothly and cost effectively than old-fashioned, paper-based

IN THIS STORY

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systems. Small-business owners and employees can find a plethora of applications to help them interact with customers better, manage finances and employees, maintain a compelling Web presence, and keep their systems running smoothly—all things that can have a positive impact on the bottom line. For essential tasks from managing your money to maintaining your Web site, this overview identifies tools that will help you spend less time tinkering with technology so you can get back to business.

Most small-business software is designed to be installed on individual PCs, but Web-based products are fast becoming a realistic alternative for some applications. If you have a high-speed Internet connection in your office or retail location, products like Intuit's QuickBooks Online or Salesforce.com's offerings mean users can work from any machine with a Web browser. There's no need to install or update software on individual machines beyond, perhaps, a browser-based ActiveX plug-in.

Web-based software that's billed in monthly installments can also reduce the up-front cost of purchase. But if you choose a Web-based solution, keep in mind that it may not be available when you're disconnected (though some have off-line clients), and make sure you have contingency plans for extracting your data should you later wish to change providers. In "Business IT: Rent or Buy?" (*http://go.pcmag.com/businessit*), we explore this topic in more depth.

In this story, we've examined both Web-based and traditional, packaged software, and organized them into a variety of key business functions that almost every small company needs to perform. Our sidebar, "More Small-Business Services," covers leading products in additional software categories that may be useful for some companies.

Of course, many businesses also have a variety of industry-specific applications to choose from. Whether you're an insurance agent or an optometrist, you'll find off-the-shelf vertical products that meet many of your needs in a single package. We haven't tried to list those possibilities in this overview. Nor have we covered software that typically comes preinstalled on systems, like the operating system and office productivity applications (e-mail, word processing, and spreadsheet), or conversely, the kind of heavily customized and expensive software projects that companies have to order through specialized system integrators and consultants.

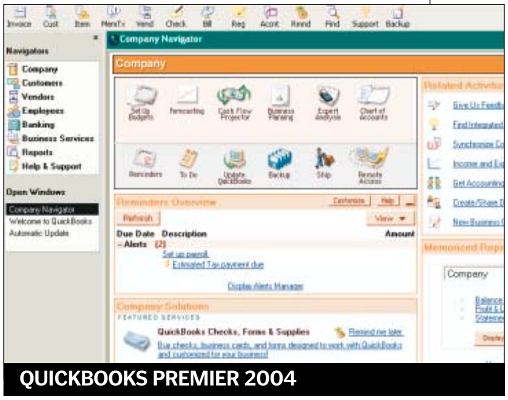
MORE ON THE WEB

For in-depth reviews of the products in this story, visit our Small-Business Supersite at www.pcmag.com/smallbusiness.

For our recent overview of business IT outsourcing services, visit http://go.pcmag.com/businessit.

MANAGE YOUR MONEY & EMPLOYEES

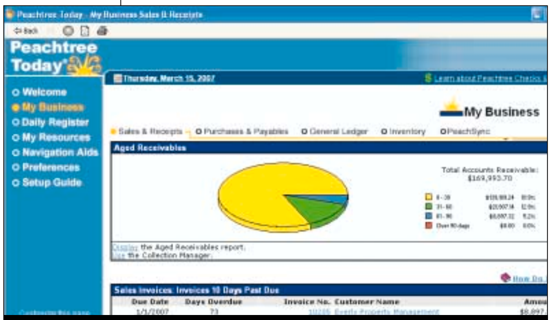
Accounting may not be the most glamorous aspect of running a business, but it certainly is a necessity: Every company needs to track accounts payable and receivable and manage payroll for its employees. Payroll is often outsourced to third-party providers, though. Choosing the right accounting package can make a potentially tedious chore more tolerable—and give you a better picture of your business's condition, which enables you to exchange financial data with your accountant, tax preparer, and bank more effectively.



QUICKBOOKS PREMIER 2004

Our favorite family of accounting products for small businesses comes from Intuit. Our current Editors' Choice, **QuickBooks Premier 2004** ($499.95 list), is an outstanding product with comprehensive features and impressive ease of use. QuickBooks excels not just at making accounting painless but also at helping educate business owners about how to manage their companies effectively. QuickBooks also provides time-tracking capabilities, so you can bill customers and easily compute wages for hourly employees. Smaller businesses that don't need extensive customization may find that **QuickBooks Pro 2004** ($299.95 list) or **QuickBooks Basic 2004** ($199.95 list) has everything they need.

QuickBooks Online Edition (starting at $19.95 a month for three users) is an additional option for companies that don't need to track inventory. Its Web-based interface is relatively rich and responsive, though we miss some of the conveniences of traditional QuickBooks software, such as quick sorting and reformatting when viewing reports. (Intuit Inc., *www.intuit.com*. Premier 2004 ●●●●●; Online Edition ●●●○○)



PEACHTREE ACCOUNTING 2005

Beyond the QuickBooks accounting options, Intuit also sells a variety of complementary financial tools for small businesses, like its **QuickBooks Point of Sale** (starting at $799.95).

Microsoft Money Small Business 2005 Edition ($89.95 list) is best suited for single-owner businesses where the proprietor manages personal and business finances within a single package. Money is a superb

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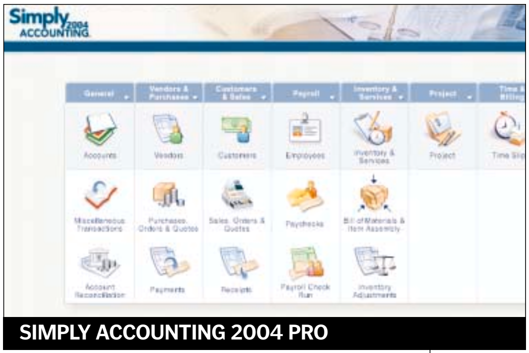

Simply 2004 ACCOUNTING
General
Vendors & Purchases
Customers & Sales
Payroll
Inventory & Services
Project
Time & Billing
Accounts
Vendors
Customers
Employees
Inventory & Services
Project
Time Slips
Miscellaneous Transactions
Purchases, Orders & Quotes
Sales, Orders & Quotes
Paychecks
Bill of Materials & Item Assembly
Account Reconciliation
Payments
Receipts
Payroll Check Run
Inventory Adjustments

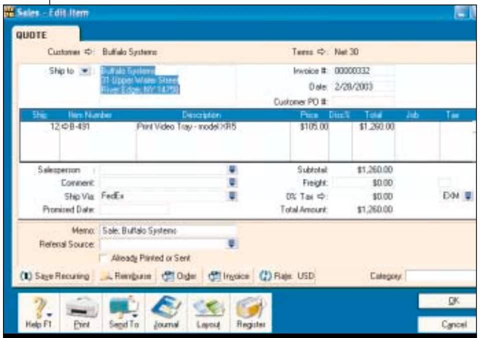
SIMPLY ACCOUNTING 2004 PRO

personal-finance package. Nevertheless, although we found its business-accounting features easy to use, the product's focus on personal-finance management may be a negative if you want to maintain a strict separation between home and company accounts. (Microsoft Corp., *www.microsoft.com.* ●●●◐○)

An appealing payroll package for small businesses is **PayCycle** (starting at $10 per month), which is an online-only service that lets you generate paychecks, pay federal and local taxes, and file the necessary forms—all with a friendly interface and free tech support. PayCycle integrates with QuickBooks and Money to simplify payroll tasks. (PayCycle Inc., *www.paycycle.com.* ●●●●●)

Several other sophisticated accounting packages are available. But their interfaces are aging, and they can't match the sleekness of QuickBooks and Money. Nevertheless, they may appeal to users with a double-entry accounting background. Best Software's Peachtree series, including the flagship **Peachtree Premium Accounting 2005** (multi-user version, $999.99 direct; single-user version, $499.99) offers excellent inventory handling, time tracking, and superb reporting options thanks to the included Crystal Reports 9.0 engine. (Best Software SB Inc., *www.peachtree.com.* ●●●●○) Small businesses with less-complex needs could also get by with **Peachtree Complete Accounting 2005** ($299.99 direct) or **Peachtree Accounting 2005** ($199.99 direct). **MYOB Plus** ($249 direct) has multicurrency support. (MYOB Limited, *www.myob.com.* ●●●●○) ACCPAC's **Simply Accounting 2004 PRO** ($99 direct) also supports multiple currencies. (ACCPAC International Inc., *www.simplyaccounting.com.* ●●●○○)

Although you'll probably track payroll data in your accounting software, managing additional information about employees and job applicants can be a nuisance too. For a more formal system, you might consider supplementing your accounting package with human-resources management products targeted at the needs of small businesses. **Soft-Q Human Resource Suite** ($631.65 direct) is a simple database application that lets you track employee information, including salary history, vacation and absences, training, and benefits. (Teilhard Technologies, *www.soft-q.com.* ●●●○○) **HR-Office 4.0** (starting at $995) offers similar features and more, such as job applicant management capabilities and self-service administration options—all wrapped up in an appealing interface. (Ascentis Corp., *www.ascentis.com.* ●●●●○)


Sales - Edit Item
QUOTE
Customer: Buffalo Systems
Terms: Net 30
Ship to
Invoice #: 00000332
Date: 2/28/2003
Customer PO #:
Ship
Item Number
Description
Price
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Tax
12
B-491
Print Video Tray - model XR5
$105.00
$1,260.00
Salesperson
Comment
Ship Via: FedEx
Promised Date
Subtotal: $1,260.00
Freight: $0.00
0% Tax: $0.00
Total Amount: $1,260.00
EXM
Memo: Sale; Buffalo Systems
Referral Source
Already Printed or Sent
Save Recurring
Reimburse
Order
Invoice
Rate: USD
Category
Help F1
Print
Send To
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Register
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Small-Business Help Online

We scoured the Web to find helpful resources for small businesses and entrepreneurs. If we missed your favorite, let us know; log on to our discussion forums (http://discuss.pcmag.com) and share your experience with our readers.

INFORMATION SITES

- Starting new businesses: *http://smallbusiness.blogspot.com*
- Small-business and home business ideas: *www.businessknowhow.com*
- Small-business ideas and information: *www.businessownersideacafe.com*
- Starting and growing a small business: *www.entrepreneur.com*
- Legal information: *www.nolo.com*
- About.com's small-business information: *http://sbinformation.about.com*
- Counselors to America's Small Business: *www.score.org*

GOVERNMENT SITES

- Business gateway to federal resources: *www.business.gov*
- Legal and regulatory information for America's small businesses: *www.businesslaw.gov*
- Small-business and self-employed one-stop resource: *www.irs.gov/businesses/small*
- United States Small Business Administration: *www.sba.gov*

PUBLICATION SITES

- BusinessWeek Online small-business site: *www.businessweek.com/smallbiz*
- Inc.com—Small Business Resources for the Entrepreneur: *www.inc.com*
- Wall Street Journal Center for Entrepreneurs: *www.startupjournal.com*

COMMERCIAL SITES

- Mail Boxes Etc. Small Business Help Center: *www.mbe.com/sbhc*
- Microsoft Small Business Center: *www.microsoft.com/smallbusiness/bc/default.mspx*
- Quicken.com Small Business Center: *www.quicken.com/small_business*
- Business Plan Coach: *www.sbishere.com*
- CCH Business Owner's Toolkit: *www.toolkit.cch.com/BOToC.asp*

—Compiled by Molly K. McLaughlin

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- Custom Disaster Recovery DVD
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Best Mid--Range PC of 2004
Computer Shopper Magazine

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Maximum PC Magazine

"If you are looking for a desktop with an integrated screen that can travel occasionally, you are in for the ride of your life. The Hypersonic Sonic Aviator will not disappoint."
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  (Quickbooks™, ADP™, Paychex™ and others)

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EXPENSE	COST PER EMPLOYEE	5 EMPLOYEES	10 EMPLOYEES
LABOR RELATED TO COLLECTING, CALCULATING & ENTERING PAYROLL DATA	$65	$325	$650
TIME CALCULATION INACCURACY	$280	$1,400	$2,800
THEFT OF TIME / TIME CARD FRAUD	$150	$750	$1,500
UNAUTHORIZED OVERTIME (15 MIN. PER WEEK)	$292	$1,460	$2,920
SICK LEAVE & VACATION POLICY ABUSE	$232	$1,160	$2,320
TOTAL EXPENSE	**$1,019**	**$5,095**	**$10,190**

*Savings based on reports from the American Payroll Association

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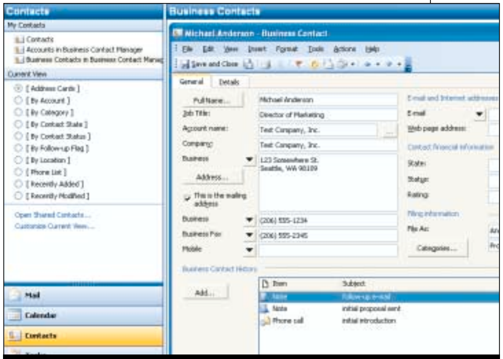
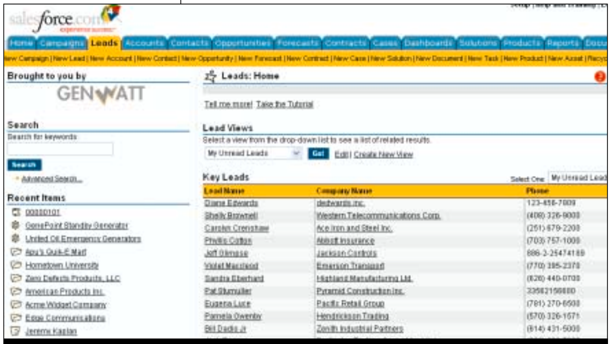
MANAGE YOUR CUSTOMERS & CONTACTS

Serving return customers is almost always more profitable than acquiring new ones; so it pays to treat your clients well. Although the financial packages we mentioned often provide basic capabilities for tracking customer information, many companies can benefit from a more focused customer relationship management (CRM) product.

Microsoft Outlook provides basic contact management capabilities in its address book, and you can share a centralized contact list if you're running Microsoft Exchange server or its equivalent. But most businesses are likely to want something more sophisticated. One option to consider is the **Microsoft Outlook Business Contact Manager** (included with Microsoft Office Professional Edition and Small Business Edition 2003). The Business Contact Manager integrates into Outlook 2003, appearing as another contact list beside your standard Outlook contacts. It lets you track contacts and accounts, log phone calls and other interactions, manage opportunities in your sales pipeline, and run a variety of reports. It's not a bad start, though it does suffer from feeling like the Outlook plug-in that it is, rather than a purpose-built application. (Microsoft Corp., *www.microsoft.com.* ●●●○○)


MS OUTLOOK BUSINESS CONTACT MANAGER


SALESFORCE.COM PROFESSIONAL EDITION

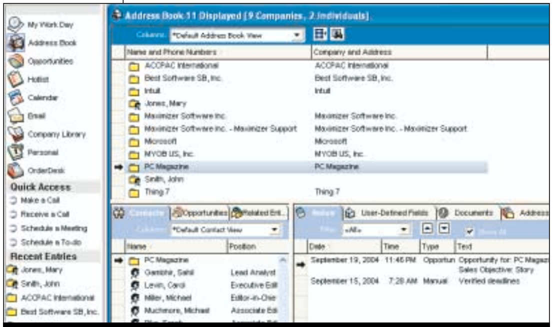
Standalone contact managers include FrontRange Solutions' **GoldMine 6.5** ($199 list). GoldMine lets you track detailed information about your contacts, schedule appointments or actions for those contacts, and track when the assigned tasks have been completed. Each user has a My GoldMine page, a personal portal showing daily activities, e-mail inbox, recently updated contacts, and the contents of any RSS feeds you choose to include. One caveat: GoldMine's interface can be confusing at times. GoldMine is available in a variety of additional flavors, including a corporate version ($495) that links to Outlook and Microsoft Exchange Server. And an iGoldMine add-on ($295 per concurrent user) lets you access info over the Web. (FrontRange Solutions Inc., *www.frontrange.com.* Version 6.5 ●●●●○)

Although Best Software's Act! contact manager has long provided basic CRM capabilities, the new **ACT! 2005 Premium for Workgroups** ($399.99 list) takes a big step forward with support for tracking and forecasting sales opportunities and other features. The new edition supports companies as a native data type, provides better activity and calendar management, and offers additional field types and customization. (Best Software SB Inc., *www.act.com.* ●●●●○)

Maximizer 8 ($159 direct) lets you keep track of both individuals and companies using a clear, list-based interface. You can also enter opportunities, schedule meetings, track documents, and keep a hot list of key tasks. (Maximizer Software Inc., *www.maximizer.com.* ●●●●◐)

CRM is one of the areas where Web-based products have become particularly appealing. The best of the so-called "on-demand" CRM systems available today is **salesforce.com Professional Edition** ($65 per user per month). Salesforce.com provides all the tools you need for tracking leads and customers, keeping track of shared activities, reporting on your sales pipeline, centralizing document management, and more. It's both easy to use and highly customizable. Also available are the stripped-down **salesforce.com Team Edition** (up to 5 users, $995) and a free, single-user **Personal Edition.** (salesforce.com inc., *www.salesforce.com.* Professional Edition ●●●●◐)

NetSuite Small Business ($99 per month for the first user, $49 per month per additional user) also provides Web-based CRM capabilities, but it really sets its aim on much broader goals, offering back-end database, accounting, Web site management and analysis, and human resources features as well. NetSuite's all-in-one approach and comprehensive dashboards may appeal to companies that don't want to assemble multiple software products, though its interface can be a bit intimidating compared with more specialized packages. (NetSuite Inc., *www.netsuite.com.* ●●●●○)


MAXIMIZER 8

OUR CONTRIBUTORS: John Clyman is president of the technology consulting firm Narrative Logic LLC and a contributing editor of *PC Magazine*. **Molly K. McLaughlin** is a freelance editor. Associate editor **Michael J. Steinhart** and lead analyst **Sahil Gambhir** were in charge of this story.

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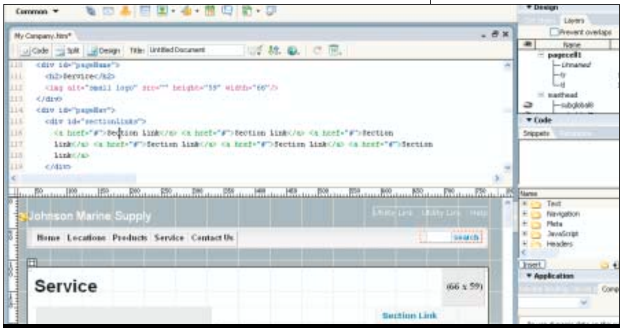
MANAGE YOUR **E-STORE & WEB PRESENCE**

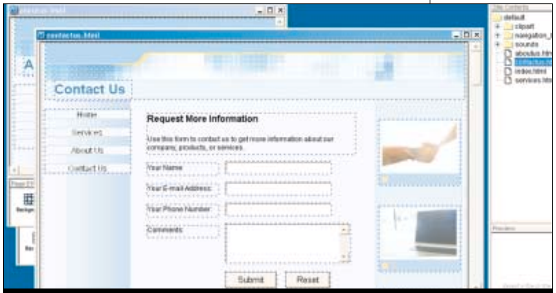
It's hardly news that virtually every small business needs a Web presence, even if it's just a simple brochureware site with essential information like product and services offerings, locations, and contact information. But you may be able to go a step further and use the Web for e-commerce as well. Done right, it can add convenience for your customers and reduce costs for you.

Thousands of Web hosts provide basic hosting plans, where you pay them to store your site's pages on their Internet servers. But if you're looking for integrated services that include site-building software and e-commerce support, we have a few favorites. Our Editors' Choice in this category, **Kurant StoreSense** (setup starting at $100, plus $49.95 a month) offers a compelling combination of site-building tools, promotions features, and back-office capabilities. With StoreSense, it's easy to get a basic e-commerce site up and running quickly, and the powerful, browser-based design tools and advanced programmability ensure that you won't soon outgrow the service. (neoverve inc., *www.neoverve.com.* Also available through other resellers. ●●●●○)



MACROMEDIA DREAMWEAVER MX 2004

Yahoo! Small Business offers a variety of e-commerce hosting options that we like as well. The **Yahoo! Merchant Starter** package ($39.95 a month, plus $50 setup fee and charge of 1.5 percent per transaction) lets you use Yahoo! SiteBuilder 2.0 software, a Windows Web design client that provides FrontPage-like capabilities in an easy-to-learn package. Because Yahoo! SiteBuilder is tied directly into your hosting account, embedding commerce listings and uploading pages is simple. And we're impressed with Yahoo! hosting's snapshot capability, which automatically stores a copy of your site at regular intervals so you can roll back changes. (Yahoo! Inc., *http://smallbusiness.yahoo.com.* ●●●●○)



YAHOO! SITEBUILDER 2.0

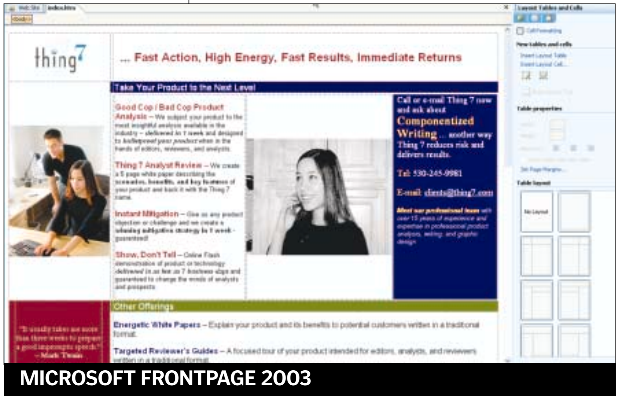
Interland's **Online Marketing Suite** ($49.95 a month, plus $49.95 setup) is another service that couples e-commerce hosting with a dedicated site builder—this one, a browser-based program derived from Trellix. The suite includes starter content for a variety of industries, and it provides tools for creating blogs and managing electronic mailing and distribution lists. (Interland Inc., *www.interland.com.* ●●●○○)

Affinity Internet's **ValueWeb Commerce** ($49.95 per month, plus $29 setup fee) combines Miva Merchant–powered e-commerce hosting with Affinity's CreateIt! Site Builder software, a private-label version of Macromedia Contribute 2. (Affinity Internet Inc., *www.valueweb.com.* ●●●●○)

Some businesses may want to set up shop in an already-bustling electronic mall. **eBay Stores** lets you create a custom-designed store on the world's most popular auction site; the Basic plan is $9.95 a month, plus listing and closing fees. An eBay Store needn't be restricted to selling items by auction; it can also contain fixed-price items. (eBay Inc., *www.stores.ebay.com.* Not rated.) Similarly, **Amazon.com's zShops** lets you set up a storefront, though you have fewer options for customizing its appearance than on eBay. Setting up an Amazon zShops storefront requires a Pro Merchant Subscription at $39.99 a month—and, as with eBay, you'll pay listing and closing fees. (Amazon.com Inc., *www.amazon.com/zshops.* Not rated.)

For those who want a more traditional way of building a site locally and then deploying it to the Web host of their choice, the software we recommend is **Macromedia Contribute 3** ($149 direct). Contribute 3 makes it easy to build a Web site with extensive predefined styles, gives you room to grow with its built-in Dreamweaver MX 2004 engine, and includes valuable yet simple workflow and collaborative features. If you're graphically savvy and looking to build a particularly rich site, **Macromedia Dreamweaver MX 2004** ($399 direct) remains the tool of choice. With its high-end design features and built-in support for creating sophisticated database-driven sites, your small business is unlikely to outgrow its capabilities. (Macromedia Inc., *www.macromedia.com.* Contribute 3 ●●●●◐; MX 2004 ●●●●●)

Microsoft FrontPage 2003 ($199 list) can also do an excellent job building your site. New features like the Button Builder (for adding mouse-over actions) and Tracing Image (for building your site on top of a mock-up image) make it even more productive than previous editions. (Microsoft Corp., *www.microsoft.com.* ●●●●○)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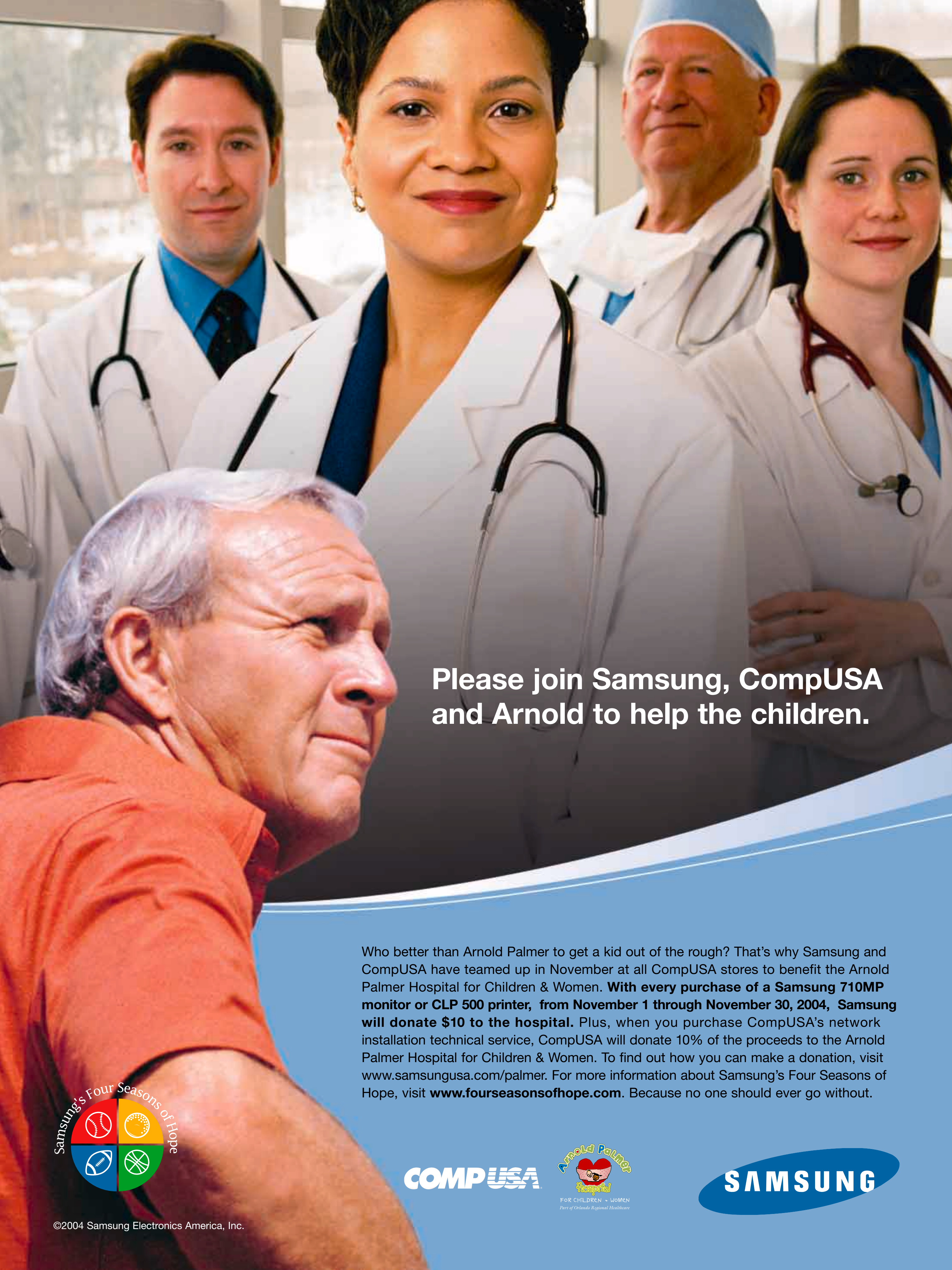

Please join Samsung, CompUSA and Arnold to help the children.

Who better than Arnold Palmer to get a kid out of the rough? That's why Samsung and CompUSA have teamed up in November at all CompUSA stores to benefit the Arnold Palmer Hospital for Children & Women. **With every purchase of a Samsung 710MP monitor or CLP 500 printer, from November 1 through November 30, 2004, Samsung will donate $10 to the hospital.** Plus, when you purchase CompUSA's network installation technical service, CompUSA will donate 10% of the proceeds to the Arnold Palmer Hospital for Children & Women. To find out how you can make a donation, visit www.samsungusa.com/palmer. For more information about Samsung's Four Seasons of Hope, visit **www.fourseasonsofhope.com**. Because no one should ever go without.

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SECURE YOUR **DATA**

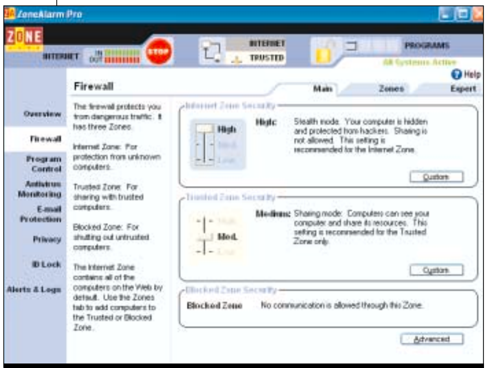
We wish this category weren't necessary, but you need software and tools to ensure that your systems stay secure and your data stays safe. Unfortunately, the potential for both accidents (think hard-drive failures) and malicious attacks (worms, spyware, hackers, and more) is great, and you must be proactive.

Your business should have a multipronged data-protection strategy that includes defense—firewall, antivirus, and antispyware—plus reliable backups to guard against the possibility of disaster. Just as important as having the strategy is sticking to it. Make sure that backups are performed religiously and that software patches are applied regularly.

There are a variety of places where you can put software to work defending your infrastructure. First, and most obvious, is on individual client machines. But installing and maintaining software on multiple machines can become tedious quickly, and users may not manage their desktops correctly despite all the software you load on them. All but the smallest businesses will benefit from perimeter security solutions that sit at or near the edge of your company's network, where it meets the Internet. (For more on this topic, visit our Business Security Buying Guide at *www.pcmag.com/securitybg.*)

Please note that in this section, several products are marked, "this version not rated." In these cases, we reviewed a different tier of the same product (such as a professional edition instead of a small-business edition) or the previous version of the software. To see how these similar titles fared, visit our Web site at *www.pcmag.com.*

Perimeter security products offer the advantage of central installation and management, and they are available in a variety of versions to suit your needs:



The firewall protects you from dangerous traffic. It has three Zones.

Internet Zone: For protection from unknown computers.

Trusted Zone: For sharing with trusted computers.

Blocked Zone: For shutting out untrusted computers.

The Internet Zone contains all of the computers on the Web by default. Use the Zones tab to add computers to the Trusted or Blocked Zone.

High: Stealth mode. Your computer is hidden and protected from hackers. Sharing is not allowed. This setting is recommended for the Internet Zone.

Medium: Sharing mode. Computers can see your computer and share its resources. This setting is recommended for the Trusted Zone only.

Blocked Zone: No communication is allowed through this Zone.

ZONEALARM PRO 5

More Small-Business Services

Download this table at **www.pcmag.com.**

Company	Product	Function highlights	URL
OPERATIONS			
Automatic Data Processing Inc.	ADP eXpert Services suite	Payroll, taxes, benefits, time management	www.sbs.adp.com
Ceridian Corp.	Ceridian	Payroll, expense manager, tax service, HR and benefits administration, legislative compliance, staffing solutions	www.ceridian.com
Concur Technologies Inc.	Concur Expense Service, Concur Payment	Travel and entertainment expense reports, billing automation	www.concur.com
Employease Inc.	Employease	HR, benefits, payroll management	www.employease.com
Ketera Technologies Inc.	Ketera Spend Management	Web-based contract and spending management, analysis	www.ketera.com
Paychex Inc.	Paychex Business Solutions, Paychex Administrative Services	Payroll processing, employee benefits, human resource management	www.paychex.com
PRODUCTIVITY APPLICATIONS			
Airframe Business Software	Airframe Enterprise	Hosted, Web-based business automation software for project teams	www.myairframe.com
Alpha Software Inc.	Alpha Five	Relational database tool for beginners and experts	www.alphasoftware.com
Broderbund	Family Lawyer 2004 Deluxe Home and Business	Legal forms and advice	www.broderbund.com
Endeavors Technology Inc.	AppExpress Enterprise	Web-based distribution of business applications	www.endeavors.com
FileMaker Inc.	FileMaker Pro	Simple database tool with Web deployment capabilities	www.filemaker.com
HyperOffice	HyperOffice	Web-based collaboration and secure remote access to team applications	www.hyperoffice.com
Intuit Inc.	QuickBase	Web-based database applications	www.quickbase.com
PaloAlto Software Inc.	Business Plan Pro 2005	Tool to create a successful business plan	www.palo-alto.com
TURNKEY SECURITY			
Ciphertrust Inc.	IronMail Appliance	Antispam, antivirus, antifraud, and policy enforcement	www.ciphertrust.com
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SPY SWEEPER 3.0

packages that you can run on a local server, software embedded in plug-and-play appliances, or from your ISP.

For example, **Symantec BrightMail Anti-Spam 6.0** (starting at $26 per month for 100 users) performs highly effective spam filtering and is available with an antivirus plug-in. You can run BrightMail on a Windows server, get it built into a hardware appliance, such as Borderware Technologies' **MXtreme MX-200,** or outsource this capability by choosing an ISP (such as AT&T or Earthlink) that implements BrightMail for the e-mail accounts it hosts. (Symantec Corp., *www.symantec.com.* This version not rated.)

Similarly, **MailFrontier Gateway Server** offers a Small Business Edition (starting at $495 per year) as well as dedicated appliances and client versions. (MailFrontier Inc., *www.mailfrontier.com.* This version not rated.)

You'll have to weigh the cost, convenience, and trade-offs of each option. Appliances can be particularly appealing, because dedicated systems help hide complexity and some include antispam, firewall, remote access, and even Web filtering.

Another approach is to adopt versions of traditional security software that include central management for corporate use. For example, Zone Labs' **Integrity 5.0** (starting at $65 per seat) lets you set firewall policies centrally. (Zone Labs LLC, *www.zonelabs.com.* ●●●●○) On the crucial antivirus front, **Symantec AntiVirus Corporate Edition** (starting at $251 for five users) provides an extension of the company's antivirus product. (Symantec Corp., *www.symantec.com.* ●●●●○) **McAfee Active VirusScan SMB Edition** (starting at $215 for five users) also offers a similar extension. (Network Associates Technology Inc., *www.mcafee.com.* This version not rated.)

Keeping your OS up-to-date against security vulnerabilities is crucial. If you're running Windows XP, start by installing **Windows XP Service Pack 2** (free)—if you haven't already. More generally, make sure your PCs check automatically for new Windows updates, or visit *www.windowsupdate.com* regularly. (Microsoft Corp., *www.microsoft.com.* Not rated.)

Windows XP SP2 includes the new Windows Firewall, a dramatic improvement over the older Internet Connection Firewall. Still, we recommend running a full-featured third-party firewall like Zone Labs' **ZoneAlarm Pro 5** ($39.95 direct) on each desktop. Once you've installed a supplemental firewall, don't forget to disable SP2's built-in firewall to avoid conflicts. (Zone Labs LLC, *www.zonelabs.com.* ●●●●●)

ZoneAlarm is also now available as part of **ZoneAlarm Security Suite** ($69.95 direct, plus $24.95 a year after the first year. ●●●●◐), which includes antivirus, e-mail monitoring, Web content filtering, and IM security features. **Norton Internet Security 2005** ($69.95 direct, Symantec Corp., *www.symantec.com.* ●●●●◐) and **McAfee Internet Security 2005** ($69.99 direct, Network Associates Technology Inc., *www.mcafee.com.* ●●●○○) offer a similar breadth of capabilities. The Norton and ZoneAlarm products are our current Editors' Choices.

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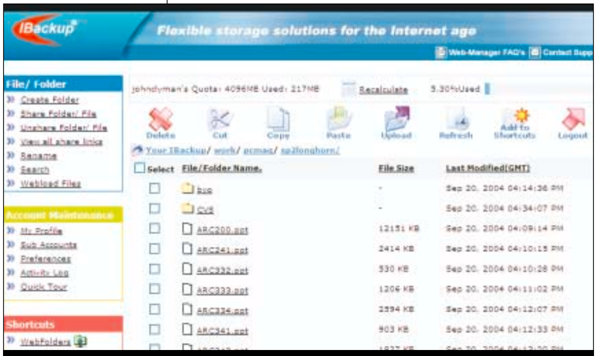
RETROSPECT PROFESSIONAL 6.5

Spyware and adware are an increasing concern, and even though most forms are more annoying than threatening, it pays to be protected. We haven't found any antispyware product that provides an impenetrable shield, but we have some favorites: Webroot's **Spy Sweeper 3.0** ($29.95 direct, Webroot Software Inc., *www.webroot.com.* ●●●●○) and Lavasoft's **Ad-Aware SE Plus 1.02** ($26.95 direct, Lavasoft, *www.lavasoftusa.com.* ●●●●○). Both are effective at alerting you to malware infestations in real time and letting you block them. The McAfee and Norton/Symantec security suites also claim to provide antispyware support, but they aren't as effective.

Finally, if you're looking for ways to cut out spam and phishing attacks (and who isn't?), consider antispam tools that are for both individual desktops and gateways. On the client side, we prefer **MailFrontier Desktop 4.0** ($29.95 direct) for Outlook and Outlook Express. (MailFrontier Inc., *www.mailfrontier.com.* ●●●●○)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IBACKUP

For backups, the best software likely depends on how you approach the task: Do you use a traditional tape-drive backup system, back up to recordable CDs or DVDs, copy one entire hard drive to another, or use an Internet-based backup service? **Retrospect Professional 6.5** ($89 direct) is a comprehensive traditional backup tool. (Dantz Development Corp., *www.dantz.com.* ●●●●◐) **BounceBack Professional 5.4** ($99 direct) is useful for cloning one hard drive to another. (CMS Products Inc., *www.cmsproducts.com.* ●●●◐○) Among Internet-based backup services, our favorite is **IBackup** (starting at $14.95 a month), which works either directly via your browser or through a Windows client and lets you configure an online drive to appear as a local drive. (Pro-Softnet Corp., *www.ibackup.com.* ●●●●○)

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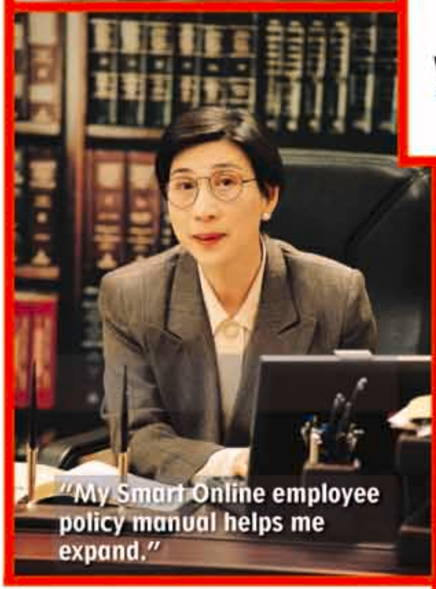
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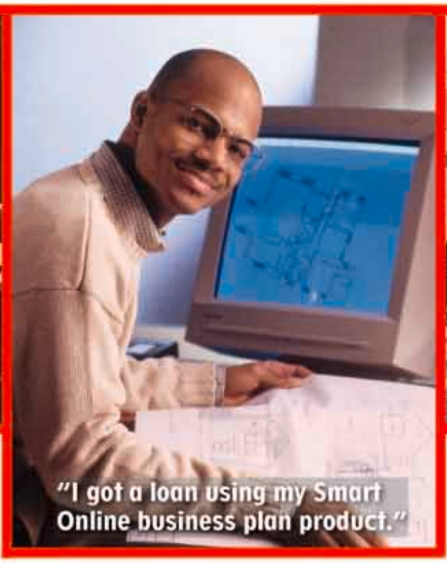
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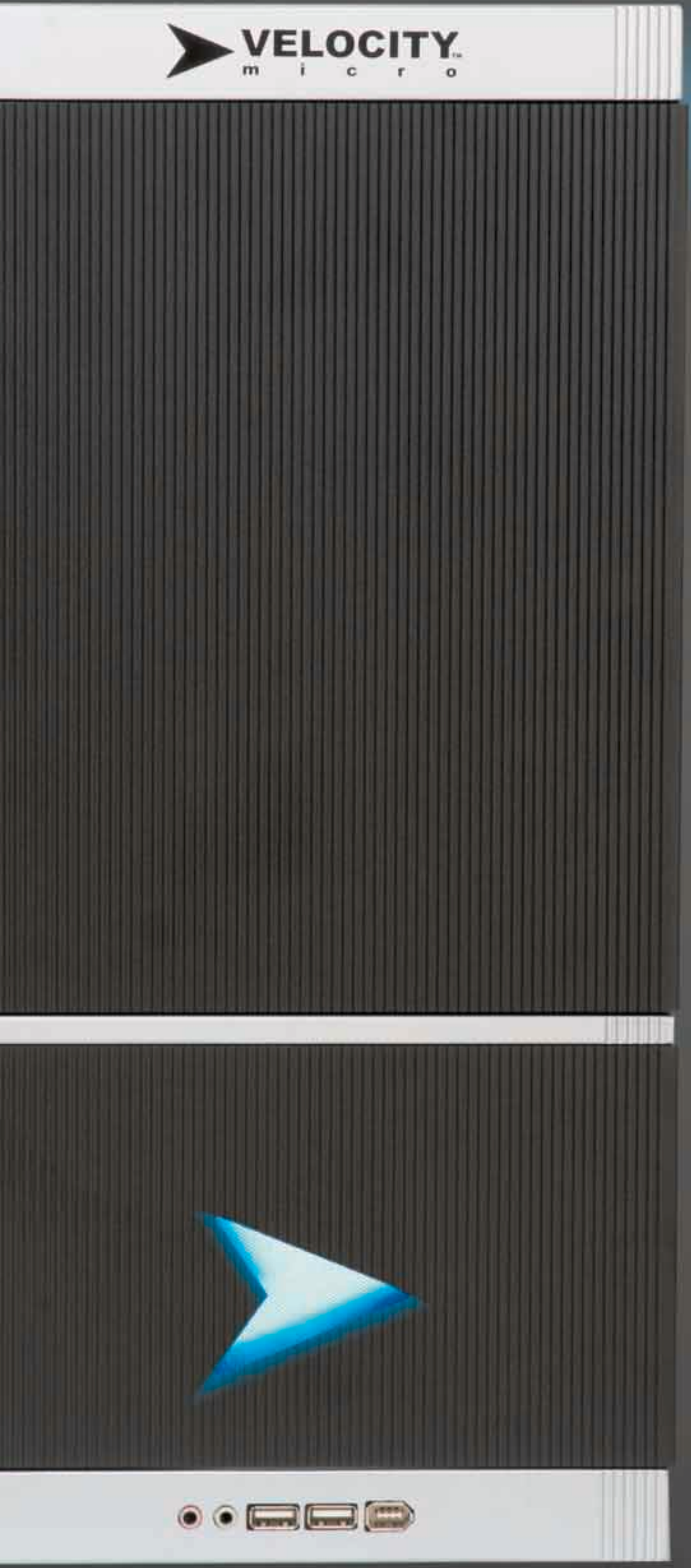

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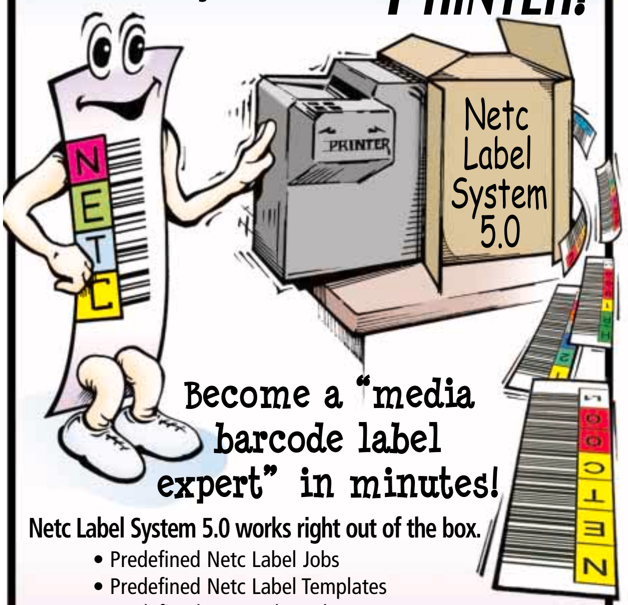

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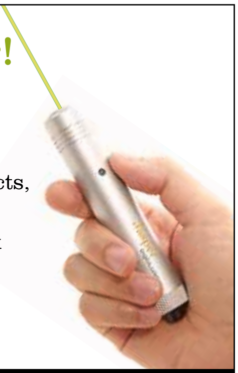

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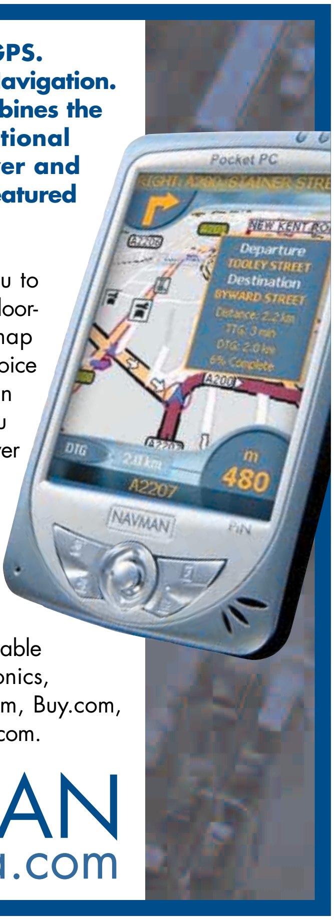

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He makes a limited number of these distinctive handmade timepieces, which eventually find their way onto the wrists of only the world's most distinguished gentry. Today, collectors are willing to pay thousands of dollars to add one of these original Steinhausen masterpieces to their own collection.

Reborn After 80 Years

Until now, that was the only way you could own a Steinhausen, still one of the world's rarest and most prized wristwatches. But for the first time in 80 years, the original Steinhausen masterpiece is now being painstakingly reproduced for modern day collectors. Still manufactured by hand, this 21st-century reproduction carries the same graceful styling and features as the original. The scratch-resistant crystal comfortably rests in a surgical grade stainless steel case and bezel, which provides the ultimate in precision and protection.

Powered by You

This handsome timepiece has been updated with a kinetic automatic movement that is powered by the motion of the wearer's arm, so the watch never needs winding or batteries.

Hand-crafted Elite Movement

The Steinhausen movement consists of 185 parts, that are assembled entirely by hand. To prevent wear on gears, fine watches use tiny gemstones to reduce friction. The Steinhausen features up to 35 jewels, 15 more than most of the worlds elite watches. The movement is then rigorously tested for flaws and accuracy. Only 6% of the movements made ever meet the stringent requirements to be placed in this noble timepiece, making the Steinhausen one of the most accurate in the world.

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Patek Philippe makes first wrist watch **1923** Lips produced the first battery powered watch **1966** Steinhausen masterpiece is reproduced for first time

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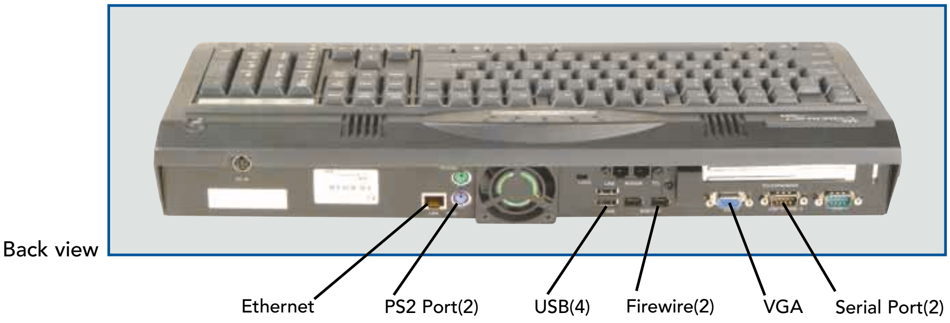

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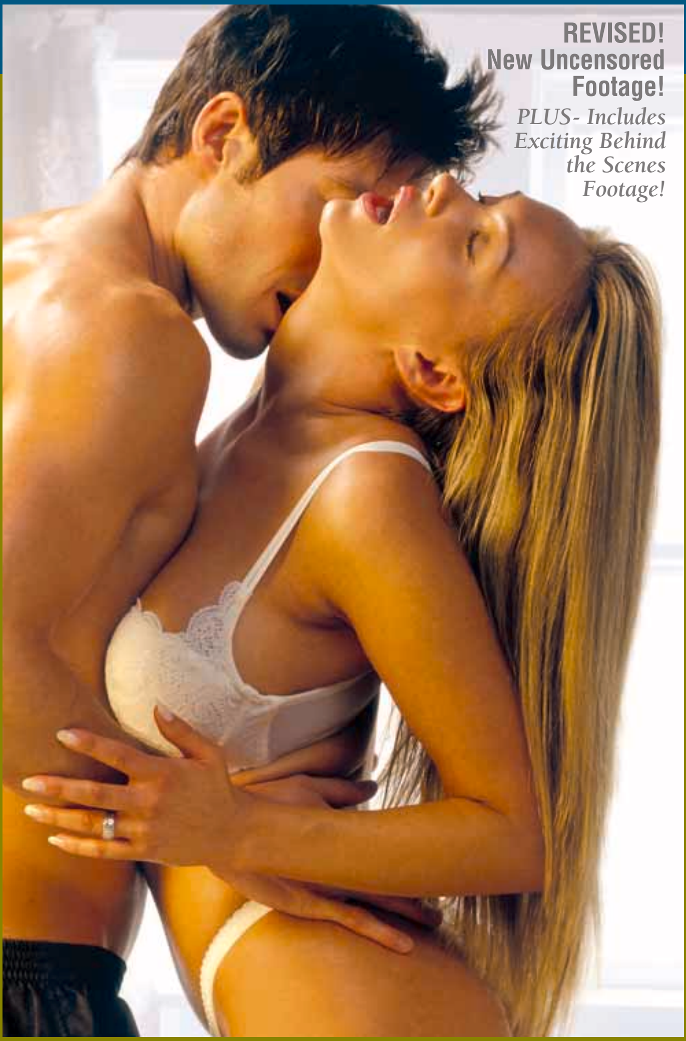
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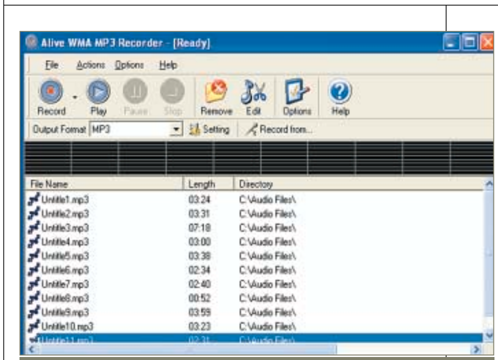
AFTER HOURS

TECHNOLOGY ON YOUR TIME

Streaming-Audio Capture Tools

BY TROY DREIER

You've got a portable digital music player, and you listen to streaming radio, but you haven't been able to put the two together. You can now: These six tools let you capture live audio streams to listen to whenever and wherever you want. • What's the legality of all of this? Gary Hecker of The Hecker Law Group, an intellectual property law firm, says that if companies selling these products were to be sued, the courts would probably rule as they did in the Sony Betamax case: As long as a product has legitimate uses that do not infringe copyright, the whole product can't be said to be infringing. • Although legal challenges are likely, William Coats, a partner with the firm of Orrick, Herrington, and Sutcliffe, says it's unlikely the recording industry will target end-users, as they are harder to trace than peer-to-peer software users.


Alive WMA MP3 Recorder - [Ready]
File
Actions
Options
Help
Record
Play
Pause
Stop
Remove
Edit
Options
Help
Setting
Record from...

Output Format: MP3

File Name	Length	Directory
Untitle1.mp3	03:24	C:\Audio Files\
Untitle2.mp3	03:31	C:\Audio Files\
Untitle3.mp3	07:18	C:\Audio Files\
Untitle4.mp3	03:00	C:\Audio Files\
Untitle5.mp3	03:38	C:\Audio Files\
Untitle6.mp3	02:34	C:\Audio Files\
Untitle7.mp3	02:40	C:\Audio Files\
Untitle8.mp3	00:52	C:\Audio Files\
Untitle9.mp3	03:59	C:\Audio Files\
Untitle10.mp3	03:23	C:\Audio Files\

ALIVE WMA MP3 RECORDER 1.2.6.8

Alive WMA MP3 Recorder 1.2.6.8

Alive WMA MP3 Recorder has gotten off to a good start supporting a range of audio formats, but the program still could be more functional. Its strength is that it can turn your streamed recordings into MP3, WMA, WAV, OGG, or VOX files, providing a wide range of quality settings for each.

Alive's interface is about as unimaginative as the program's name, but it's simple and effective. Begin streaming whatever content you'd like to save, select the format you want for your end file, and click Record. Alive won't split a recording into tracks, though it does have simple editing controls that let you trim your files.

Scheduling controls, which unfortunately are far too limited, are hidden in the Options menu. You can quickly set a one-time action, but there's no way to create repeated events. And you have to leave the source program running, since Alive can't launch an application for you.

All in all, this software is simple but flexible, and it deserves to find a following with people who want more choices in their recording format.

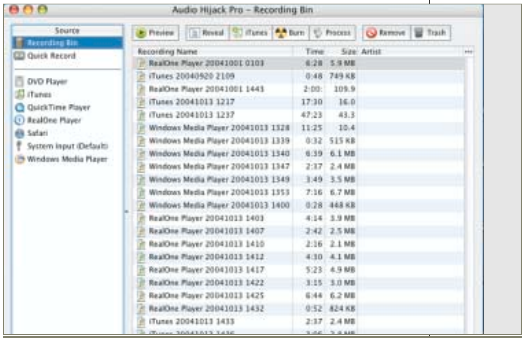
$29.95 direct. AliveMedia Inc., www.alivemedia.net. ●●◐○○

WHAT THE RATINGS MEAN

●●●●●	EXCELLENT
●●●●○	VERY GOOD
●●●○○	GOOD
●●○○○	FAIR
●○○○○	POOR

Audio Hijack Pro 2.0

The only Mac application in this roundup, Audio Hijack is a powerful program with a clear interface that looks like it was designed in Cupertino. It was made to grab audio from any application, even your PC's built-in DVD player, so if there's a song on a soundtrack or a bit of dialogue you'd like to record, this software can copy it as easily as an Internet stream.

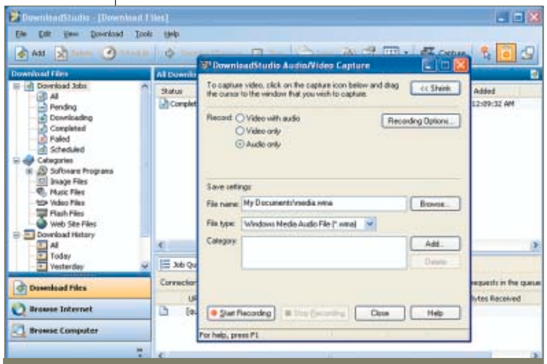

Audio Hijack Pro – Recording Bin
Source
Recording Bin
Quick Record
DVD Player
iTunes
QuickTime Player
RealOne Player
Safari
System Input (Default)
Windows Media Player
Preview
Reveal
iTunes
Burn
Process
Remove
Trash

Recording Name	Time	Size	Artist
RealOne Player 20041001 0103	6:28	5.9 MB	
iTunes 20040920 2109	0:48	749 KB	
RealOne Player 20041001 1443	2:00:	109.9	
iTunes 20041013 1217	17:30	16.0	
iTunes 20041013 1237	47:23	43.3	
Windows Media Player 20041013 1328	11:25	10.4	
Windows Media Player 20041013 1339	0:32	515 KB	
Windows Media Player 20041013 1340	6:39	6.1 MB	
Windows Media Player 20041013 1347	2:37	2.4 MB	
Windows Media Player 20041013 1349	3:49	3.5 MB	
Windows Media Player 20041013 1353	7:16	6.7 MB	
Windows Media Player 20041013 1400	0:28	448 KB	
RealOne Player 20041013 1403	4:14	3.9 MB	
RealOne Player 20041013 1407	2:42	2.5 MB	
RealOne Player 20041013 1410	2:16	2.1 MB	
RealOne Player 20041013 1412	4:30	4.1 MB	
RealOne Player 20041013 1417	5:23	4.9 MB	
RealOne Player 20041013 1422	3:15	3.0 MB	
RealOne Player 20041013 1425	6:44	6.2 MB	
RealOne Player 20041013 1432	0:52	824 KB	
iTunes 20041013 1433	2:37	2.4 MB	

AUDIO HIJACK PRO 2.0

To make a recording, first select the source program. Click Hijack to grab the audio and hit Record. You can split a recording manually into tracks or have Audio Hijack do it automatically when it detects a gap, but it won't tag the resulting songs. It also lets you schedule streaming radio recordings. If you don't have a dedicated URL for the stream, you'll have to select the station and then leave the source program running. One plus is that you can mute the stream so the sound doesn't play through your speakers. The program lets you save recordings as MP3 or AAC tracks (64 to 192 Kbps), or as AIFF or Apple Lossless files. Audio Hijack also comes with a variety of optional filters for customized effects.

$32 direct. Rogue Amoeba Software LLC, www.rogueamoeba.com. ●●●◐○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Browse Internet
Browse Computer
DownloadStudio Audio/Video Capture
<< Shrink
Recording Options...
Browse...
Add...
Delete
Start Recording
Stop Recording
Close
Help

To capture video, click on the capture icon below and drag the cursor to the window that you wish to capture.

Record: ○ Video with audio ○ Video only ⦿ Audio only

Save settings:
File name: My Documents\media.wma
File type: Windows Media Audio File (*.wma)
Category:

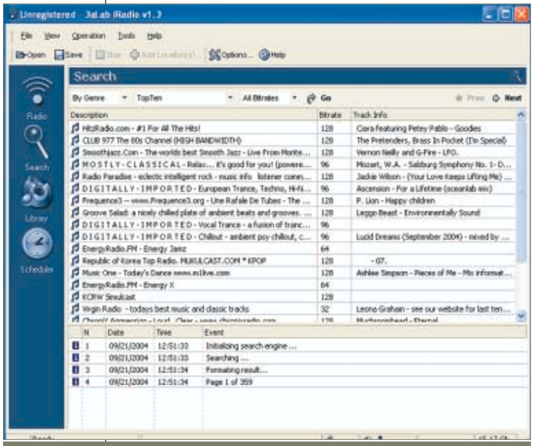
For help, press F1

DOWNLOAD STUDIO 2.0

DownloadStudio 2.0

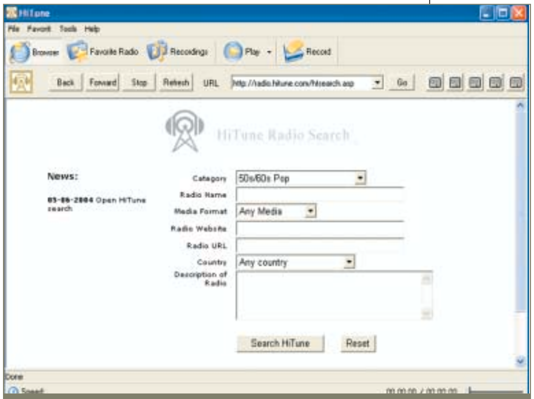
This Swiss Army knife of a program can do things that none of the others can, such as grab all of the audio content from a site. In this year's Utility Guide, our June 8 issue, we awarded DownloadStudio the Editors' Choice for download manager applications. Looking at it purely as a tool for recording streaming content, we're still impressed.

To download a live stream, you have two options. If you know the stream's address, you can plug it in directly and have the program download it extra fast from the server. If there's no address but you have the stream playing in a separate application, you'll need to open the Audio/Video Capture window in the Tools menu. The drawbacks are that you can record the live stream in only WAV or WMA formats and the program won't split your recording into tracks.



N	Date	Time	Event
1	09/21/2004	12:51:33	Initializing search engine ...
2	09/21/2004	12:51:33	Searching ...
3	09/21/2004	12:51:34	Formatting result...
4	09/21/2004	12:51:34	Page 1 of 359

IRADIO 1.3



News:
05-06-2004 Open HiTune search

URL: http://radio.hitune.com/hisearch.asp
Category: 50s/60s Pop
Radio Name:
Media Format: Any Media
Radio Website:
Radio URL:
Country: Any country
Description of Radio:

HITUNE PRO 1.1

The option to grab all of the audio content from a site will be a timesaver if, for example, your favorite band regularly posts exclusive tracks on their site. The included wizard makes it easy to set up, letting you take only content in a specified format or only new files.

$39.95 direct. Conceiva Pty. Ltd., www.conceiva.com. ●●●●○

HiTune Pro 1.1

With its integrated Web browser, HiTune makes playing and searching for streams easy, but the product needs to mature before we can recommend it.

When you launch HiTune, you can use the app's search tool to look for MP3-streaming stations or use the integrated Web browser to surf your favorite sites. From there, you can simply play a station or play and record one at the same time. Like iRadio, this application will save your files as MP3s as they are streamed, and it doesn't give you control over quality. HiTune can also record from RealPlayer or Windows Media Player.

The program's interface looks like a work in progress. (On the Browse screen, for example, there are five identical unlabeled buttons that bring you to different browsing areas.) The documentation is also poor, written in broken English with plenty of errors, and there are no scheduling options. HiTune shows inspiration in how it lets people search for music, but it's not yet ready for the masses.

$16 direct. StreamingStar Workshop, www.hitune.com. ●●○○○

iRadio 1.3

iRadio is a trade-off: It works with only a narrow range of streaming audio content, but it offers a rich assortment of ways to search and mine that content.

Start iRadio and you'll see a ready-made library of mostly ShoutCast and Live365 streams. The search options let you pore through thousands of stations to find just the ones you want. Add your picks to the library, so you can access them again. From the library view, you can start a stream and record it. Since these are MP3 streams with tagging metadata attached, iRadio can save them as separate tracks and tag them correctly. The drawback, however, is that it will save them only as MP3 files.

iRadio streams the music itself and offers better scheduling options than the others. You can select the exact stream you want and dictate when and how often you want it recorded. It can also burn your audio to a CD, but the Lite version, which lacks this feature, is a better deal ($14.95 direct). If you don't need the luxury of recording streams from any application, iRadio is an excellent choice.

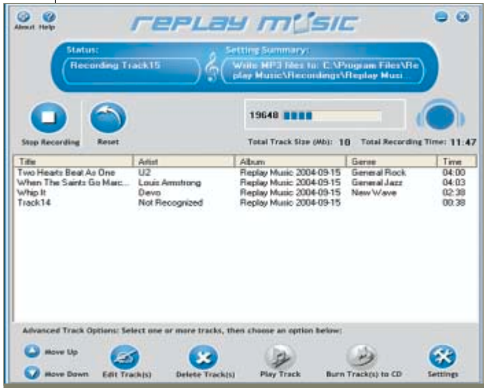
$39.95 direct. 3aLab, www.3alab.com. ●●●●○

Replay Music 2.0

All of the apps we reviewed for this story do a solid job of recording streaming audio, but our Editors' Choice winner, Replay Music, goes far beyond the norm. Replay can record streamed songs from most applications, break them into individual files (either as WAV or 128- to 320-Kbps MP3 files) and even tag them with the correct song and artist info. It does this by taking a digital fingerprint of a song and comparing it with the information stored in its central server. Replay works with a variety of streams, including those from Napster and Musicmatch that require a subscription.

During testing, Replay didn't identify songs perfectly every time; it was right on about 80 percent of them. But when it can't recognize a song, you can always add the tags yourself. Replay also has built-in CD-burning controls, and it can burn CDs or send tracks to iTunes automatically. The 2.0 release, which should be out by the time you read this, offers unlimited tagging. (Version 1.0 topped out at 5,000 tagged songs.) Paid 1.0 users will automatically be upgraded to 2.0. Applian also makes Replay Radio, an excellent tool for recording scheduled Internet radio shows.

$29.95 direct. Applian Technologies Inc., www.replay-music.com. ●●●●◐



Status: Recording Track15
Setting Summary: Write MP3 files to: C:\Program Files\Replay Music\Recordings\Replay Musi
Total Track Size (Mb): 10 Total Recording Time: 11:47

Title	Artist	Album	Genre	Time
Two Hearts Beat As One	U2	Replay Music 2004-09-15	General Rock	04:00
When The Saints Go Marc...	Louis Armstrong	Replay Music 2004-09-15	General Jazz	04:03
Whip It	Devo	Replay Music 2004-09-15	New Wave	02:38
Track14	Not Recognized	Replay Music 2004-09-15		00:38

Advanced Track Options: Select one or more tracks, then choose an option below:

REPLAY MUSIC 2.0

MORE ON THE WEB

www.pcmag.com/afterhours

See Personal Technology online for a how-to guide on capturing streaming audio.

GEAR + GAMES

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Space-Age Phone Conferencing

The **Polycom SoundStation2W** can help eliminate tangled wiring from conference room phones. The W in the name stands for wireless. A base station connected to your phone line communicates wirelessly with Polycom's trademarked *Star Trek*–style speaker phone. A rechargeable lithium ion battery provides up to 12 hours of talk time or 80 hours of standby time. Its 64-bit encryption ensures that your calls remain private. For truly wireless conferencing, you can connect your cell phone to the SoundStation2W, but call quality will be limited by your cell phone's sound quality. Full duplexing works well—a must for teleconferencing.—*Craig Ellison*

$699 list. Polycom Inc., www.polycom.com.
●●●○○

Central Wiring

The **O'Sullivan Digital Satellite** might be your answer if you'd like to connect all the wires on your desktop to one central place. This gadget mounts on your desktop through a 60-mm hole (which is standard on many computer desks, including most of those from O'Sullivan). Beneath your desk, you can connect to a network, power outlet, phone line, and USB Uplink port as needed. On the desktop, the Digital Satellite has connections for Ethernet, a phone, and two switched AC plugs, and it includes a four-port, powered USB 2.0 hub. The Digital Satellite is included with Apex and Maestro SmartDesks, or it can be purchased separately at OfficeMax.—*CE*

$49.99 list. O'Sullivan Furniture, www.thedigitalsatellite.com.
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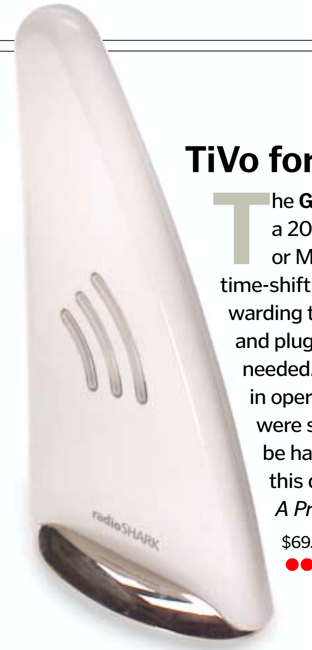

TiVo for the Radio

The **Griffin RadioShark** puts a 21st-century spin on a 20th-century medium by letting you use a Windows or Macintosh PC to schedule radio recordings and time-shift live programs, pausing them and then fast-forwarding through commercials. Simply install the software and plug in the fin-shaped antenna; no power cord is needed. The RadioShark is sometimes less than shark-like in operation; we wish scrolling through saved programs were smoother and the cord were longer, because it can be hard to get good reception. But we love the freedom this device offers. We'll never again have to miss *A Prairie Home Companion.—Troy Dreier*

$69.99 direct. Griffin Technology, www.griffintechnology.com.
●●●◐○

iGo Where You Go

The heaviest thing in your computer bag (besides the laptop) may be the rat's nest of transformers and cables, each unwilling to work with others. Enter the **iGo EverywherePower3500,** a 5-ounce universal transformer for accessories such as cell phones, PDAs, digital cameras, DV cameras, and so on. The EverywherePower3500 charges two devices at once so long as they don't draw more than 15 watts combined, which is not a problem for peripherals. It uses the same $10 tips (sold separately) as the bulkier iGo Juice transformer that can simultaneously recharge a notebook and an accessory. The EverywherePower3500 works with wall outlets, car outlets, and aircraft power plugs.—*Bill Howard*

$70 street. iGo, www.igo.com. ●●●●◐

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Online City Guides

BY WILLIAM VAN WINKLE

You're planning a trip to a major U.S. city, and you'll have hours to wander in search of fun things to see and do. Having a native friend to guide you would be ideal, but chances are you'll hit the Web in advance for advice. • Larger players include Lonely Planet (www.lonelyplanet.com/destinations)*, Fodor's* (www.fodors.com/miniguides)*, and Citysearch* (www.citysearch.com)*. But for an alternative viewpoint, here are a few of our favorite local sites.*

CHICAGO TRAVELER

Chicago Traveler

Chicago Traveler is professional, comprehensive, and exceptionally easy to navigate. The site's interactive maps, for everything from casinos to theaters, are an excellent adjunct to the Things-To-Do areas, which cover just about everything. Listings for events, sites, and resources are exhaustive, but there is relatively little text on the site, and most of this feels touristy rather than "inside track." Hotels have ratings, but restaurants do not. An appealing aspect is that the advertising isn't too in your face.

www.chicagotraveler.com. ●●●◐○

Experience LA

Experience LA nearly ignores lodging and dining and focuses instead on things to see and do in the area. Activities are sorted either by region (Chinatown, Hollywood) or theme (Family Fun, Latino Heritage, Public Art, and so on). Items such as a list of farmers' markets around the city demonstrate the site's devotion to showing all sides of L.A. Insider commentary is scant at best, but advertiser presence is very light, and the site is simple to surf.

www.experiencela.com. ●●●◐○

Insider's Guide to NYC

The Insider's Guide feels like a blog site pulled from *Sex and the City.* The site's NY-savvy host, Laura, recommends looking for subway trains with all their windows up in the summer, because it means they have air conditioning. She gives you quick restaurant reviews punctuated by valuable descriptions, such as "dismal atmosphere" or "The majority of diners are Asian, which shows it must be good." The focus of the site is on eating out and shopping; a handful of must-see sights are listed.

www.laurasnyctales.com/nycguide. ●●●○○

A Local's Guide for People Visiting or Moving to San Francisco

Self-described as "fiercely noncommercial," this San Francisco site is the real deal, offering a personal view of what to see, what not to see, and why. The site provides photo tours of different areas and romantic walk suggestions, as well as accommodation recommendations from site visitors and listings. Most of the places recommended are not accompanied by phone numbers, so you'll have to find those yourself. What this site lacks in flash and convenience it makes up for in authenticity and genuine care for its city.

www.dreamworld.org/sfguide. ●●●●○

VISITOR'S GUIDE: WASHINGTON D.C.

Visitor's Guide: Washington, D.C.

Since this site is run by *The Washington Post,* you need to be careful not to click out of the Visitor's Site. And you can expect to hit banner ads and subscription forms along the way. Still, the site offers helpful lodging, dining, and activity information, much of it accompanied by hands-on editorial content. Would you have thought to take in the big monuments at night? Know where to go for an authentic Washington chili dog? This site has tips galore and will prove handy and enjoyable for a broad range of readers.

www.washingtonpost.com/wp-srv/travel/visitorsguide.htm. ●●●●○

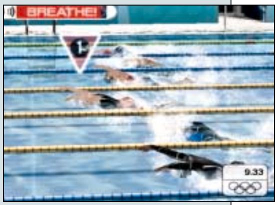
QUICK CLIPS

Evil Genius

Any run-of-the-mill secret agent can save the world, but to achieve global domination, it takes an Evil Genius. That's you in this campy, real-time game—part James Bond, part The Sims—which pokes fun at classic 1960s spy thrillers. You'll build a secret lair, fight off government spies, train your minions, research technologies to fulfill your plans, and send agents out on missions to aid your cause. Although the humor grows stale as the game progresses, playing Evil is really fun.—*Peter Suciu*

$49.95 list. Vivendi Universal Games Inc., www.vugames.com. ●●●●○

Athens 2004



The summer Olympics are over, but you can relive them in this comprehensive, officially licensed PS2 game. Choose from 64 countries and 800 athletes to compete in 7 different venues. Try to break an Olympic or world record in 25 events in the Track & Field, Swimming, Gymnastics, Shooting, Archery, Weightlifting, and Equestrian categories. Some events are harder than others, and most involve a mix of skills ranging from timing to aiming to button mashing.
—*Matthew D. Sarrel*

$50 street. Sony Computer Entertainment America Inc., www.989sports.com. ●●●○○

Chris Sawyer's Locomotion

Transportation networks are the heartbeat of every big city. In Locomotion, it's up to you to keep them going—and in the process, build a shipping empire. Although the emphasis is on rail, you'll also use trucking, buses, cargo ships, and even airplanes as the game progresses from the year 1900 to 2000. Although it's reminiscent of SimCity, the narrow focus on transportation makes this game less challenging and therefore slightly less rewarding.—*PS*

$29.95 list. Atari Inc., www.atari.com. ●●●◐○

VAMPIRE® THE MASQUERADE BLOODLINES™

"One of the most anticipated RPGs this year" —Gamespot

Choose to swear allegiance to 1 of 7 different clans, then use an array of vampire powers to complete quests and gain experience.

Witness the destructive power of your weapons, including guns, swords and supernatural vampire powers, in next-gen first-person and third-person gameplay.

Get sucked in to the streets of Los Angeles, where the options are endless and the dangers are boundless.

1. I'll return with the pearl...
2. I'll get it, but you'd better hold up your end of the deal.
3. No deal. Tell me what you know.
4. I've heard enough out of you. I'll rip the info from your pretty little hide.

Interact with mortals and other vampires in a world that reacts to clan, gender and dialogue in this deep, immersive RPG.

MATURE 17+
M
Blood and Gore
Intense Violence
Sexual Themes
Strong Language
ESRB CONTENT RATING www.esrb.org

PC CD-ROM SOFTWARE

ACTIVISION.

activision.com

vampirebloodlines.com

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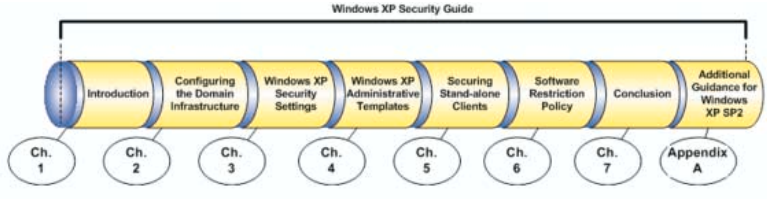
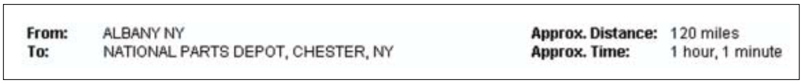
BACKSPACE

HOW MANY "POLICE ACADEMIES" CAN YOU FIT ON A PORTABLE MEDIA PLAYER?

Edited by Don Willmott


Windows XP Security Guide
Introduction
Configuring the Domain Infrastructure
Windows XP Security Settings
Windows XP Administrative Templates
Securing Stand-alone Clients
Software Restriction Policy
Conclusion
Additional Guidance for Windows XP SP2
Ch. 1
Ch. 2
Ch. 3
Ch. 4
Ch. 5
Ch. 6
Ch. 7
Appendix A

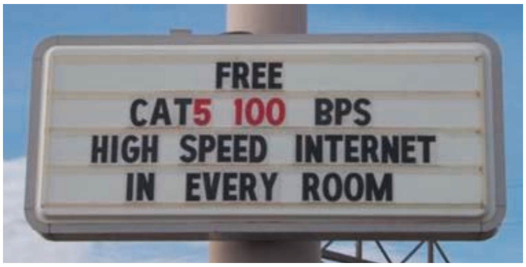
« Microsoft says of this index to some of its security products: "This guide is not intended for home users." No kidding.

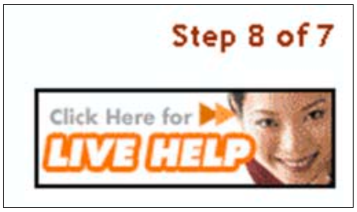


From: ALBANY NY
To: NATIONAL PARTS DEPOT, CHESTER, NY
Approx. Distance: 120 miles
Approx. Time: 1 hour, 1 minute

« Assuming, of course, you're driving a shiny new Porsche. (National Parts Depot site)

» No, this photo was not taken in 1983.

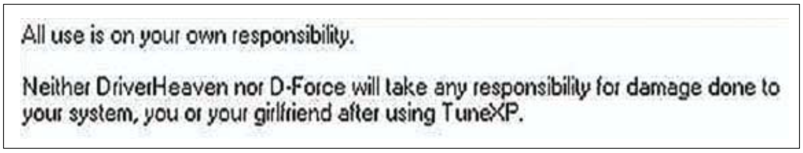

FREE
CAT5 100 BPS
HIGH SPEED INTERNET
IN EVERY ROOM



Step 8 of 7

Click Here for
LIVE HELP

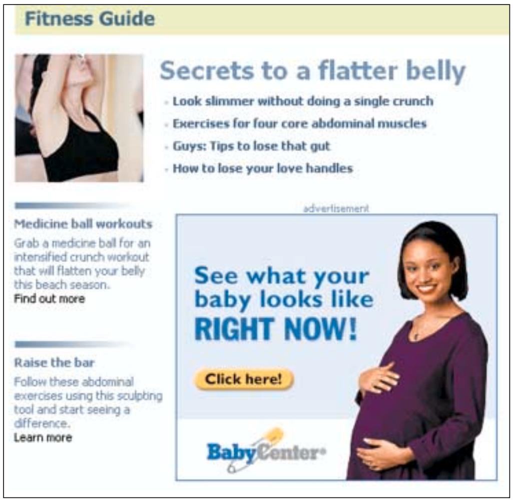
« Just when you thought you were finished... (NetBank site)



All use is on your own responsibility.

Neither DriverHeaven nor D-Force will take any responsibility for damage done to your system, you or your girlfriend after using TuneXP.

« So keep your girlfriend at least 10 feet away from the software. (TuneXP help)



Fitness Guide

Secrets to a flatter belly

- Look slimmer without doing a single crunch
- Exercises for four core abdominal muscles
- Guys: Tips to lose that gut
- How to lose your love handles

Medicine ball workouts

Grab a medicine ball for an intensified crunch workout that will flatten your belly this beach season.
Find out more

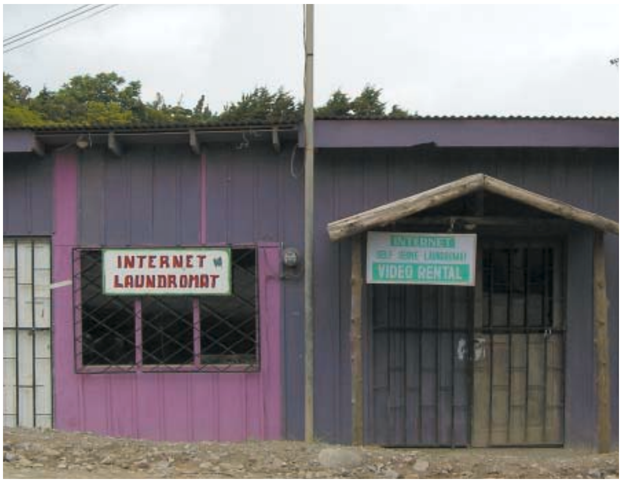
Raise the bar

Follow these abdominal exercises using this sculpting tool and start seeing a difference.
Learn more

advertisement
See what your baby looks like RIGHT NOW!
Click here!
BabyCenter

« And one more secret: Don't get pregnant! (MSN Diet & Fitness site)

» Backspace on the Road: Monteverde, Costa Rica


INTERNET
LAUNDROMAT
INTERNET
VIDEO RENTAL

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Winners this issue: Eric Van Aerde, David Chao, David Graham, Ron Hodge, Jeff Richeson, Tyler Robbins, and Michael Silverman.

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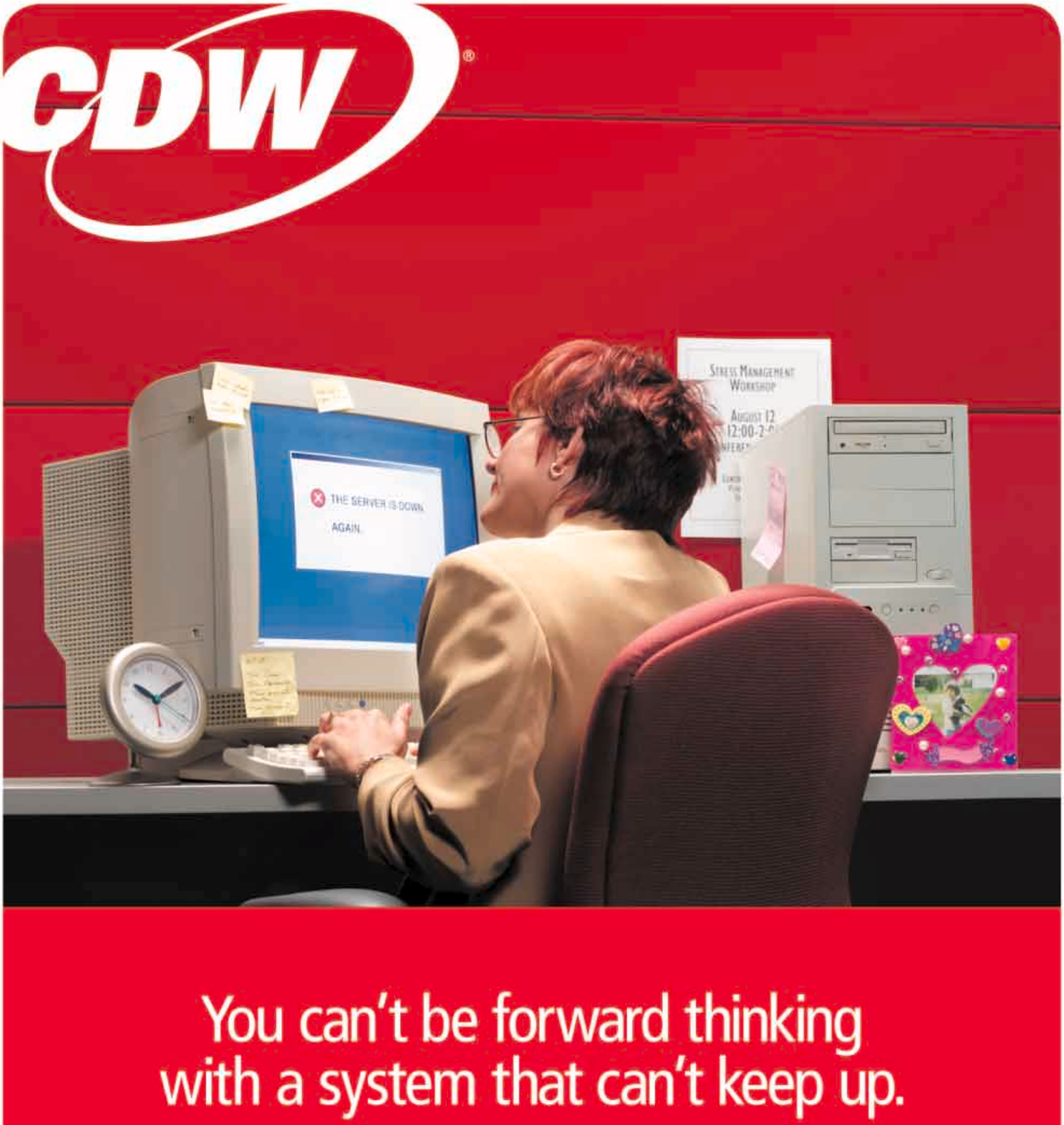
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THE SERVER IS DOWN.
AGAIN.
STRESS MANAGEMENT WORKSHOP
AUGUST 12
12:00-2

You can't be forward thinking with a system that can't keep up.

The best business plan in the world can't outpace a slow, unreliable system. At CDW, we pair the latest desktops and notebooks with the most advanced servers to create the most efficient system for your business. Saving employees from having to wait for processors to complete basic tasks or worry that a server will crash while they're accessing critical data. All of which allows you to get back to the business of beating the competition. Call us and get the right system, right away.

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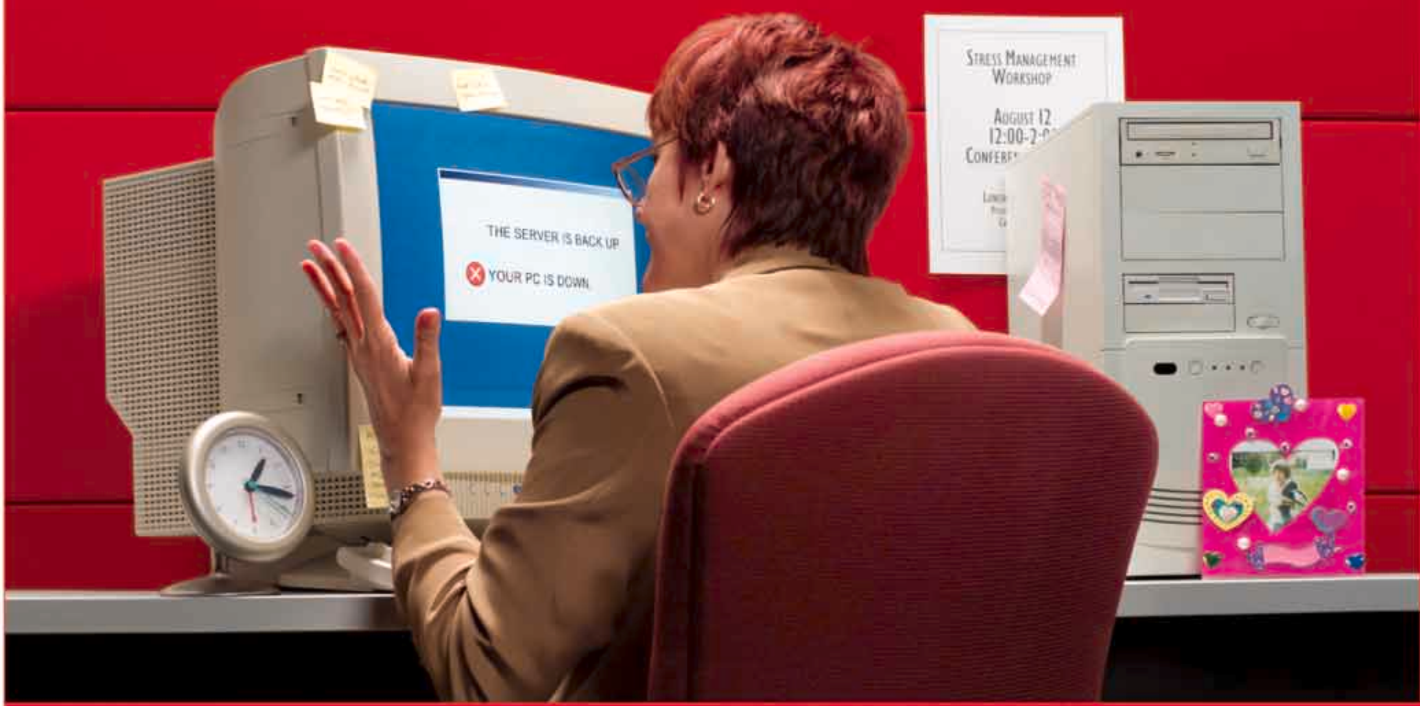

When part of your system is down,
all of your systems are down.

¹Eligible processors include Intel Pentium II, III or Intel Celeron; AMD processors do not qualify; trade-in values are estimates only; actual trade-in values may vary from $25 to $500; all products must be in good working condition and have a fair market value; call your CDW account manager for details; offer ends 12/31/04. Customer understands that CDW is not the manufacturer of the products purchased by customer hereunder and the only warranties offered are those of the manufacturer, not CDW. All pricing is subject to change. CDW reserves the right to make adjustments to pricing, products and service offerings for reasons including, but not limited to,

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Recommended accessories:
Kingston 256MB memory upgrade **$90** CDW 372573
Toshiba port replicator **$179** CDW 577638
Toshiba Services 3-year warranty upgrade **$165** CDW 289266

$1499 NOTEBOOK CDW 683904
-200 TRADE-IN
$1299 YOUR PRICE

TOSHIBA

IBM ThinkPad R51

- Intel® Centrino™ Mobile Technology
- 1.5GHz Intel® Pentium® M processor
- Intel® PRO/Wireless 2200 network connection (802.11b/g)
- CD-RW/DVD-ROM combo drive
- 14.1" XGA active-matrix display

Recommended accessories:
IBM ThinkPad Mini-Dock **$229** CDW 461018
IBM 256MB memory upgrade **$109** CDW 547665
IBM ServicePac 3-year depot service **$160** CDW 169500

$1299 NOTEBOOK CDW 635077
-200 TRADE-IN
$1099 YOUR PRICE

IBM Business Partner

Monitor sold separately

IBM ThinkCenter A50

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- Windows® XP Professional

Recommended accessories:
IBM 15" LCD monitor **$429** CDW 515984
IBM 256MB memory upgrade **$93** CDW 502188
IBM ServicePac 3-year depot service, next business day, 9 x 5, onsite warranty upgrade **$139** CDW 322617

$549 DESKTOP CDW 678340
-30 TRADE-IN
$519 YOUR PRICE

IBM Business Partner

---

hp compaq business desktop d220

- 2.4GHz Intel® Celeron® processor
- Memory: 128MB
- 40GB hard drive
- Windows® XP Home

Recommended accessories:
hp compaq 15" LCD monitor **$329** CDW 633920
hp compaq 256MB memory upgrade **$90** CDW 573469
hp care pack 3-year, next business day, 9 x 5, onsite warranty upgrade **$93** CDW 226432

$379 DESKTOP CDW 594531
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Monitor sold separately

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