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Tips and Tricks

GOOGLE IS MORE than a search engine. It is a dictionary, a calculator, an almanac, a phone book, and much more. Here's how to harness its other powers.

TOP 10 WORDS

GOOGLE LIMITS SEARCHES to only the first ten words entered, so keep your search phrases as short as possible.

Answers	Catalogs	Directory	Froogle
Groups	Images	Google Labs	Google Local
News Search	Special Searches	University Search	Web Search

GOOGLE OPTIONS: TO MINE THE VAST collection of Google's ever-expanding services, go to the icon menu at www.google.com/options/index.html.

Google searches on words in the order they appear, so **book paper** would get you a different result than **paper book**.

DEFINITE DEFINITIONS

DEFINE: Find definitions to words by typing **define:word**. Only the definition is returned. If you want sites based on the word as well, drop the colon. Example: **define word**

BUILT-IN CALCULATOR

USING THE GOOGLE calculator is as easy as 2+2. Just enter the numbers you'd like to calculate, without the equal sign. Example: **2+2** returns with 2+2=4.

For multiplication, use an asterisk (*); for division, use a forward slash (/).

You can also use Google's calculator to query higher-level mathematics. Go to www.google.com/help/ calculator.html for directions.

MAPS IN A SECOND

TYPE **map location** (where *location* is a city and/or state) for your choice of maps. Or do a more exacting search by entering a U.S. street address, city, state, and/or zip code. (For a region map, enter a phone area code.) Example: **123 main street san francisco ca**

INSTANT STOCK QUOTES

ENTER A TICKER symbol for a company or mutual fund on the New York Stock Exchange, Nasdaq, or American Stock Exchange for a current quote.

THE BIG PHONE BOOK

ENTER AN INDIVIDUAL residential phone number (312-555-1212) to get a listed address (and map), or enter a first name (or initial), last name, and city to get the number, if listed. You can also zero in by adding the area code or zip code as well. Don't have an address? List the last name and a zip code or city and state to get a search result.

GOOGLE'S GOT YOUR NUMBER

PACKAGE TRACKING: Enter your tracking number from Federal Express, United Parcel Service, or the United States Postal Service.

UNIVERSAL PRODUCT CODES: Enter the UPC number to get information on the product and its maker.

FLIGHT NUMBERS: Enter the airline name and flight number for status. Example: **United airlines 150** or **usair 150** ∎

Google Hack and Guides

USING THE GOOGLE programming code (API), a number of aficionados have come up with Google applications. Check out Google News Map and Google Word Color at Douwe Osinga's blog (find.pcworld.com/43858).

A cornucopia of Google tips is offered at O'Reilly (find.pcworld. com/43856), the site of the publisher of a trio of Google books: *Google Hacks*, *Google: The Missing Manual*, and *Google Pocket Guide*.

How Lucky Can You Get?

THE "I'M FEELING LUCKY" button next to the "Google Search" button

I'm Feeling Lucky

takes you directly to the first Web page that would be listed on a regular Google search results page. It is best used as a shortcut to a site that will clearly be the first result.

PC WORLD

Instant Reference Guide:
21 Google Shortcuts, Tips, and Tricks

Make quick searches even quicker with the right word. Use the search bar as a calculator. Track packages. Check flight status. Go shopping. Here's how.

Shortcuts

IF YOU KNOW the right syntax, you can home in on a short list of targeted search results. Here are some of the key search phrases and how to use them.

A PLUS FOR + AND -

TO MAKE GOOGLE include stop words (common words that it would otherwise ignore, such as *the*), you can use a + (plus sign). To make Google exclude stop words, replace the + with a – (minus sign). (With all syntax words, make sure there is no space after either sign or after a colon.) Example: To find keyboard shortcuts in Microsoft Word, type **keyboard+shortcut+word**. Replace *word* with any other application name to get keyboard shortcuts for it, such as OE (for Outlook Express), Quicken, and Acrobat.

YOU ARE INTITLED

INTITLE: Tells Google to search for just words found in Web page titles. Example: **intitle:dark chocolate**

CAUGHT IN THE WEB

INURL: Google looks only in URLs of Web pages. Example: **inurl:baseball**

FILE FORMATS RULE

FILETYPE: There are a number of file types searched by Google in addition to standard HTML-formatted pages. Example: Typing **filetype:doc dark chocolate**

brings back only Word documents on the subject of dark chocolate. Similarly for other file types, only files created with the corresponding program are returned. Examples:

- Adobe Acrobat (**pdf**)
- Lotus 1-2-3 (**wk1**, **wk2**, and so on)
- Microsoft Excel (**xls**)
- Microsoft PowerPoint (**ppt**)
- Rich Text Format (**rtf**)
- Shockwave Flash (**swf**)
- Text (**ans**, **txt**)

FIND THE DEALS

TEXT SUPPORT

INTEXT: Google searches only in the body text of Web pages—not in links, URLs, or titles. Example: **intext:pcworld** or **intext:pcworld.com**

CITE THE SITE

SITE: Use this bit of syntax when you want to limit Google's search to a particular site. Example: **site:pcworld.com Microsoft mouse** would offer only references to Microsoft mice that are on *PC World*'s Web site.

How to Search in Froogle
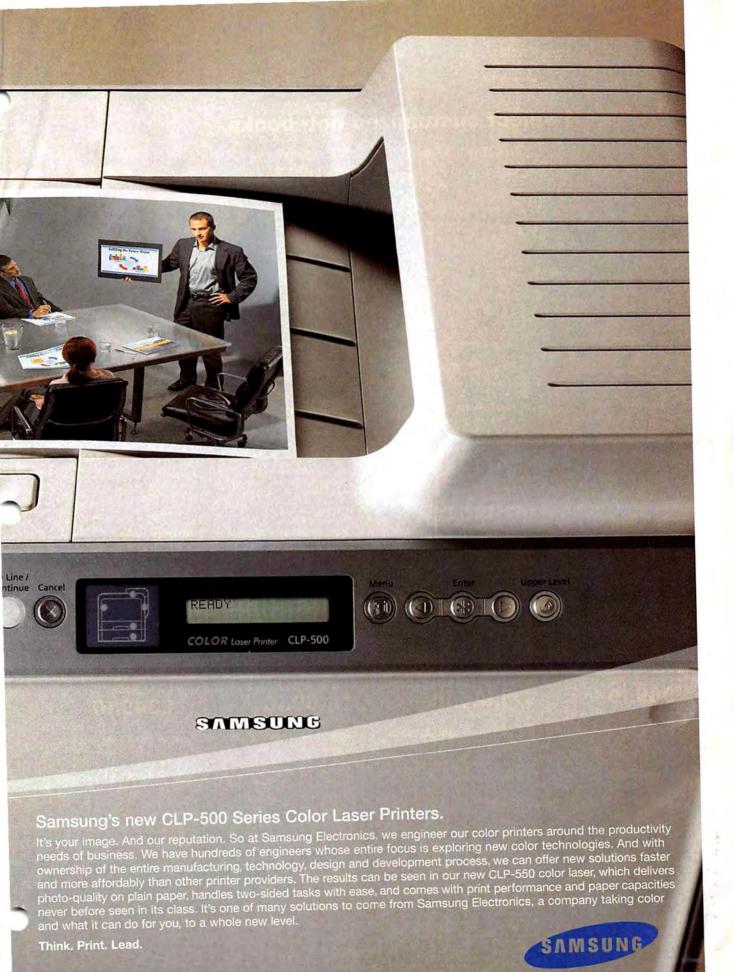
FROOGLE, GOOGLE'S shopping site, targets the item or stores you are looking for more precisely than if you performed the same search in the Google search bar. But you can still get a large number of hits if an item is sold on a legion of Web sites. To narrow your search even more in Froogle, you can search by a specific store. Example: store:macys returns with everything the store sells.

Add an item before, and the search is more specific: chocolate store:macys

Once you get the results, Froogle lets you narrow your query by price range, topic area, and more in a separate pane on the left side of the results page.

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The Annoyances Issue

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FEATURES

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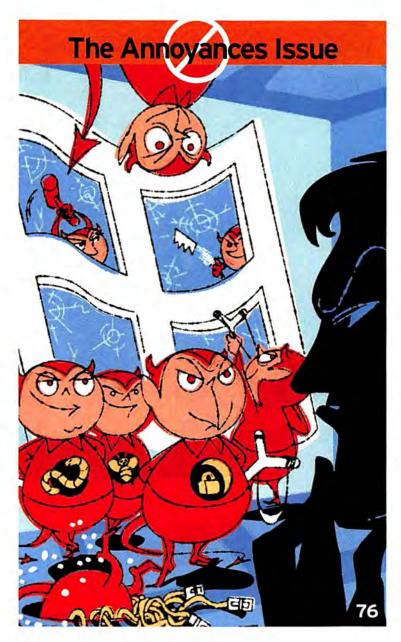
75 Fixes for the Biggest Annoyances

You're at the boiling point. Windows is acting up. Peripherals refuse to cooperate. And online, nothing seems to be working right. Before you give your PC the boot—literally—read this special issue. We've filled it with a host of tricks and tools for eradicating the worst computing irritations. With our guidance, you'll be able to breathe easier—and get back to work.

123

Cover Illustration by Edwin Fotheringham

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Visit www.pcworld.com/pcwinput and rate this issue—you could win an HP IPaq H4155 Pocket PC handheld, which currently sells for approximately $400. You'll need the subscriber number from your mailing label to take this survey online. The site explains the official rules and also how to participate in the drawing if you're not a subscriber. You can enter from September 20 through October 15, 2004.

COMING UP IN NOVEMBER

Tech Shopping Guide: We tell you where to get the best info and prices both online and offline.
Anatomy of a Worm: Follow a Windows system file as it gets created, infected, and patched.

The Total Wireless Network: How to buy, install, and use a wireless net in your home or home office.
From Vinyl to MP3: It's high time you hauled those old LPs out of storage and into the digital age.

Durable DLP Projector, Multitalented MFPs, and a Phone for Photos

NO ANNOYANCES HERE: A home theater projector that uses Digital Light Processing technology, an array of inkjet and laser multifunction printers, and a cell phone that takes 1.2-megapixel photographs are among the stars of our October issue. We also take an extended look this month at free and low-cost utilities to enhance PC performance, housekeeping, and security in "Annoyance Busters" (page 123).

142 Affordable Home Theater
The well-built InFocus ScreenPlay 4805 delivers top-notch imaging capabilities and easy color adjustment at an entry-level price of $1495.

146 All-in-One Multifunction Printers
Our *Top 100* Spotlight illuminates MFPs in two flavors: inkjet (like the Canon MultiPass MP390 at left) and laser (like Brother's MFC-8840DN).

60 Photo-Friendly Cell Phone
The Kyocera Koi heads three camera phones in our *New Products* section. Comfortable and nicely designed, the Koi is nothing to carp about.

THIS MONTH'S CROP OF TOP PRODUCTS

THE HIGHEST-RANKING new products reviewed in this issue of *PC World* are listed above, together with the page number where each product is reviewed and the star rating it received. See find. pcworld.com/10860 for more about *PC World*'s Star Ratings.

PC WORLD

ONLINE FEATURES

PDA Virus Found in the Wild
find.pcworld.com/43974

Experts have been warning about them for years, and now one has finally emerged: the Brador Trojan horse gives intruders access to infected Pocket PC devices.

Hack the Vote
find.pcworld.com/43976

How reliable are e-voting machines? The debate over this question has prompted a challenge—and a cash payout for sabotaging the system.

FEATURED COLUMN

Mac Skeptic
find.pcworld.com/42090

Senior Editor Rebecca Freed casts a discerning eye on Macintosh technologies and products, and identifies what's genuinely hot and what's just hype.

E-MAIL NEWSLETTERS

Weekly Brief
Best stories of the week.
Daily Product Review
Expert reviews, sneak previews.
Steve Bass's Home Office
Get the most from your gear.
Best Buys
Award winners from our *Top 100*.

Daily Downloads
The hottest software on the Web: games, utilities, drivers, and more.

Visit find.pcworld.com/37577 for these newsletters and more.
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PRODUCT FINDER

How it works: Powerful search tools find the products you want.
Best prices: Real-time prices drawn directly from vendors.
Merchants: Hundreds of retailers, with ratings from customers.

Services: Simplified order tracking and shipping calculations for all of your online purchases.

Go to find.pcworld.com/37580 for all Product Finder listings.

FIND-IT URLs

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

HIGHLIGHTS

Digital World
www.digital-world.com

Our new bimonthly publication, *Digital World*, covers the new world of digital entertainment products. All newsstand copies of *PC World* include a copy of *Digital World* as well. In addition, it's available online; *PC World* subscribers can download a printable version for free. Go to dwfind.com/43834 for details.

TOP 10 DOWNLOADS

Head to find.pcworld.com/43906 to locate and download these popular files.

1. Ad-Aware SE 1.03
2. Spybot Search & Destroy 1.3
3. Pop-Up Stopper Free 3.1.1012
4. ZoneAlarm 5.0.590.015
5. Motherboard Monitor 5.3.6
6. Norton AntiVirus 2004
7. WebWasher Classic
8. RegRepair 4.4.03
9. Browser Hijack Blaster 1.0
10. WinPatrol 7.0

MOST POPULAR PRODUCTS

At press time, these were the top sellers, by category, at *PC World*'s Product Finder.

- **Digital Music Player**
  Apple IPod Mini
  find.pcworld.com/43436
- **Memory**
  Kingston 512MB PC3200 DDR DIMM
  find.pcworld.com/43936
- **Business Software**
  Intuit QuickBooks Pro 2004
  find.pcworld.com/43932
- **LCD Monitor**
  SyncMaster 193P
  find.pcworld.com/43930
- **Digital Camera**
  Canon EOS Digital Rebel EF-S SLR
  find.pcworld.com/43938

CLUTTER TO CASH.

There's a gold mine in your garage (or maybe in your closet, or even on your desk). Whether trading in your current system for that hot upgrade, or just watching your old gear gather dust, you should try a great new free resource from PC World and eBay that makes selling your desktop or notebook super convenient.

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ASUS A8V Deluxe Motherboard w/Gigabit LAN & IEEE 1394

Corsair XMS 512MB PC3200 DDR SDRAM Memory

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You're Using an Annoying Browser

Still running Internet Explorer? Switching is easier—and smarter—than ever.

TALK ABOUT A NEVER-ENDING BATTLE! For the third October in a row, our cover spotlights the nuisances that obstruct PC productivity. We like to think we're making a dent in the problem. But annoyances are sort of like Tribbles: Get rid of one, and a half-dozen more pop up to trouble you.

So this time around, we're devoting an entire special issue—spearheaded by Executive Editor Edward N. Albro—to irritations and their fixes. To which I hereby add another bit of annoyance-busting advice: Ditch your browser.

That's assuming you use Internet Explorer, of course. (Odds are you do: 88 percent of visitors to our Web site run it.) Windows XP Service Pack 2 seals some security holes and adds (finally!) a pop-up blocker, but IE feels increasingly like a shaky, lumbering dinosaur.

By contrast, its leading rivals, Mozilla Firefox and Opera, are full of tools to make browsing less taxing. And while no browser is a fortress, these two are safe from a bevy of IE-specific glitches. Some of those holes are serious enough that the Department of Homeland Security's computer security division has publicly mused about the benefits of switching (see "Is It Time to Ditch IE?," page 34).

It wasn't always this way. Back when the browser war raged, IE received frequent (and meaty) upgrades. Only when a bundled-with-Windows IE conquered the market did it start to calcify.

But a funny thing happened when the war ended: The losers forgot to surrender. True, Netscape, like Microsoft, ceased doing much to beef up its browser. But instead, the company did something at least as constructive: It created an open-source version, Mozilla, that third-party developers could reinvent.

Firefox (www.mozilla.org), the newest Mozilla upgrade, is still in beta as I write. Already, though, this free download is an uncommonly polished product. For instance, searching for a phrase in a Web page couldn't be simpler: Just start typing the word, and Firefox scrolls forward to find it. And tabbed browsing, which lets you wrangle multiple Web pages in one window, feels like an essential feature that IE never got around to implementing.

Meanwhile, the Norwegian creators of Opera (www.opera.com) continue to add new stuff. In some ways, their browser is more inventive (albeit more cluttered) than Firefox. For example, it has an RSS newsreader and a nifty little note-taker built in. The full version costs $39, but the ad-supported edition is free.

Nervous that your favorite Web sites won't function well in a browser that doesn't hail from Redmond? Don't stress out about it: I've adopted Firefox as my primary browser for work and play, and nearly every site I've visited is at least as functional in Firefox as it would be in Internet Explorer. IE remains on my drive for sites and services that demand it.

Many of my cohorts have moved on, too: A plurality of our editors now favor Mozilla. Our office may be an atypical workplace, but every new IE security bulletin provides more reason to try an underdog alternative.

I'm not saying that Firefox or Opera will win Browser War II. Still, if even a small fraction of the world were to abandon Internet Explorer, Microsoft would surely work harder to build a better browser. And that wouldn't be annoying at all. ■

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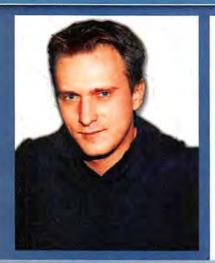
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ILLUSTRATION: EDWIN FOTHERINGHAM

NEWS & TRENDS

EDITED BY RAMON G. McLEOD

Sneaky Sharing

DESPITE WELL-PUBLICIZED WINS BY PIRACY FOES, ILLEGAL DIGITAL MUSIC AND MOVIE TRADING CONTINUES TO FLOURISH IN UNDERGROUND HAVENS. BY MICHAEL DESMOND

WHERE HAS ALL the good illegal peer-to-peer action gone? Underground. In some cases, *waaaaay* underground. Fearful of reprisals from the major entertainment companies and worried about virus-laden, corrupted, or spoofed files, many users are shying away from the big-name file-sharing networks like Kazaa and WinMX, and have gone straight, buying their music and video from legal sources. That's a win for Hollywood.

But it is also clear that large numbers of music and video pirates are simply looking elsewhere for their booty and have turned to lesser-known P-to-P networks, Usenet, and even invitation-only networks.

"Users are very much moving around...rather than moving out," says Eric Garland, the CEO of BigChampagne, a market research firm specializing in P-to-P activity.

To combat the new threats, Hollywood has turned to old standbys: new legislation, more lawsuits, and improved copy-control technology.

Once boasting over 30 million users, Kazaa is now down to about 16 million, according to research firm ComScore Media Metrix. WinMX users have dropped from a high of 6.8 million down to 6 million this May, the firm says. If you looked just at these results, it would appear that entertainment companies are winning

the war. But these statistics show only a partial picture of the piracy problem.

STILL TRADING

HAVE USERS really reformed? Not really: Many are flocking to smaller P-to-P networks like BitTorrent, EDonkey, and EMule. According to Com-Score, BitTorrent nearly doubled in users, from about 200,000 to more than 400,000 between November 2003 and May 2004; EMule grew from under 100,000 users in February 2003 to nearly 300,000 a year later. EDonkey, which ComScore did not track in its survey, has made even bigger gains, says Garland.

Their usage numbers may not be on the same scale as the old Napster's, but these services may pose a greater threat to content owners than previous P-to-P networks. All three use an advanced technique called *swarming*, in which portions of files are downloaded from multiple sources and immediately offered to the network. The result: potentially faster downloads and more rapid propagation of content.

And there are other options for pirated content.

Internet newsgroups, best known by the collective name Usenet, offer a vast reservoir of music, movies, and software, at connection speeds that can put the better-known P-to-P services to shame.

In the past, the difficulty of using newsgroups, combined with limits ISPs place on file transfers, has stunted the growth of piracy on them. That could change, particularly with the emergence of user-friendly software—such as the freely available Xnews reader—that makes accessing

content in newsgroups easier than dealing with the more unpredictable P-to-P services.

But even if newsgroups become a more popular venue for illegal file trading, they are generally still public and therefore trackable. Private networks set up by file traders are harder to track or quantify.

"John," an IT manager for a financial services firm in the Midwest, says that he and his friends have traded files over an encrypted virtual private

Fast, advanced new P-to-P services may pose an even greater piracy threat than the old ones did.

network they set up expressly for that purpose. And more and more music and video is being traded face-to-face.

"If it's music, it's almost always sneakernet," John says. "It's just so much easier to hand someone a USB drive and say, 'Bring it back to me next week.' It's easy to trade someone 20 gigs of music for 20 gigs of music."

GOING STRAIGHT OR DROPPING OUT?

THE GOOD NEWS for Hollywood is that the piracy crackdown in the last two years has persuaded substantial numbers of people to go legit. A Pew Internet Project report reveals an increase in those who say they download music

files, from 18 million in December 2003 to 23 million in February 2004—17 percent of whom use legal services like ITunes or Musicmatch. And ComScore data shows that the six largest online music shopping services drew more than 11 million visits from U.S. users in March alone.

That's as it should be, says Marc Morgenstern, vice president and general manager of Loudeye's Digital Media Asset Protection Business. The company sells online-content-protection services to the music, movie, game, and software industries. Its Overpeer service line is responsible for some of the decoy files masquerading as copyrighted content on P-to-P networks. The aim: to make file sharing so inconvenient that consumers will pay for a more predictable and satisfying experience.

"[The file-sharing community is] starting to notice. If you go on bulletin boards, you will see that people are getting frustrated by this activity," says Morgenstern.

But while file-sharing oldtimers may be frustrated, Hollywood's aggressive antipiracy campaigns may also be scaring off potential customers for legal download services.

The Pew study shows that the Recording Industry Association of America's legal actions are discouraging potential first-time users of legit services. About 60 percent of those who have never tried downloading don't want to go to any source of downloaded music—legal or not—for fear of lawsuits, the study says.

The much-publicized anti-piracy lawsuits aren't the only reason users might be confused as they consider ▶

buying digital tunes. It can be hard to tell the good guys from the bad. Some legitimate music services such as Great Britain's Wippit use the same basic peer-to-peer technology that powers pirate havens like Kazaa, while the Russia-based Allofmp3.com, for example, has a download music store with appealingly low prices—but its licenses are based on Russian copyright laws, so its content may be illegal for users outside of that country.

UPPING THE ANTE

DESPITE AN OVERALL drop in P-to-P activity, the RIAA, the Motion Picture Association of America, and the BSA continue to publish apocalyptic estimates of revenue lost to online and offline piracy. The BSA, for instance, maintains that in 2003 nearly $29 billion worth of pirated software was installed on PCs worldwide. The music industry primarily blames file sharing and music piracy for drops in U.S. sales, from a peak of $14.6 billion in 2000 to $11.9 billion in 2003. What's more, as worldwide broadband adoption continues to grow—especially in Asia—these groups expect the problem to worsen.

Widely available broadband has enabled pirates to expand beyond music to other kinds of digital media. "Accesses for movies and games are increasing dramatically," says Morgenstern. "As soon as a game or movie is released, there is a race out there to get it onto peer-to-peer."

How are antipiracy groups responding? For one thing, they're pushing for more targeted legislation to strictly limit behaviors and technologies that can encourage copy-

right infringement, points out BigChampagne's Garland.

A flurry of such bills is advancing through Congress, including the Inducing Infringement of Copyright Act

---

Scared of lawsuits, 60 percent of potential new users won't try downloading music at all.

(S 2560), which would effectively criminalize P-to-P networks that encourage trading of copyrighted material (see find.pcworld.com/43966 for details on this and other bills).

The legislative effort won't end the cat-and-mouse game, says Morgenstern, because some of these P-to-P software vendors, such as EDonkey, are

UPDATE

SOFTWARE ON THE SLY

HOLLYWOOD IS not alone in feeling the pinch of online pirates. The software industry also faces a significant and growing threat from pirates who spam users relentlessly, marketing cheap, bare-bones copies of popular software such as major products from Adobe, Intuit, and Microsoft.

The e-mail originates largely from Eastern Europe, says John Wolfe, the Business Software Association's manager of investigations. While the spam often describes these copies as being for personal "backup" purposes, Wolfe emphasizes that the practice clearly violates copyright law: The sites make no effort to verify that buyers already have a license for the software, and many offer cracks that let buyers avoid the software's copy protection.

Most such sites have sprung up in the last 12 months, according to industry investigations. And though illegal software sales are difficult to track, Sean Myers, manager of Internet antipiracy at the Software Information and Industry Association, says that, based on his observations, sales of sham backup copies have tripled in the past year.

The BSA and similar groups have a very limited ability to confront offshore pirates. So as with P-to-P file sharing, scrutiny could fall on those who buy the illegal copies of applications.

offshore. And with Gnutella, a popular open-source P-to-P program, "there is no there, there," he says—it's a super-distributed network. "This is a gnarly, worldwide problem."

Peer-to-peer networks are not going to go away."

So in addition to new laws, entertainment and computer companies are bringing new technologies to the content-protection table. One of the more notable is in Microsoft's upcoming Windows Media Digital Rights Management 10 software, formerly code-

named Janus. Though it's meant to facilitate the secure downloading of content from subscription services to portable players, its mission could expand. Janus includes a protected, real-time clock in digital media that permits playback only after verifying that a license is valid. Microsoft has a bevy of partners; expect compatible devices and digital media offerings this year.

Microsoft's software could also work with another DRM scheme called Advanced Access Content System. AACS is intended for use with next-generation optical discs, such as Blu-ray and HD-DVDs. It's in the development stage and should work with other existing DRM technology; it may also let users copy a disc onto a compliant movie server in their home or onto select portable devices. AACS has backing from Disney and Warner Brothers, as well as from several major computer firms like IBM, Intel, Microsoft, and Sony, among others.

TiVo's upcoming digital broadcast security technology, recently blessed by the Federal Communications Commission, permits some sharing of DTV broadcast content over the Internet. It allows a TiVo user to send recorded free, over-the-air DTV programs via the Net to other TiVo boxes or PCs registered to that user.

File sharing is here to stay, and the new DRM technologies do acknowledge that and plan for it. Whether they will give users enough rights to make illegal sharing no more than a blip in the digital media market remains to be seen.

Additional reporting by Liane Cassavoy and Mark Sullivan.

ILLUSTRATION: PETER HOEY

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PINNACLE
SYSTEMS

SYSTEMS

Should Your Next PC Be a Workstation?

DESPITE SUB-$1000 PRICES, THE ANSWER STILL DEPENDS ON WHAT APPS YOU RUN.

THE HP Workstation Xw4200 and Dell Precision Workstation 370 may draw the interest of 'prosumer' users seeking more power.

UNTIL RECENTLY, *workstation* meant a pricey power system that graced the desk of an engineer, a graphics designer, or a professional video editor. But astute PC shoppers who see workstations following conventional desktop PCs down past the $1000 barrier are asking: Should I buy a workstation instead?

The answer: Get one only if you run industrial-strength programs that need high-end graphics and performance, and if you're willing to pay extra for fail-safe reliability. Workstations remain special-purpose systems that contain souped-up hardware and undergo extensive testing, which costs a premium. But with that premium down to a few hundred bucks, the choice really depends on your needs.

It's easy to find affordable, introductory workstations that run Windows. Both Dell and Hewlett-Packard market Windows XP–based workstations starting at under $1000 and stretching to about $3500; IBM's offerings cost only a few hundred dollars more. Midrange ($3000 to $10,000) and high-end units typically have bigger cases than PCs, more memory and PCI slots, and more drive bays, making frequent upgrades easy.

POWER, REDUNDANCY

MOST WORKSTATIONS have error-checking and -correcting memory that won't drop the occasional bit—a flaw unnoticeable in fast-moving games but disastrous when calculating jet aircraft tolerances. These units have larger power supplies and better, quieter fans to avoid overheating.
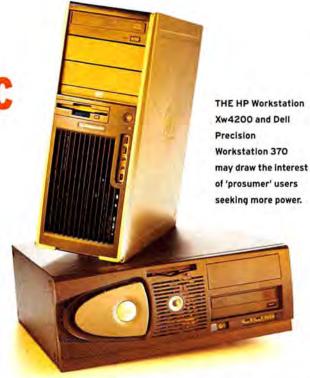
Even some entry-level workstations support dual CPUs, but they need multithreaded software to benefit from them. Adobe Photoshop is multithreaded, but few games are. Microsoft Office's dual-CPU support makes background operations faster and stabler.

Workstations often contain two SCSI or Serial ATA hard drives zipping along at up to 15,000 rpm, and RAID striping to split data between the drives to jack up performance.

New PC components are going right into workstations. The first units of DDR2 memory run at 533 MHz (as with both workstations we tested) but can reach 1 GHz, outpacing the older, 400-MHz DDR. Workstations put the PCI Express bus to good use, as well; Advanced Micro Devices says its Hyper Transport Technology performs similarly.

Workstation graphics ▶

TEST REPORT

WORKSTATIONS RUN FAST, BUT THEIR CAPABILITIES VARY

AN INDUSTRIAL-STRENGTH GRAPHICS board makes a noticeable difference in a workstation's performance with some applications.
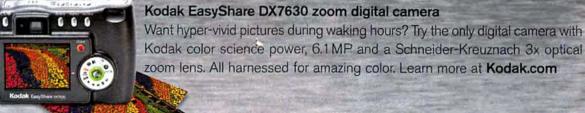
SYSTEM	Price	Processor	Memory	Graphics card	WorldBench 5 Faster	TIME (IN SECONDS) REQUIRED TO RUN TEST				FPS[1]
						Adobe Photoshop 7.0.1	Microsoft Office 2002 with SP2	WinZip 8.1	Musicmatch Jukebox	Return to Castle Wolfenstein
Dell Precision Workstation 370 find.pcworld.com/43994	$3446	3.6-GHz Pentium 4	2GB/DDR2-533 SDRAM	256MB NVidia Quadro 6 Series	112	328	508	281	459	140
HP Workstation Xw4200 find.pcworld.com/43996	$3602	3.4-GHz Pentium 4	2GB/DDR2-533 SDRAM	64MB NVidia Quadro NVS PCI-E	107	343	511	296	482	40
Dell Dimension 8400 (comparison desktop) find.pcworld.com/43544	$2999	3.6-GHz Pentium 4	1GB/ DDR2-533 SDRAM	256MB ATI Radeon X800 XT	98	333	514	356	464	138

TEST Center FOOTNOTE: [1]Frames per second. Tested at 1024 by 768 resolution and 32 bit color. **HOW WE TEST:** All PCs ran Windows XP Professional Edition and were tested with WorldBench 5, *PC World's* applications-based benchmark, as well as an assortment of other benchmarks. See find.pcworld.com/43998 for a complete explanation. Tests developed and conducted by the PC World Test Center. All rights reserved. **CHART NOTE:** A higher score is better on WorldBench 5 and Return to Castle Wolfenstein; for other tests, lower is better.

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cards usually run faster and have more memory than PC boards, and support OpenGL, which adds realistic 3D rendering and is used by dozens of games. NVidia's Quadro FX 4400 is popular; 3Dlabs, ATI, and Matrox also offer professional-class cards.

None of these technologies is unique to workstations. What truly demarcates a workstation from an ordinary PC is added testing to ensure that demanding apps run smoothly. For solid reliability, workstation makers seek certification from software vendors. Workstations also run special speed-tweaking utilities.

Vendors say even the new low-end models go to users with special reliability and performance needs. For example, Wall Street types crunch huge spreadsheets and use multiple real-time displays. "We tune for these kinds of applications," says Joe Curley, Dell's senior manager for the Precision line of workstations.

HP also promotes to "prosumers," notably game enthusiasts who want the class of machines the games were designed on. Vendors report interest from serious amateur video editors, who seek graphics capabilities and reliability.

To see how Windows workstations compare with PCs, *PC World* tested the new Dell Precision Workstation 370 and HP Workstation Xw4200. The Dell posted the second-highest score ever on World-

What truly demarcates a workstation is testing to ensure rock-solid reliability.

Bench 5, our revamped suite of real-world application tests. The Dell's score of 112 slightly outdid the HP's 107 (still a top-five mark), perhaps due to its slightly quicker 3.6-GHz Intel Pentium 4 processor (the HP's P4 runs at 3.4 GHz).

Both showed their speed in our WinZip compression test. The HP unit's NVidia Quadro NVS PCI-E graphics board proved less well-suited to our graphics test; the Dell's workstation graphics card and extra video memory (256MB to the HP's 64MB) did much better. As expected, both workstations earned average scores on our Office and audio tests.

Are there any PC applications a workstation isn't good for? Not really, say the experts. The only drawback is price: For all their new affordability, workstations still cost more. "For every [price] drop you see in workstations, there's usually a deeper drop in PCs," says Lloyd Cohen, IDC's director of worldwide market analysis.

—*David Essex*

FLASH STORAGE

Tiny Drives With Big Brains

IT'S HARD TO RESIST THESE INCREASINGLY HANDY DEVICES. BUT SHOULD YOU TRY?

HAVING BASICALLY replaced floppy disks as the portable media of choice for small amounts of PC data, USB flash drives are pursuing more widespread adoption, sporting faster data transfer speeds, advanced features for desktop mobility and security, and lower prices.

However, that very popularity and versatility make them security risks for businesses, according to a recent report from Gartner Research, which recommends that companies consider forbidding the use of uncontrolled, privately owned devices on their equipment.

The U.S. Department of Energy already has banned USB flash drives and other portable storage, such as Apple IPods, from the workplace, saying copying and stealing sensitive data with them is just too easy.

EXPANSION PLANS

DESPITE SUCH concerns, the drives' capabilities continue to grow. Take RedCannon Security's Fireball KeyPoint USB drive: Using its included software, you may surf the Web and leave no tracks. The KeyPoint also scans your PC for spyware and allows you to access a version of your e-mail account stored on the drive. The KeyPoint costs $299 for a 512MB model.

Meanwhile, the DiskOnKey division of M-Systems has unveiled what it claims are the

fastest USB 2.0 flash drives yet available, boasting read rates as speedy as 23 megabytes per second and write speeds of 15 MBps, which is about 30 percent faster than the rates of competitors. The latest crop of DiskOnKey drives comes in an array of sizes, topping out at 2GB ($470).

The $130, bottle-cap-size Micro Mini 512MB USB 2.0 Drive from Iomega can hold dozens of portable applications called Active Disk software. While you currently can open only one app at a time, Iomega says that by winter the drive should handle opening multiple apps at once.
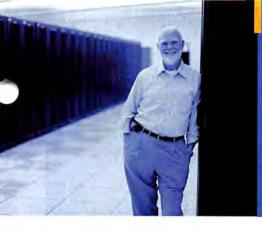
Security risks aside, the best news is that USB flash drives are increasingly affordable.

MINIATURE MEGABYTES from RedCannon (above left), M-Systems (right), and Iomega.

Analysts say prices will dip even lower over the next six months as new vendors begin making the type of memory these drives use, thereby creating price competition.

—*Tom Spring*

BROWSERS

Is It Time to Ditch IE?

FEDS SAY SWITCHING BROWSERS IS ONE WAY TO DEAL WITH SECURITY THREATS.

THIS SUMMER the Department of Homeland Security's cybersecurity wing suggested that people use a different browser to deal with Internet Explorer's continuing security flaws. Could this be the beginning of the end for Microsoft's Web browser dominance?

Don't bet on it. Recently discovered flaws in the Mozilla browser illustrate that it is not immune to exploits (see "In Search of a Safer Browser,"

ART MANION of the Department of Homeland Security says that Internet Explorer's unique features increase its vulnerability.

page 36). Also, Windows XP Service Pack 2 provides new protections against IE-specific attacks (IE's tight integration with Windows prevents you from uninstalling it, anyway). Still, with no end in sight to Web-based attacks, neither alternative—patching IE or

switching to a non-Microsoft browser—is by itself sufficient to ensure online safety.

POPULAR TARGET

IE'S SWAY IS impressive: In June, IE's global browser usage share was 95 percent, according to the Web analytics firm WebSideStory.

But that ubiquity has also subjected IE, and Microsoft, to sustained attacks from virus and worm writers and brows-

er hijackers looking for the biggest returns. According to TruSecure Corporation Chief Strategist Russ Cooper, moving to another browser would provide only a temporary solution: "If people did switch en masse, the attackers would simply switch their target."

Still, market dominance is not the only reason for the Microsoft browser's disproportionate share of attacks. Art Manion, Internet security analyst for US-CERT, the operational arm of the National Cyber Security Division at the Department of Homeland Security, says IE's unique features increase its online vulnerability. Examples include IE's security zones; its support for scripted ActiveX controls and for scripts that let Web sites hide browser menus and toolbars; and Dynamic HTML support. "Other browsers simply do not have these features," Manion adds.

Microsoft continues to put out patches for newly discovered flaws. But after a flaw that had been previously repaired reappeared in a new patch, US-CERT issued a vulnerability note recommending that Web users might want to consider a different browser. Around the same time, in early July, WebSideStory reported that for the first time in years, IE's market share had dropped by a percentage point, to 94 percent.

IE's preeminence is unlikely to decline significantly, however. Despite long-standing efforts by Web-standards organizations, many companies continue to employ Microsoft-proprietary scripting and HTML extensions that make their sites fully functional only when viewed using Internet Explorer. And even when you do set up a different default browser, some features of Windows—including the cru-

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cial Windows Update patch mechanism, Windows Messenger, and Outlook Express —invoke IE regardless of your default browser choice.

OTHER STEPS

DESPITE REPORTS to the contrary, US-CERT hasn't recommended dropping Internet Explorer as the only—or even the best—way to combat online threats. "US-CERT does not recommend one specific browser or software product over another," states US-CERT's Manion.

Instead, the US-CERT vulnerability note (find.pcworld. com/43840) suggests dumping IE as the last of several strategies for handling a flaw in which a Web page in the Internet Zone (where IE invokes a number of safeguards against attacks) can trick IE into running JavaScript code in the much-less-secure Local Machine Zone, where programs are assumed to be known to the computer user.

WEB SECURITY

Other measures that US-CERT recommends include disabling Active scripting (which encompasses Java-Script) and ActiveX controls in both the Internet and Local Machine zones; applying security updates for Microsoft Outlook; sending and receiv-

ing mail using the script-proof plain-text format; using an updated antivirus program; and avoiding links embedded in unsolicited e-mail, instant messages, or Web forums (see August's *Internet Tips*, find. pcworld.com/43842).

Even when the US-CERT vulnerability note finally suggests using a different browser, it says that doing so may prevent Web users from using all of the features of key Web

sites. The solution isn't bailing out of IE, according to TruSecure's Cooper, adding that doing so would be like "stamping out a flea on your back with a tractor trailer." Both he and Manion instead recommend simply adding known, legitimate sites to IE's

Trusted Zone after tightening security in the Internet and Local Machine zones.

Concerns about IE's flaws may further decrease as users install Windows XP Service Pack 2, which became available in early August (see find. pcworld.com/43844). Cooper, for example, particularly lauds SP2 for incorporating new IE features that protect users from attempts to invoke or install malicious software via a

Web page. Manion likes the way SP2 prevents Web sites from altering IE's interface— for example, by hiding address and status bars that show the real name of a Web page, which allows perpetrators of phishing attacks to make their pages look much more believable. (*Phishing* is the use of realistic-looking Web pages or e-mail messages purportedly from banks or other financial institutions that request recipients to enter their user names and passwords, which then go directly to the attackers.)

Still, Microsoft's new service pack is not a panacea. "I have no doubt that some sort of attack will be discovered that can work against IE after XP SP2," warns Cooper. But at the very least, he says, SP2's new safeguards will make the problem of not knowing that an attack has occurred "dramatically less likely—if not eliminating it entirely."

—*Scott Spanbauer*

> Concerns about IE's flaws may further decrease as users install Windows XP Service Pack 2.

IN SEARCH OF A SAFER BROWSER

ALTERNATIVE BROWSERS MAY not soon eclipse Microsoft's Internet Explorer, but that doesn't mean they can't serve alongside or even replace it. US-CERT reports "a number of significant vulnerabilities in technologies relating to the IE domain/zone security model, the DHTML object model, MIME type determination, and ActiveX," and that "it is possible to reduce exposure to these vulnerabilities by using a different Web browser, especially when browsing untrusted sites."

Using different browsers can also change the way you experience the Web. On the
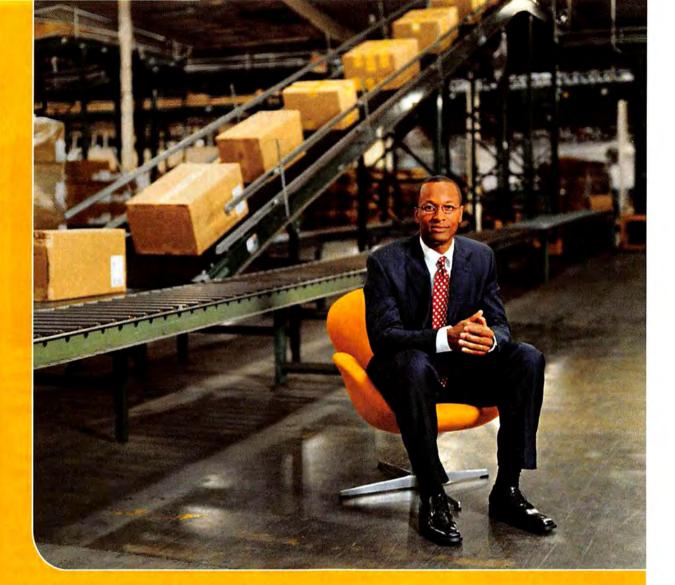
RUNNING A TAB: Firefox's tabs lets you flip instantly between sites.

one hand, they can stop you in your tracks at Web sites engineered to work only with IE. But on the other hand, you might be pleasantly surprised: Alternative browser features missing in IE include password managers and tabbed browser windows.

Rolf Assev, an executive vice president at Opera Software, says that safety con-

cerns rather than new features drive users to the Opera browser: Reports of IE's security flaws have spurred a big increase both in free downloads and in sales. Downloads of the Mozilla Foundation's Mozilla and Firefox browsers have also spiked.

Using a non-Microsoft browser doesn't assure security. Hackers recently exploited flaws—since patched—in both Opera and Mozilla (as well as in the Netscape browser derived from the latter). Still, the fact that these browsers suffer far fewer attacks than IE could make them look like safe harbors, even if only for a little while.

FUTURE TECH

Building a Global Phone

WHEN TRAVEL TAKES you outside of the United States, technological incompatibilities can render devices like your cell phone useless. Now a company by the name of Vanu is using technology called Software Defined Radio to try to change that.

All current radio technology—including standard radio, wireless Internet connections, and cellular connections—is hardware-based. The hardware defines the function of a device, whether it's an FM radio or a CDMA or GSM cell phone. With software-based radio, instead of having one cell phone that uses a GSM network and another that requires a CDMA network,

you could have one handset with built-in software that lets you connect to both networks. Vanu has demonstrated the technology with a prototype IPaq handheld. In addition to displaying screen icons for standard software, the unit also features icons that the company uses to launch analog FM radio (the standard commonly used for walkie-talkies) and P25, a digital FM standard used by emergency-responder radios. CDMA and GSM calling could be added in the future. The result is a more useful cell phone that you could operate on any cellular network anywhere. Consumer use of the technology is likely about five years away.

—*Liane Cassavoy*

HEADS UP

7 Megapixels Under $600

STORES SHOULD BE STOCKING the next photographic fancy by the time you read this: 7-megapixel digital cameras. In the midrange, for instance, Sony will ship its 1-inch-thick Cyber-shot DSC-P150, a 7.2-megapixel camera that includes a 3X optical zoom lens and a 1.8-inch LCD screen. It captures images at a resolution of 3072 by 2304 pixels, which should be good enough to print 8-by-10-inch enlargements at 300 dots per inch. Expect to pay less than $500. Canon's comparable 7-megapixel Power-Shot S70 comes with a 28mm to 100mm, 3.6X wide-angle optical zoom lens so that you can get everyone in the photo. The $599 S70 also has 13 shooting modes (including enhanced VGA movie mode) and an optional wireless controller. –*Anne B. McDonald*
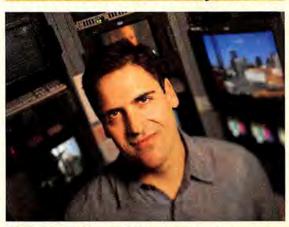
THREE MINUTES

A Vision for Portable High-Def

MARK CUBAN, AN EARLY Internet millionaire, founded HDNet, the first national network to broadcast entirely in the 1080i high-definition TV format. He also owns the Dallas Mavericks, and is slated to star in the ABC fall reality show The Benefactor.

What is HDNet?
HDNet is kind of a USA- or TNT- or TBS-type network that has a wide variety of content. On HDNetMovies, we take movies that were either shot in high-def or were shot in 35 millimeter that we think are good, and put them out there.

What computing devices are you currently using?
I have two Sony VAIO laptops in front of me. One is a backup; one is a backup for a backup. Then I have a D-Link access point. I've got an old Snap Quantum drive. I've got a removable 80GB drive that I also use as a backup. You can tell I get kind of freaky about backups. I just bought a new HP Media Center PC M1090n, with the removable 160GB drive. I bought it to do some testing, because I want to be able to take HDNet content and see if we can distribute it on these removable drives—just jump past DVD.

You mean distribute high-def content on removable drives, not on next-generation DVD technologies HD-DVD and Blu-ray?
Hard drives are far more efficient and more capable of storing future content than HD-DVD or Blu-ray. No question that those discs right now are smaller—physically—but they top out at a 50GB capacity. Drives don't have such limitations. They are increasing in storage and decreasing in size and price. Heck, it's not inconceivable that you could fit a 2-hour, high-definition movie on a small keychain drive within five years.

What will that mean to me as a viewer at home?
Well, hopefully you'll be able to buy or rent a hard drive with 5, 10, 20 movies on it. And you'll use your DVR, your PC, or your Media Center PC, and just through a FireWire port or a USB 2.0 port, you'll connect the hard drive [to load or view the movies]. *(Read Mark's blog at* find.pcworld.com/43848. *For a longer version of this interview, go to* find.pcworld.com/43846.*)*

—*Liane Cassavoy* ∎

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To make IBM ThinkPad notebooks even more valuable, each are featured here are give you the efficiency, productivity and edge you need on business with on the following ThinkVantage Technologies:

IBM Active Protection System:

Helps detect on that ThinkPad notebooks, uses an ongoing technology to help protect your hard drive from sudden damage caused by drops and jolts.

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Lost your data because of a software crash on virus? Recover it. Recover saved data in minutes with our single-button solution.

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Switch between wired and wireless connections.

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Use our and through a hardware that combined hardware and software solution is designed to protect user data and keep it private.

Access IBM:

Get the help you need, when you need it. One button on your ThinkPad notebook brings you a world of resources and assistance.

IBM ThinkPad R51

System Features:

- Intel® Centrino™ Mobile Technology
  - Intel Pentium® M Processor 715 (1.50GHz)[7]
  - Intel PRO/Wireless Network Connection 802.11b/g[7]
- Microsoft Windows XP Professional[4]
- 15" SXGA+ TFT display (1400x1050)
- 256MB DDR SDRAM[5]
- 40GB hard drive[6]
- Integrated Ethernet and modem
- IBM Ultrabay™ Enhanced CD-RW/DVD-ROM combo
- IBM UltraConnect™ Antenna for increased signal strength[7]
- 1-yr system/battery limited warranty[8]

NavCode 1836H8U-M419

THINK EXPRESS MODEL PRICED AT **$1,499***

With Microsoft Office Small Business Edition 2003:[4] $1,739

IBM ThinkPad T42

System Features:

- Intel Centrino Mobile Technology
  - Intel Pentium M Processor 1.50GHz[7]
  - Intel PRO/Wireless Network Connection 802.11b/g
- Microsoft Windows XP Professional
- 14.1" XGA TFT display (1024x768)
- 32MB ATI Mobility RADEON 7500 graphics
- 256MB DDR SDRAM
- 30GB hard drive
- Integrated Gigabit Ethernet and modem
- IBM Ultrabay Slim DVD-ROM
- IBM UltraConnect Antenna for increased signal strength
- Only 1" thin,[10] 4.5-lb travel weight[11]
- 1-yr system/battery limited warranty[8]

NavCode 2378DTU-M419

THINK EXPRESS MODEL PRICED AT **$1,549**

With Microsoft Office Small Business Edition 2003: $1,789

ServicePac™ Service Upgrade:[12] 2-yr Onsite Repair/9x5/Next Business Day Response #30L9189 **$197**

IBM ThinkPad T42

System Features:

- Intel Centrino Mobile Technology
  - Intel Pentium M Processor 735 (1.70GHz)[7]
  - Intel PRO/Wireless Network Connection 802.11b/g
- Microsoft Windows XP Professional
- 14.1" XGA TFT display (1024x768)
- 32MB ATI Mobility RADEON 7500 graphics
- 256MB DDR SDRAM
- 40GB hard drive
- Integrated Gigabit Ethernet and modem
- IBM Ultrabay Slim CD-RW/DVD-ROM combo
- IBM UltraConnect Antenna for increased signal strength
- 1-yr system/battery limited warranty[8]

NavCode 2378FTU-M419

THINK EXPRESS MODEL PRICED AT **$1,749**

With Microsoft Office Small Business Edition 2003: $1,989

ServicePac Service Upgrade: 4-yr Depot Repair #69P9195 **$249**

IBM ThinkPad T42

System Features:

- Intel Centrino Mobile Technology
  - Intel Pentium M Processor 1.50GHz[7]
  - Intel PRO/Wireless Network Connection 802.11b/g
- Microsoft Windows XP Professional
- 15" XGA TFT display (1024x768)
- 32MB ATI Mobility RADEON 7500 graphics
- 256MB DDR SDRAM
- 40GB hard drive
- Integrated Gigabit Ethernet and modem
- Ultrabay Slim CD-RW/DVD-ROM Combo
- Only 1" thin, 5-lb travel weight
- 1-yr system/battery limited warranty[8]

NavCode 2378DWU-M419

THINK EXPRESS MODEL PRICED AT **$1,649**

With Microsoft Office Small Business Edition 2003: $1,889

ServicePac Service Upgrade: 3-yr Depot Repair #30L9192 **$132**

IBM ThinkPad T42

System Features:

- Intel Centrino Mobile Technology
  - Intel Pentium M Processor 735 (1.70GHz)[7]
  - Intel PRO/Wireless Network Connection 802.11b/g
- Microsoft Windows XP Professional
- 15" SXGA+ TFT display (1400x1050)
- 64MB ATI Mobility RADEON 9600 graphics
- 512MB DDR SDRAM
- 60GB hard drive (7200 RPM)
- Integrated Gigabit Ethernet and modem
- IBM Ultrabay Slim CD-RW/DVD-ROM combo
- IBM UltraConnect Antenna for increased signal strength
- 3-yr system/1-yr battery limited warranty[8]

NavCode 2379DXU-M419

THINK EXPRESS MODEL PRICED AT **$2,399**

ServicePac Service Upgrade: 3-yr Onsite Repair/9x5/Next Business Day Response #30L9195 **$243**

IBM ThinkPad X40

IBM ThinkVantage Technologies:

- Longest standard battery life of any leading-brand notebook[13]

System Features:

- Intel Centrino Mobile Technology
  - Intel Pentium M Processor LV 1.20GHz[7]
  - Intel PRO/Wireless Connection 802.11b
- Microsoft Windows XP Professional
- 12.1" XGA TFT display (1024x768)
- Intel Extreme Graphics 2
- 256MB DDR SDRAM
- 40GB hard drive
- Integrated Gigabit Ethernet and modem
- Legendary IBM fullsize keyboard[14]
- 7.5hr Li-Ion battery[15]
- 1-yr system/battery limited warranty[8]

NavCode 23866GU-M419

THINK EXPRESS MODEL PRICED AT **$1,749**

ServicePac Service Upgrade: 3-yr Onsite Repair/9x5/Next Business Day Response #30L9195 **$243**

IBM ThinkPad X40 Solution Pack

IBM ThinkVantage Technologies:

- Longest standard battery life of any leading-brand notebook

System Features:

- Intel Centrino Mobile Technology
  - Intel Pentium M Processor LV 1.20GHz[7]
  - Intel PRO/Wireless Connection 802.11b
- Microsoft Windows XP Professional
- 12.1" XGA TFT display (1024x768)
- 256MB DDR SDRAM
- 40GB hard drive
- Integrated Gigabit Ethernet and modem
- 7.5-hr Li-Ion battery
- 3-yr system/1-yr battery limited warranty[8]

Accessories Included:

- ThinkPad X4 UltraBase Dock
- IBM Ultrabay Slim CD-RW/DVD-ROM combo

NavCode 23826UU-M419

THINK EXPRESS MODEL PRICED AT **$2,199**

ServicePac Service Upgrade: 5-yr Onsite Repair/9x5/Next Business Day Response #69P9200 **$449**

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small & medium business
S O L U T I O N S

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Information Services Manager
City of Chaska, US

RECOVERING A LOST HANDHELD   **WATCH STATEMENTS FOR ONLINE FEES**   **WORDPERFECT DEFENDED**

PC MYTHS–ARE THEY OR AREN'T THEY?

YOUR ITEM ON cell phone and electronics usage on aircraft ["Busting the Biggest PC Myths," August] is not entirely correct. As a professional airline pilot, I have experienced interference attributed to electronic device usage in the cabin, which could have (under different weather conditions) caused a disaster. Fortunately the outcome was a safe landing. Technology changes rapidly, and every combination of radio frequency interference patterns cannot possibly be tested. Passengers who think they "know better" could cause hazardous situations.

Dave Meyer, Ramstein, Germany

LETTER OF THE MONTH

Spam King Is 'Part of the Problem'

IN THE AUGUST "Three Minutes" interview [*News and Trends*], so-called spam king Scott Richter was asked, "How do you react to people who challenge your business from an ethical standpoint?" He answered: "There are a lot of people who have a lot of time on their hands. I wish those people would take all that time and help find a cure for cancer, help puppies at the shelter, clean up the highways." Well, Mr. Richter, those people who actually want to do the things you talk about are probably sitting at their home or office, hour after hour, sorting your 100 million e-mail messages a day, and maybe that is why those things are not being done. You are a part of the problem!

Guy Antebi, via the Internet

THE FEDERAL Communications Commission (not the Federal Aviation Administration) requires that cell phones not be used in flight, as they would create co-channel interference with other users. A cell phone used while airborne could cause interference with many conversations.

Rich Stewart, Annapolis, Maryland
Editor's response: As we should have made clear, the FCC does indeed prohibit the use of cell phones on flights once the plane is airborne, while ground use is allowed by the FAA.   *–Grace Aquino*

YOU SAY IT'S a myth that "Terrible things happen if you turn off your PC without shutting down Windows." If, however, you turn off the computer without first spinning the hard drive heads down, the heads can crash into the disk, which can make the drive unusable. The kids at the school where I work frequently turn off the PCs whenever they like by holding down the power button or unplugging the power cord; as a result, out of 250 PCs, we have had to replace 20 hard drives in the last nine months. (And all of our systems are less than two years old.)

David Bailey
Kenton, Newcastle, United Kingdom

YOU SAY, "DOS is dead," but you can still get new DOS licenses (PC-DOS, not MS-DOS). I work for a company that refurbishes used IBM computers. For every functional machine we ship, we are required to include either Windows or a DOS Certificate of Entitlement. If a machine comes in with a customized or older version of Windows, neither of which we can load, then it gets a COE.

Jeffrey DeWitt, Garner, North Carolina

EXPERTS CAN DISAGREE

IN YOUR AUGUST issue your writers have created some confusion. In "Busting the Biggest PC Myths," author Gregg Keizer states that it is a myth that "Turning off your PC daily to save power shortens its life." The sidebar to *Hardware Tips* on page 154, "Four Tips for Longer PC Life," says to leave your PC running.

Wayne Staples, via the Internet
Editor's response: Our myths article states, "There's no definitive answer," though we tried to report what seems to be the consensus of the experts. Kirk Steers's column notes the difference of opinion.   *–G.A.*

MORE FREE SOFTWARE

YOUR ARTICLE "The Best Free Software" [August] touts the Google Deskbar while ignoring Dave's Quick Search Deskbar (www.dqsd.net). This program has been around since well before Google's offering, it is quite well-regarded, and I've found it practically indispensable.

John Barone, Alexandria, Virginia

WITH WINDOWS XP, unless you shell out for the "Plus" pack, you have virtually no control over the XP style interface. One of the programs listed in the *PC World* Downloads area—Style XP 2.01—solves this issue for free; it provides access to literally hundreds of styles on its associ- ▶

ated Web site and to any other themes, styles, boot screens, and log-ins that you can find around the Net.

Lawrence Hults, Lincoln, Nebraska

INK COSTS

THE AUGUST article "Ink Costs Compared: The Frugal and the Spendthrifts" [the sidebar, on page 96, to "Printers for Every Purpose"] ignores one important point: HP has made it impossible for others to clone their ink cartridges; other companies have not—making their printers cheaper to operate. Third-party ink cartridges for Canon printers—which work fine—cost one-fourth the price of cartridges refurbished by HP.

Hank Friedman, El Cerrito, California

LABEL YOUR HANDHELD

"KEEP YOUR HANDS on Your Handhelds" [*Consumer Watch*, August] missed one good method for recovering a handheld: With a label maker, type "REWARD IF FOUND—CALL *xxx/xxx-xxxx*." Never rely on just the ID screen—the battery may die long before the unit is found.

Bob McKinley, Washington, DC

WATCH YOUR CHARGES

THANKS FOR the story on Simple Escapes and MemberWorks ["Fees Surprise Unwary Web Shoppers," *News and Trends*, August]. I spotted their charge on a long-unused credit card, spent hours doing research on the Internet and more on the phone with MemberWorks and my issuing bank, and had the charge reversed.
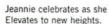
Lyn Ian, via the Internet

IN DEFENSE OF WORDPERFECT

YOUR REVIEW OF WordPerfect Office 12 [*New Products*, August] merely considers it to be mimicking Microsoft Office at a lower price. I bought the OEM version of WordPerfect Office 11 with my PC because I considered WordPerfect to be a better word processor than Word. The upgrade to version 12 was a no-brainer.

Charles Chapman, London, Ontario, Canada

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Cheap, Incredibly Fast Net Access

Plus: Cell phone clubs, a store in your OS, and free streaming audio.

1 Really Broad Broadband

The Buzz: If you're one of the lucky ones, you'll soon be able to cruise the Web at 5 megabits per second for about $40 a month. There's a catch, of course. Verizon's Fios program—which runs honest-to-goodness fiber-optic cable right to your doorstep—is currently available only in Keller, Texas, with a couple more cities due to come online by the end of the year. Verizon will also offer a 15-mbps fiber-optic package (five to ten times faster than cable or DSL) for $50, or $45 if you have Verizon phone service, and a 30-mbps version for a price yet to be determined.
Bottom Line: Like the doctor says, fiber is good for you. Too bad it's so hard to get.

2 Phone-Side Chats

The Buzz: Man is a social animal with opposable thumbs, which explains the burgeoning popularity of SMS (short message service) clubs composed of mobile citizens who share common interests and a passion for cell phone "texting." San Diego–based SMS.ac—which boasts 10 million–plus members in some 200 countries—has more than 100,000 user-created clubs, from MJTurkFan ("Michael Jackson's Turkish Die-Hard Fans") to Nike World. Sending an SMS note is free, but for receiving messages club members are charged a small fee, which SMS.ac shares with the club's founder.
Bottom Line: It isn't all fun and games. Say you've missed work or blown off a meeting. Just SMS a plea to the Alibi and Excuse Club, and a stranger will intercede (as in, lie) on your behalf. Handy!

3 Windows Shopping

The Buzz: Microsoft is readying Windows Marketplace, a site that will point shoppers toward Windows-compatible hardware, software, and downloads. Accessible via the XP Start menu, an Internet Explorer button (added via Windows updates), and third-party sites, Marketplace will feature "a really big tent" of merchants, says Windows XP product manager Tracy Overby. Multiple partners are promised, though at press time only CNet (which brings Download.com and a passel of e-tailers to the party) has been announced. It isn't yet clear how Microsoft will make money from this, though history suggests it'll find a way to profit.
Bottom Line: Hmm.... I wonder if you'll be able to buy the Windows version of Monopoly on the Marketplace site.

4 Free Music Streams

The Buzz: An intriguing new model for music sharing, Mercora transforms its members into broadcasters who can stream any song in their library to others using Mercora's peer-to-peer network. Members can create groups and specify who gets to hear their music. But all listening is live: There's no downloading permitted. In the spirit of P-to-P, members can't listen in unless they make their own content available for sharing.
Bottom Line: Mercora pays a licensing fee to the record industry. In other words, it's legal. Look, Ma, no lawsuits. ∎

Contributing Editor Steve Fox covers buzz-worthy products, ideas, and trends. Contact him at steve_fox@pcworld.com. Visit find. pcworld.com/31643 for more Plugged In.

NAGGING QUESTION

Why Is It Called Beta Software?

THE SECOND letter of the Greek alphabet, *beta* signals the second item in a series. In the world of prerelease software, an "alpha" is the first iteration–a program undergoing in-house testing. When an alpha graduates to beta, intrepid customers get to try it out. Most software passes through multiple beta stages and then "release candidates." The final version is often referred to as GA (for "general availability") or "gold code"–an overly optimistic moniker, given the inevitable bug fixes and service packs that follow.

HOW TO AVOID WEB BUYING ANNOYANCES

PRIVACY WATCH: WHO'S STAKING OUT YOUR INBOX?

ON YOUR SIDE: MP3 FILES IN LIMBO

Web Shopping: A Cart Full of Frustration

Buying online should be simple and pleasant. Here's how to end the hassles.

NO SPECIAL ISSUE on technology annoyances would be complete without a discussion of the superstore of struggles and the database of difficulties that online shopping sometimes becomes. So here are half a dozen common (and aggravating) glitches that continue to bedevil e-commerce, along with some suggestions for avoiding them in the future.

CHEAPER TO KEEP IT

GOT A GRIPE concerning the goods you bought? Unless you have indisputable proof that the glitch is the retailer's fault, you can count on picking up the tab for return shipping (and often, the cost of insurance as well). This expense can add up fast, especially for heavy items such as computers and appliances. In fact, the cost of returning the item may be steep enough in some cases to convince you to settle for an item that's less than satisfactory.

Your best bet is to make sure at the outset that the item you order is exactly what you want, and then read the return policy carefully. You might also consider purchasing from a Web site that has a physical store nearby, but only if you're sure that the store will accept returns on items ordered online. (For electronics, don't forget to check for restocking fees, which may add 15 percent or more to your tab.)

REBATE ROULETTE

WHAT IS IT about rebates that brings out the cheapskate technophobe in companies? Setting up a simple form that consumers could fill out and submit online ought to be a no-brainer for these Web geniuses. But even at sites like Rebateplace.com that are dedicated to the black art of rebate tracking, you'll find only downloadable PDF files that you have to print, fill out, and (gasp!) physically drop in a mailbox. If I didn't know better, I might suspect that companies aren't interested in making rebates easier to get.

ACCOUNT FOR THIS

WHEN WAS THE last time you had to create a special account with a supermarket just to buy a gallon of milk?

That's what I thought. So why do so many shopping sites insist on trying to start a long-term relationship when all you want to do is buy a printer cartridge?

As far as I'm concerned, a good shopping site should treat customers like a well-mannered first date: First you spend some quality time together. And then, if things work out, the two of you can take it to the next level and start choosing login names, passwords, and preferences.

BREAKING UP IS HARD TO DO

SPEAKING OF commitment, music fans might recognize this tactic, which some Web-based services use to lure folks into an LTR: The site offers a short-term, ▶

no-strings-attached free trial subscription.

But if you decide to end the relationship after the trial period—or even after you've subscribed for a while—things can get dicey. Some online services (especially ones that already have your credit card number) seem to guard the secret of how to cancel a subscription as if it were a nuclear-missile launch code.

So the next time you're tempted to check out some new music site or other online service, don't hook up until you know how to break up. Look for direct contacts to customer service and clear, concise billing policies; and be wary of sites that are long on promises but short on details. And to all the Web services that just can't seem to take no for an answer: It's not you, it's us, okay? Give up and move on.

BARGAINS THAT AREN'T

THERE'S NOTHING like the thrill of finding a hot piece of gear, a rare CD, or a fancy software application on sale at a rock-bottom price. Congratulating yourself on your online shopping savvy, you hustle it into your shopping cart and jubilantly click the checkout button. But when the site recalculates your total charges, that bargain-basement price suddenly doesn't look like such a bargain anymore.

It's those sneaky shipping and handling costs again. Just when you think you've snagged a steal, the site tacks on costs that are steep enough to send the package via Tahiti on a first-class plane ticket.

Don't get taken in. Before you seal any deal, compare the cost of the item plus shipping at three or four different sites. The sites that engage in this practice presumably hope that customers can't—or won't—do the math. Does that sound like a company you want to do business with?

WHOSE SITE IS IT, ANYWAY?

IF YOU'VE EVER purchased electronics, tools, clothing, food, housewares, or anything else besides books or music from a certain online vendor whose name rhymes with "Shamazon," you may have experienced this one first-hand. You order a widget from your favorite retail megasite. A few days later it shows up, sent by some company you've never heard of.

Granted, this isn't a problem if your widget arrives in perfect condition. But what if it's DOA? That's when you'd ▶

New Services That Peep Into Your Inbox

"YOU SENT ME AN E-MAIL? My spam filter must have zapped it."

Lots of us have used this line, and chances are that a few times, like when the message was a bunch of lame jokes from Uncle Morty, it wasn't the absolute truth. But the excuse won't work anymore if Uncle Morty starts using one of the new services that track whether you got an e-mail and what you did with it.

These services, from MsgTag (www.msgtag.com, $20 with a free trial) and DidTheyReadIt (www.didtheyreadit.com, $50 per year, with a free trial), insert a small piece of HTML code into outgoing messages. When the recipient opens the message in an HTML-compatible e-mail client such as Outlook or Outlook Express, or with a Web-based mail service like Hotmail, either service can track the message.

Both MsgTag and DidTheyReadIt can tell senders when the message was received and when it was opened. Did-TheyReadIt goes a few steps further, allowing the sender to find out how long the message window was left open and whether a message was forwarded.

The purveyors of these services argue that there's a real need (beyond simple nosiness) for them. A certain percentage of legitimate messages do get caught in spam filters, and using return receipts won't always ensure that your missive gets through. "Most system [administrators] will turn off all return receipts by default, and some e-mail services, like Hotmail and Yahoo, don't allow return receipts at all," says Alex Rampell, CEO of Rampell Software, which sells the DidTheyReadIt service.

But does that concern justify empowering people to snoop into your e-mail reading habits? In some circumstances, these services could be downright dangerous. DidTheyReadIt grabs the IP address of the computer you use to open an e-mail message, and then uses that address to determine your location, right down to the city you're in. The service "gives you the location [of the recipient] and a link to MapQuest," Rampell says. Imagine how helpful this would be to a predatory adult who's in e-mail communication with a child.

If you want to protect your privacy, both services are fairly easy to defeat. The easiest solution is to disable the display of HTML content or of embedded graphics in your messages. Doing this will also prevent the majority of phishing e-mail messages from displaying properly; so in general, it's a sensible thing to do. The downside is that you won't be able to see any other images—including ones you might want to see—that are embedded in the body of messages. (Image files sent as e-mail attachments will still get through, however.)

For people who use Outlook (versions 2000 through 2003) and don't want to turn off HTML in mail messages, former Netscape programmer Mike Belshe has created a free program called NoSpyMail (www.belshe.com/nospymail) that can detect and block Web bug elements in messages without requiring you to turn off HTML in your e-mail client software.

To my mind, your inbox should be your own personal domain. Let's do what we can to keep it that way. —Andrew Brandt

Crash Eats MP3s

I USED A LAPTOP to edit lots of music files—family recordings, 78s, LPs, and tapes, all of which required hours of work. I didn't have room on my notebook hard drive, so I transferred the files to my RCA Lyra RD2840 MP3 player. After seven weeks, the Lyra died, taking my files with it. (I meant to make copies, but hadn't done so before the Lyra stopped working.) RCA offered to exchange the player, but retrieving my data is more important.

Kip Williams, Newport News, Virginia

On Your Side responds: RCA's warranty policy is to exchange a broken device with a new one. But the company made an exception for Williams. "Our engineers disassembled it and found that an integrated circuit had burned out," says spokesperson Dave Arland. The good news: "The hard drive is intact and [RCA] will transfer it to a working Lyra player," Arland says. Our advice: Regardless of how new your storage device is, make sure that you back it up regularly.

—Grace Aquino

better start hoping that the sending company has as responsive a customer service department and as accommodating a return policy as the site that you thought you were buying from.

Note to big online shopping sites: If you're going to partner with every Tom, Dick, and Harry and David.com on the Web, make sure your customers understand that they're doing business with another company. And provide a clear link to that company's return policies and restrictions before checkout. ∎

Anne Kandra is a contributing editor and Grace Aquino and Andrew Brandt are senior associate editors for PC World. *You can send them e-mail at consumerwatch@pcworld.com. If you would like to read previously published* Consumer Watch, Privacy Watch, *or* On Your Side *columns, visit* find.pcworld.com/31703, find.pcworld.com/31706, *or* find.pcworld. com/31709, *respectively.*

11 Easy Ways to Keep a PC Up-to-Date

Get the latest on patches and upgrades for your hardware and software.

I'LL BET THAT YOU need something to worry about. Start with the latest roll-out of ever more dangerous viruses and worms. Then wonder whether you have all the latest updates and hot fixes for your programs and devices. My strategy for staying one step ahead of the bad guys combines news feeds, alerts, online lists, and a few indispensable sites that deliver the information my PC can't live without.

Even with such snazzy new tools as instant messaging and RSS feeds (more about them later), I get most of my technology information the traditional way—via e-mail and by surfing the Web. Here are my au courant essentials.

First, make sure that you have Windows XP set to check for updates automatically (this feature isn't available in other versions of Windows, which you have to update manually). Right-click *My Computer* and choose *Properties•Automatic Updates*. Check *Keep my computer up to date*. (See this month's *Internet Tips* column on page 166 for more on Automatic Updates.) Under 'Settings', choose either to be notified when updates are available, so that you can download them yourself, or to have Windows download them automatically and alert you prior to installing them. (I skip the automatic installs because I want to know what Microsoft is up to.)

Until recently, Microsoft supplied a free CD containing all critical Windows updates through 2003. My guess is they'll do it again. Check find.pcworld.com/43200 for the availability of the CD. If Microsoft does send out the CD again, you'll have to wait two to four weeks for delivery.

And don't forget to download and install Windows XP's new Service Pack 2, which improves the OS's security.

To keep up with happenings in the Redmond Empire, I subscribe to KbAlertz (www.kbalertz.com), a free e-mail service from Scott Cate and Dave Wanta that covers important new Microsoft Knowledge Base articles. One of the service's recent alerts resolved a USB printing problem that had been plaguing me for months.

DOWNLOAD A BIG FIX

BIGFIX (free for consumers) checks my PC for bugs, security risks, and outdated software. Visit find.pcworld.com/43202 for the download. When you're asked during install whether you want BigFix to run every time you boot, say no. (Run the utility manually once a week.) After installing BigFix, open it and select *Go•Subscribe* to sign up for your version of Windows.

To keep my primary e-mail inbox from overflowing, I use a Web-based account for alerts and lists. (I'm lucky enough to have a Google Gmail account with 1GB of storage, but a Yahoo account with 100MB of storage would work, too.)

The hottest new technology for gathering information is RSS feeds (it stands for Really Simple Syndication, among other

things). Instead of hunting down news and alerts yourself, you can subscribe to sites and services that send the data directly to you. The RSS format is easy to scan for critical headlines. And whereas my ISP's spam filter inadvertently blocks some e-mail lists, all of my RSS feeds get through to my inbox.

In order to use this technology, you must have an RSS reader. My favorite is FeedDemon, which also earned the Editor's Pick from last July's "News on Demand" roundup of RSS software (find.pcworld.com/43206). FeedDemon works very much like a program I'm already accustomed to—Internet Explorer. It comes with almost 180 RSS feeds presubscribed (because I was interested only in technology and news, I deleted almost half of the offerings). I love FeedDemon's Auto-discovery feature: If I browse to a Web page that has feeds, the program can quickly add them—no muss, no fuss. Unfortunately, FeedDemon costs $30, but it's worth it. Visit find.pcworld.com/43208 to download the trial version. Pluck RSS Reader (find.pcworld.com/43210) is a good, free alternative.

I'm interested in reading about upcoming products and those currently being tested. So I log on to WinBeta to see what is moving through Microsoft's product pipeline (www.winbeta.org). Also cool are BugBlog's RSS feeds (www.bjkresearch.com), which save me grief by telling me about software glitches and workarounds.

I gotta run. I just got an RSS feed from my wife, Judy, alerting me to the latest news: My dinner's getting cold. ∎

Contributing Editor Steve Bass is the author of PC Annoyances, *published by O'Reilly. Contact him at homeoffice@pcworld.com.*

ILLUSTRATION: GREG CLARKE

Security Holes Plague Windows Help

Patches for XP and 2000 are available now—but 98 and Me users must wait.

AS ITS NAME implies, the Windows HTML Help system is designed to help PC users by providing graphics, multimedia elements, and hyperlinks to additional information. But it turns out that attackers can use this system to help themselves to your files, and even to take control of your PC.

Two newly discovered security holes affect the HTML Help system and the Task Scheduler in Windows XP and 2000. The Help security bug also affects earlier versions of Windows, including 98, 98 SE, and Me.

Unfortunately, Microsoft has not yet finished developing patches for the older Windows versions and can't say when they'll be ready. When they are, the company says, users will be able to get the patches through Windows Update (find.pcworld.com/43704). One minor blessing: The older

versions of the Windows operating system aren't susceptible to the Task Scheduler bug. (Task Scheduler allows users to set the times when specific

jobs, such as system maintenance programs, will run.)

Before a malevolent cracker could exploit either security flaw, you would have to visit a Web site that hosted a malicious link, or click a link in an HTML e-mail that took you to the attacker's site. Like many

security flaws in Microsoft products, these holes could be exploited by sending the system faulty or excessive information, causing the machine to malfunction. Then the attacker would transmit a program of his or her own to take control of your PC.

Microsoft designated the holes as "critical" because a cracker's successful assault could result in the complete takeover of your machine: The evildoer would then have free rein to steal your personal files or even to wipe out the contents of your hard disk.

Microsoft has now released patches for both flaws in Windows XP and 2000. If you use XP, I recommend getting Service Pack 2. Though the company hasn't yet posted patches for Windows 98 and Me systems, it has provided workarounds for both bugs.

So far, there have been no reports of attacks, but don't take any chances. Visit find.pcworld.com/43706 for the patches and for more technical details on the HTML Help flaw (numbered 840315), and go to find.pcworld.com/43708 to get the Task Scheduler fix (numbered 841873). Both fixes are included in SP2. ∎

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

INTERNET EXPLORER FIX BLOCKS NEW VIRUS

MICROSOFT'S CUMULATIVE PATCH for IE plugs three newly discovered security holes that it rates as "critical," including one that could result in something similar to a serious—but not widespread—virus attack launched this past July that is known as the "download.ject" or "Scob" virus (see find.pcworld.com/43820 for more); the attack involves logging a user's keystrokes.

The patch aims to head off recurrences of that incident, which exploited weaknesses in Windows and in Microsoft's Web server software. The update also contains previously released patches for IE, fixing flaws in Windows XP and 2000—but not 98 and Me yet. Get the patch (numbered 867801) at find.pcworld.com/43822.

IN BRIEF

Dell Adapter Recall

DELL IS RECALLING 28,000 power adapters for some Latitude and Inspiron notebooks. It is possible to plug the wrong power cord into the adapters, posing a shock hazard. Go to find.pcworld.com/43714 for information about a free retrofit kit.

Mozilla Patch

A NEW PATCH FIXES a flaw discovered in the protocol handling functions of Firefox, Thunderbird, and the Mozilla Application Suite. The bug affects only Mozilla browsers on Windows PCs—not those on Linux PCs or Macs. The fixed versions are Mozilla 1.7.1, Firefox 0.9.2, and Thunderbird 0.7.2. Visit find.pcworld.com/43824 for details.

D-Link Firmware Upgrade

D-LINK HAS released new firmware for its AirPlus DI-614+ wireless routers. The update, version 3.43 (find.pcworld.com/43720), fixes a hole that could allow Denial of Service attacks.
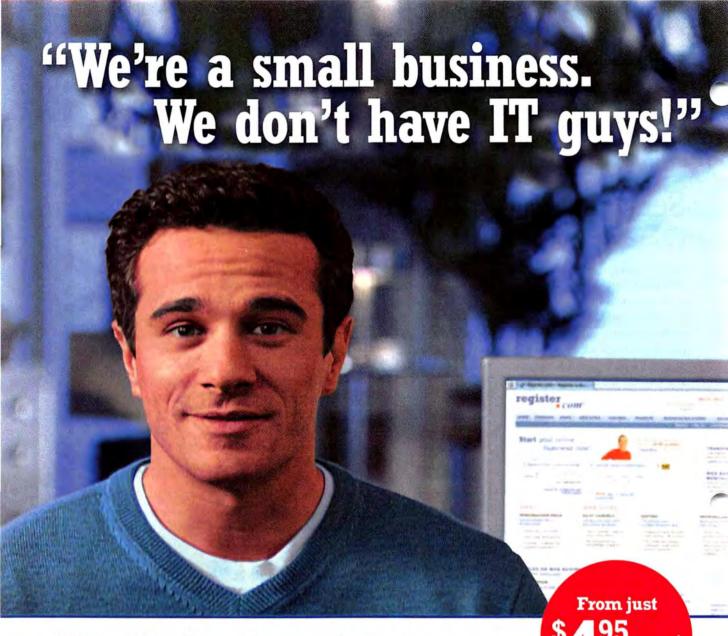
BUGGED?

FOUND A hardware or software bug? Tell us about it via e-mail at bugs@pcworld.com.

Suddenly the idea of email on a cell phone seems obvious.
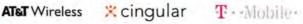
Treo 600

Push one button on the Treo™ 600 smartphone from palmOne and it happens. Suddenly you're on email* – sending, replying, communicating. All with an integrated, easy to use QWERTY keyboard. No complex key punching or endless text scrolling. No booting up or waiting for applications to launch. Just updated email, ready when you are, right out of the box.* The Treo 600 is also a full-featured mobile phone, a Palm Powered™ organizer and a digital camera. It lets you text message and browse the Web.* And yes, it really is small enough to slip in your pocket. Learn more at www.palmOne.com or visit your local service provider. Finally, a smartphone that really is smart.

Sprint.   **AT&T** Wireless   ✕ cingular   **T**··Mobile·   **palmOne**

NEW PRODUCTS

Camera Phones Go Megapixel

New phones offer more features and higher-resolution images, but don't ditch your stand-alone camera.

THE NEW Sprint PCS Vision Picture Phone PM-8920, Kyocera Koi, and Nokia 7610.

CELL PHONES

EARLY CAMERA phones were more toy than tool, capturing low-resolution images better suited for throwaway shots than photo-album memories. Kyocera, Nokia, and Sprint PCS hope to change that with new megapixel-plus camera phones capable of taking pictures good enough for 4-by-6-inch prints. However, my tests show that while their photos are larger, they still lack the sharpness, detail, and color accuracy stand-alone digital camera users demand.

I tested preproduction versions of the Kyocera Koi ($199 to $299) and the $450 Nokia 7610, plus a shipping version of the $300 Sprint PCS Vision Picture Phone PM-8920. I photographed our test mannequin, Gloria, indoors using each camera's highest resolution setting. Afterward I moved images off the Kyocera and Nokia to a PC using a USB cable; Sprint PCS does not offer a cable, so I transferred the photos by e-mailing them as file attachments.

I viewed the resulting test images on my PC screen and as 4-by-6 prints. Though all were satisfactory, none were exceptional. For example, the 1280-by-960-resolution snapshots from the Kyocera Koi appeared a little washed out, and the flesh tones looked a bit too gray. The Nokia 7610's 1152-by-864-resolution pictures offered slightly better skin tones, but overall they were too dark—in part due to the device's lack of a built-in flash. The Sprint PCS PM-8920's 1280-by-960-resolution images looked brighter, but they were grainy, with very noticeable color speckling.

Overall, I consider the photo and video quality of these phones comparable to that of low-end Webcams—and far below that of digital cameras selling for as little as $200.

KYOCERA KOI

KYOCERA'S new phone has the most original design of the bunch: Its handset features a 2-inch LCD screen that doubles as the phone's cover. To open the Koi, you swivel the screen 180 degrees to reveal the dial pad. Open or closed, the screen is always in view.

If you hold the phone in your right palm, your index finger conveniently touches the scroll button on the side. With it you can easily adjust the volume as you talk, or you can navigate the on-screen, pinwheel-style user interface.

Open, the phone measures an above-average length of 7 inches, yet it's comfortable to use and to hold against your ear.

The phone's camera is hidden behind a lens cover. Sliding it up automatically activates the 1.2-megapixel camera, which includes a flash. You can take photos with the phone open (vertically) or closed (horizontally).

The phone's biggest drawback: In my informal battery tests, the Koi conked out sooner than the other two phones.

As we went to press, Kyocera still hadn't announced which carrier would offer the Koi, but the unit should be available from a major provider by the time you read this.

NOKIA 7610

MANY OF Nokia's phones have a distinctive appearance, but they often include ambiguous icons on the buttons, and the 7610 is no exception. While it looks stylish—complete with black, shiny buttons that curve slightly to the left like the letter J—the phone was a bit hard to use. Numbers on the dial pad are too

PHOTO RESULTS: All three units produced imperfect images of our test mannequin. The Kyocera Koi's were drab (left), the Nokia 7610's looked dark (center), and the Sprint PCS PM-8920's had color artifacts.

close together, making you liable to inadvertently press the wrong one, and some button icons are indecipherable.

Once you do get to the menu, navigating between entries such as Movie, Web, and instant messaging is simple. Back on the home screen, activating the 1-megapixel camera is easy, so you're always ready to start shooting.

The 7610 omits a flash, but its 2.25-inch screen—the largest and brightest in this group—is a pleasure to use when shooting photos and short video clips.

Unfortunately, the 7610's flat design made it uncomfortable for phone calls. It also lacks a standard volume-control button; to adjust the volume during a call, you must use the scroll button on the dial pad, which means holding the phone away from your ear. The 7610 is available now through Cingular.

SPRINT PCS PM-8920

THE SPRINT PCS PM-8920 is the smallest phone here, but it's also the plainest. It comes with a built-in flash and a few extra camera tools, including Color Tone effects such as Sepia, Negative, and Sketch. Another nice touch: The 1.3-megapixel camera has a switch that toggles between portrait and close-up modes.

It sports a clamshell design and a silver body; a camera

button is on the side below the volume controls. However, after you press the button, the camera takes about 4 seconds to activate. (The Kyocera and Nokia cameras each take less than 2 seconds to start up.)

The phone includes a small screen on the outside, which can display caller ID during an incoming call, and a larger, 1.8-inch screen inside. Navigating the on-screen menus was manageable, thanks to an intuitive interface. Overall, the unit is comfortable to use, and it features a speakerphone.

While I would not recommend replacing your current stand-alone digital camera with any of these units, the Kyocera Koi was my favorite phone of the bunch. Despite its shorter battery life, I liked the Koi's ease of use, and it produced decent images. Add to that a reasonable price, and you have a camera phone that will please most casual users.

—*Grace Aquino*

Koi

Kyocera

★★★☆☆

Well-designed Koi is a pleasure to use; battery life could be better.

Street: $199 to $299

find.pcworld.com/43788

7610

Nokia

★★☆☆☆

Slick-looking phone has a great screen but is cumbersome.

Street: $450

find.pcworld.com/43790

Picture Phone PM-8920

Sprint PCS

★★★☆☆

Lots of features, but this plain-looking phone fails to excite.

Street: $300

find.pcworld.com/43792

Personal Finance Goes for Convenience

FINANCES

THE ANNUAL updates of Microsoft Money and Intuit's Quicken once again reach out to new users seeking help managing their finances. I tried shipping versions of Money 2005 Premium and Quicken Premier 2005 (both $80). Either will please newcomers, but neither is an essential upgrade for owners of recent versions—with the possible exception of Money customers seeking super-easy access to their accounts online as well as via the desktop app.

That's because Money 2005 has automated synchronization of account data in the

KEEP IT SIMPLE—OR NOT: Money 2005's default view omits memos and categories, but you can see them in the traditional view shown here.

note that to use it you need a .Net Passport from Microsoft. Also, Microsoft requires that you upgrade Money every two years to continue using *any* of its online services. If you don't upgrade, you won't be able to download transaction data from banks or other institutions—a big drawback.

LOOK AHEAD: Quicken 2005's home screen shows upcoming bills, deposits, and a running balance to help make sure you're covered.

desktop with a Web-based MSN Money account. Entries in the desktop software appear automatically online (and vice versa), a huge convenience for people who want to manage finances from different locations via a browser—and don't mind storing their financial data on Microsoft's servers.

The Web synchronization worked fine in my tests, but

As usual, Money comes in four flavors: the $30 barebones Standard edition; the $60 Deluxe version with planning tools; the $80 Premium version that adds extra investment tools to Deluxe; and the $90 Small Business edition for those who mingle personal and small-business accounts.

To make the program less intimidating, Money's register

now shows, by default, only check number (where applicable), payee, date, amount, account balance, and whether or not a transaction has been reconciled. For users who want it, the traditional advanced view, which shows categories and memos, is still available.

QUICKEN EVOLVES

THE CHANGES in Quicken are less dramatic. The major innovation is on the home screen's list of upcoming bills, which now includes scheduled deposits and a running balance meant to show you if you'll have enough money for all your payments. This isn't a bad idea, but since the list doesn't show nonbill expenditures such as cash withdrawals, balance estimates are only approximate at best.

Other tweaks: Quicken can now memorize rules to turn cryptic payee names in downloaded records into ordinary English (E BAUER*51590045 becomes Eddie Bauer, for example). And another step toward ease of use lets you

QUICK TAKES

Sony's Self-Portrait Cyber-shot Camera

THE ROTATING lens on Sony's $450 Cyber-shot DSC-F88 makes self-portraits easier—but otherwise this 5.1-megapixel camera has little unique about it. Though it's larger and weighs more than Sony's similar DSC-T1, it has a much smaller LCD (1.8 inches versus 2.5 inches). The F88 costs a bit less and has some useful manual exposure controls, but you really have to like pictures of yourself to choose it over the T1. find.pcworld.com/43726   —Alan Stafford

make drop-down category lists less unwieldy by concealing categories you rarely employ. Handy new tools for filtering and finding entries include the ability to assign colored flags to your transactions.

Quicken's versions—the $30 Basic, $60 Deluxe, $80 Premier, and $90 Premier Home & Business—correspond roughly to Money's. Intuit won't say how long it will support Quicken's online services.

—*Yardena Arar*

Big BenQ LCD Disappoints

M O N I T O R

BENQ'S 23-inch wide-screen LCD monitor—the new FP231W—makes an impressive desk trophy. I can't tell you how many coworkers stopped by to cast covetous glances at its business-class beauty. But unfortunately, its performance doesn't live up to its great first impression.

Although the monitor's sedate charcoal-and-matte-silver cabinet looks very professional, the $1999 FP231W is clearly meant for greater things than just spreadsheets. In addition to analog and digital inputs, it includes S-Video and composite inputs. The unit's vast screen, with a 1920 by 1200 native resolution, can display several applications at once—and that isn't counting the picture-in-picture window for watching TV or videos.

However, in my informal tests of a shipping model, regular video seemed to be a little grainy and ghosty. High-definition video was sharper, but still showed some ghosting. In any application, light areas appeared shimmery and washed out, causing black text on a white background to display as less than perfect.

The FP231W offers some nice features. For example, unlike most 23-inch models it can swivel from side to side as well as tilt. Even when I raised the monitor several inches on its base, it felt stable and well balanced. Sadly, such fancy features don't overcome the unit's iffy image quality.

—*Laura Blackwell*

FP231W
BenQ
★★✭☆☆
Good looks and nice features don't compensate for giant-size LCD's less-than-stellar display.
Street: $1999
find.pcworld.com/43478

THE 23-INCH BenQ FP231W.

QUICK TAKES

Wireless Travel Router Rocks

HOTEL BROADBAND is great, but if you'd rather do your work outside on the balcony—instead of at the uncomfortable desk in your room—check out Netgear's WGR101 Wireless Travel Router. A little bigger than a deck of playing cards, this $100 device has its own firewall and connects to the hotel network, providing 802.11g wireless access for one or more notebooks (you can even securely share your connection with a colleague rooming next door).
find.pcworld.com/43746

—*Edward N. Albro*

HP's Dreamy Media Center

D E S K T O P

TEST Center TRICKED OUT with a gorgeous 23-inch high-definition LCD monitor, Hewlett-Packard's Media Center M1050y is a dream system. Unfortunately, the price is a bit of a nightmare: $4900.

But if you have the capital, you'll get a powerful Windows XP Media Center Edition 2004 PC that makes managing your burgeoning digital lifestyle remarkably easy and fun. The F2304 monitor's 1920 by 1200 native resolution offers beautiful video playback, and the Klipsch ProMedia Ultra THX 5.1 speakers produce wonderfully crisp, clear audio.

I also liked the unit's removable Personal Media Drive, which you can take out of the system's chassis to use with any other PC via USB 2.0. Equally convenient is the computer's built-in seven-in-one memory card reader.

The system's black-and-silver tower case looks a little too, well, PC to make a full transfer to most living rooms. But with its 3.6-GHz Pentium 4 processor, 1GB of DDR400 SDRAM memory, and 250GB hard drive, my shipping model proved plenty powerful for most any computing task, scoring 96 on WorldBench 5 —on par with comparably configured desktop systems that we have previously tested.
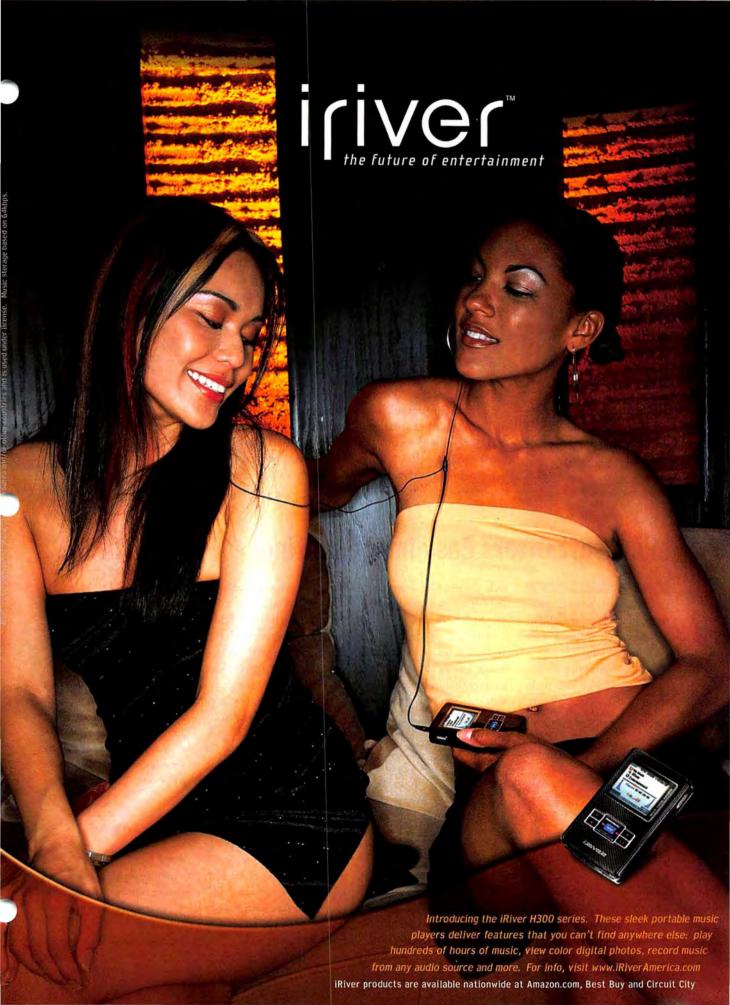
HP has less expensive versions of the M1050y that omit goodies such as the Klipsch speakers ($250) and the LCD monitor ($2200). But if you're looking for a multimedia powerhouse, it would be hard to find one better than this drool-worthy configuration.

—*Anne B. McDonald*

Media Center M1050y
Hewlett-Packard
★★★★☆
If you're serious about a digital lifestyle and have the bucks, this PC will make you very happy.
List: $4900
find.pcworld.com/43718

HP'S MEDIA CENTER M1050y with the optional LCD and speakers.

HP's Thrice-Wireless PDA

HANDHELDS

NO WIRELESS-enabled handheld can guarantee an Internet connection wherever you go, but HP's new IPaq H6300 Pocket PC series at least gives you several chances by integrating GSM/GPRS cellular, 802.11b Wi-Fi, and Bluetooth capabilities. Though pricey, these handhelds should appeal to business travelers.

A preproduction model of HP and T-Mobile's $600 **IPaq Pocket PC H6315** made a great first impression with its clean design, snap-on keyboard, and excellent wireless setup utility.

The H6315 also has a built-in camera with a digital zoom lens that can capture 640-by-480 images that looked surprisingly crisp and well lit.

The business-oriented My E-Mail service from T-Mobile can channel messages from several existing accounts—including POP3, Exchange, and Web-enabled Lotus Notes—into the H6315's inbox. However, I was unable to set the device to retrieve only new mail as it arrived, and my overloaded Notes mailbox crashed the device's inbox—a problem that could limit the H6315's usefulness.
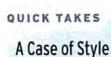
Still, the H6315's triple-threat wireless capabilities make it worth a look if staying connected is a high priority.

—*Yardena Arar*

HP'S new H6315.

IPaq Pocket PC H6315
Hewlett-Packard
Preproduction unit, not rated
Well-designed Pocket PC offers three flavors of wireless and a good low-resolution camera.
List: $600 ($500 after rebate from T-Mobile with activation of a new account)
find.pcworld.com/43702

Microsoft Offers Easy Image Editing

DIGITAL PHOTOS

IF YOU'RE READY to upgrade from the basic image editing software that shipped with your digital camera, take a look at Microsoft's **Digital Image Suite 10**. The $129 package includes all the software tools you need for organizing and editing your growing digital photo collection.

At the heart of the shipping product I tested is Digital Image Library 10, a photo organizer that looks a lot like Windows XP Explorer. Library lets you easily upload your shots, rate them with up to five stars, flag them for future attention, label them with captions, and assign them keywords for easy categorization.

When you're ready to begin editing your photos, you launch Digital Image Pro 10. Microsoft arranges the tools logically, and a set of Auto Fix commands makes completing basic changes easy. Tasks such as red-eye removal and panoramic stitching require little user intervention. Digital Image Pro provides fewer options and complex commands than competitors such as Adobe's Photoshop Elements and Jasc's Paint Shop Pro, but what you do get generally works very well.

The app's simplicity can be a bit limiting, however. For example, unlike most editors Digital Image Pro 10 will let you work only on one image at a time, so you can't try out different edits on side-by-side copies of the same photo.

Digital Image Suite 10 is a solid package, particularly for photographers ready to step up from basic image editing apps. Advanced users, however, may not appreciate the way the suite's ease of use masks some control limitations.

—*Paul Jasper*

TO EDIT YOUR PHOTOS within Microsoft's Digital Image Suite 10 package, you launch the easy-to-use Digital Image Pro 10 application.
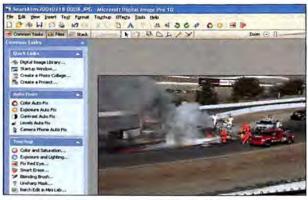
Digital Image Suite 10
Microsoft
★★★½☆
A solid image editing suite for evolving photogs, but its simplicity may annoy advanced users.
Street: $129
find.pcworld.com/43600

When was the last time your Intranet was updated?

Announcing the Macromedia® Web Publishing System. You build and manage the site. Users keep content fresh.

With Macromedia® Studio MX 2004, Contribute™ 3 and Contribute Publishing Services, you can affordably build, manage, and publish enterprise sites. And unlike the average content management system, this works. You determine who can edit and who can publish. Then users simply point and click to update any page. In no time, dated content will be a thing of the past. Learn more at **www.webpublishingsystem.com**

macromedia
WEB PUBLISHING
SYSTEM

CardScan Updated

SCANNER

COREX'S NEW $250 CardScan Executive, a revision of the indispensable business card scanner and contact management bundle, presents a fresh look, some additional tools, and notably faster performance than its predecessor.

Version 7 of the CardScan software dispenses with the old virtual-Rolodex-on-your-screen look, replacing it with a more functional interface that includes a basic list of names

plus alphabetical tabs for lightning-fast access to all of your contacts.

Among a handful of new features is the duplicates wizard, which displays two or more similar cards side by side so you can cherry-pick the data you want to keep.

In addition, the package's new color card scanner is noticeably speedier than the previous-generation 600c. The scanner processed five cards in monochrome in about 21 seconds (versus 33 seconds for the 600c), and five cards in color in about 26 seconds (versus 46 for the 600c).

Unfortunately, Corex has yet to add batch-feed capabili-

THE NEW
CardScan Executive scanner.

ties to its device, so you still must insert each card by hand.

CardScan's bundle has long been a reliable staple for business card scanning and management, and while this update breaks little new ground, it is a solid improvement over previous editions. If your current card scanner is fast enough, consider buying the $79 software upgrade alone.

—Tracey Capen

CardScan Executive

Corex

★★★★☆

Minor improvements and faster speed make for a solid update.

Street: $250

find.pcworld.com/43596

Gigabit Switches Supercharge Networks

NETWORKING

A NETWORK is only as fast as the sum of its parts. If you've recently updated your PCs' network adapters from standard 10/100 ethernet to gigabit, you'll need to upgrade

DGS-1008D

D-Link

★★★★☆

Well-designed, simple-to-use gigabit switch peps up a network.

Street: $100

find.pcworld.com/43680

EG8G-Z

EGig

★★★½☆

No-nonsense, hardworking switch is a bit on the pricey side.

Street: $199

find.pcworld.com/43682

your network switches to take advantage of the faster technology. I tested two new eight-port gigabit switches, and both performed well—though one seems a tad overpriced.

I tried out D-Link's DGS-1008D ($100) switch and EGig's EG8G-Z ($199) switch—both with eight ports—on my small home network consisting of PCs using integrated and PCI-based gigabit adapters and Cat 5e cable, which

supports transfers of up to 350 megabits per second. I used Ixia's Qcheck network troubleshooting utility to test performance and found that each switch supported average upload speeds of about 250 mbps—more than three times faster than the same network using my old 10/100 switch. Downloads were equally impressive, with both gigabit switches supporting average download speeds of 275 mbps

EGIG'S EG8G-Z
and D-Link's DGS-1008D.

Polar's New Running Computer

FITNESS GEEKS, rejoice: Polar's $350 S625X package uses a wristwatch heart-rate monitor and a distance-measuring foot pod to serve up a smorgasbord of workout details, including advanced measurements such as maximal oxygen uptake (VO_2 max). After measuring my morning run with the hardware—everything from average running speed to altitude gained to maximum heart rate—I transferred the data from the watch to my infrared-equipped notebook and then used the included Polar Precision Software to pore over the particulars. Learning to operate the five-button watch and to navigate the PC software takes some time, but as a reward you get performance details usually reserved only for the pros.

find.pcworld.com/43686

–Tom Mainelli

versus about 86 mbps with the previous 10/100 switch.

When I retested the switches using the more common, less-expensive Cat 5 cable (which is rated to 100 mbps), I saw about a 15 percent improvement over the speeds realized using the 10/100 switch and the same cable.

Though the EGig targets business users who want a no-nonsense box, I'm not sure the package warrants the $99 premium it commands over D-Link's more stylish device.

—Ramon G. McLeod

Apple's Evolutionary IPod

MP3 PLAYER

APPLE RECENTLY launched its fourth-generation IPod—and by now you either love the slick-looking player, or its features and price have left you unimpressed. Here's a simple take on the new version from somebody residing in the second camp: This one's much better, but it's still not perfect.

IPod 40GB

Apple

★★★★⯪

Apple's portable player has most of what you need, but power users may want more flexibility.
List: $399

find.pcworld.com/43744

Apple now offers 20GB and 40GB IPods for $299 and $399, respectively. That's $100 less for the same capacities as the previous generation, although accessories such as cases are no longer standard.

The major improvements: Apple rates the new IPod's battery life at 12 hours of continuous play (up from 8 hours), and I netted exactly that in tests of a shipping 40GB unit. To improve usability Apple added the IPod Mini's click-wheel control, which elegantly combines touch-sensitive scrolling with easier-to-use click buttons.

Other improvements are minor: You can now speed up Audible.com audiobooks without the chipmunk-on-helium effect, you can better manipulate On-The-Go playlists (and more easily save them), and you can shuffle through all of your songs or albums with a single click.

Frustratingly, the IPod retains several feature omissions. Apple still limits codec support to AAC, MP3, and Apple Lossless (plus .wav and AIFF), so fans of WMA, Ogg Vorbis, and FLAC are out of luck. You still can't change the order of songs on a playlist, and you can purchase music online only through Apple.

The IPod's thoughtful design and features make it an

THE FOURTH-generation IPod incorporates a new click wheel.

excellent MP3 player. But for picky buyers who are holding out for the ideal portable music device, the wait continues.
—*Eric Dahl*

The Ghost With the Most

UTILITIES

SYMANTEC'S NEW Norton Ghost 9 drive-imaging software makes it easier than ever to take a snapshot of your hard drive to prepare for those times when computing disaster strikes. I tested a beta version of the $70 Windows XP/2000–only application, based

largely on Drive Image 7 from PowerQuest—a recent Symantec acquisition—and found that it has closed the feature gap with Acronis's competing True Image 7.0.

The most dramatic new feature in Ghost 9 is the recovery environment that appears when you boot from a CD.

Gone is the confusing Ghost 2003 interface; its replacement mimics Windows exactly, right down to the Open and Save dialog boxes.

Ghost 9 can now even back up your operating system partition from within Windows (à la True Image)—no reboot required. Plus, Ghost can now create incremental images of your hard drive—a time-saver that backs up only changes (previous versions created a full image every time). Another new feature lets you schedule image backups to run in the background, as you work.

In my tests Ghost 9 proved amazingly fast at creating images, compressing and writing a 3.12GB OS partition to a 1.43GB image in only 1 minute, 21 seconds—3 minutes, 4 seconds quicker than True Image. Ghost 9 restored the same image in 1 minute, 18 seconds—about 4 minutes

faster than True Image. However, booting into Ghost 9's recovery environment itself can take up to 3 minutes; the same task took about 13 seconds for True Image. My Ghost 9 beta also lacked integrated support for my Serial ATA hard drive, but Symantec says the final version will support most drives.

My only other complaints with Ghost 9: Installation requires Microsoft's .Net framework, and the package costs about $20 more than the competition. But its usability and speed improvements make it worth spending the extra cash.
—*Jon L. Jacobi*

Norton Ghost 9

Symantec

★★★★☆

Speedy drive imaging app performs well but costs slightly more than the competition.
List: $70

find.pcworld.com/43690
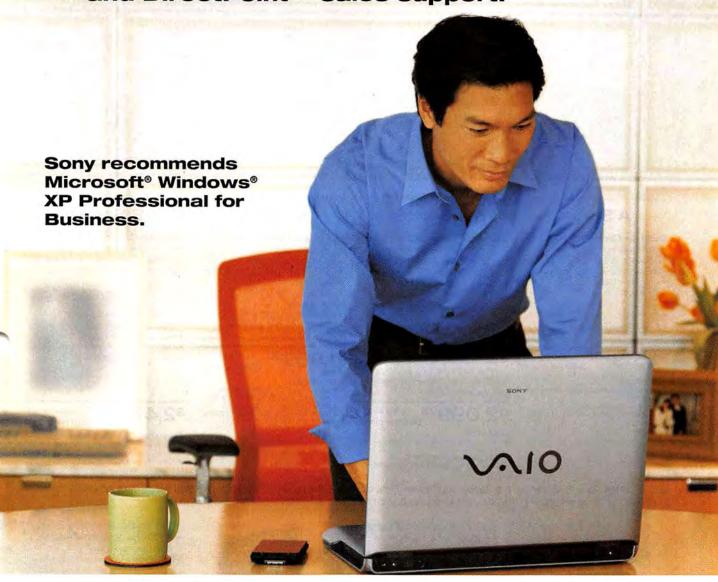
SYMANTEC'S NEW Norton Ghost 9 drive-imaging application lets you schedule incremental backups of your important PC data.

Business Solutions

Get the edge in interactivity. From portable LCD projectors that take your show on the road to plasma displays that brighten your conference room, Sony® gives you the breadth of products your business needs. And since many Sony products are designed to work with your Sony VAIO® PC, your return on investment is that much greater. Sony lets you set the pace so you can stay ahead of the competition.

VPL-CX70 LCD Projector

A portable, stylish design with high-brightness picture and easy-to-use auto-setup features. Designed to help the mobile professional deliver brilliant presentations at sales meetings, training seminars—even executive boardrooms.

- Up to 2000 ANSI Lumens Brightness[7]
- Automatic Setup (Focus, Lens, Input, Tilt, Pixel and Keystone)
- Accepts up to XGA Native Resolution (1024x768)
- Accepts Composite, Component and PC Inputs

$2,599⁹⁹   Lease for only **$74** per month[6]

DRX-700UL DVD+R Double Layer/DVD+RW Drive

Record up to 8.5GB[2] on one disc with Sony's new DVD+R Double Layer/DVD+RW Drive!

- Burn up to 4 Hours MPEG-2 or up to 8 Hours MPEG-1 Video on a Double-Layer Disc
- Record on Both 4.7GB DVD Media or 8.5GB Double-Layer DVD Media
- Backwards-Compatible with Many Existing DVD Players/DVD-ROM Drives[4]

$259⁹⁹   Add to lease
DRX700UL (External)   for only **$8** per month[6]

$159⁹⁹   Add to lease
DRU700A (Internal)   for only **$5** per month[6]

MVC-CD350 CD Mavica® Digital Camera

Unbeatable performance and value for any office needing the convenience of digital photography on a budget. Store photos directly onto inexpensive CD-R/RW media.

- 3.2 Megapixel Resolution
- Records to CD Media
- Rechargeable Infolithium® Battery Included

$399⁹⁵   Add to lease for only **$12** per month[6]

UPGRADES
- Upgrade to 5.0 Megapixel MVC-CD500 with Carl Zeiss® Lens and Much More MVC-CD500 Just $599.95 Add to lease for only **$17** per month[6]

PFM-42X1 Plasma Display

The Sony PFM-42X1 high-definition display delivers high-contrast video images and sharp text for maximum impact. Progressive scan images with 1 billion colors, flexible inputs and optional network solutions make this display ideal for conference rooms and digital signage applications.

- 42" High-Definition (XGA) Plasma Monitor (Viewable Area, Measured Diagonally)
- 1024x768 (XGA) Progressive Scan
- Up to 60,000 Hours Panel Life
- Digital (DVI-HDCP) and Analog Inputs
- Stereo Speaker Capability

$4,549⁹⁹   Lease for only **$129** per month[6]

UPGRADES
- Sony Wall-Mount Bracket for $245

Leasing and Service Information Getting the Sony business advantage is now easier than ever. Choose from a variety of competitive leasing and extended service plan options for affordability and assurance. Call a DirectPoint℠ sales support specialist for details.

"Cash in" with Low Lease Payments.[6]
48-month payment terms with $1 buyout. Ask us about other financing options.

intel inside
pentium M

FREE SHIPPING
ON SELECT MODELS[9]
WHEN YOU BUY AN ELIGIBLE PC DIRECT FROM SONY BY 10/31/04

The Annoyances Issue

TODAY'S PCs, PRINTERS, cameras, and other gadgets are so powerful and versatile that there's only one thing they can't seem to do—stop bugging us! Whether it's a notebook that refuses to connect to your company's Wi-Fi network, software that pesters you to upgrade, or spam from African millionaires in a bind, there's always something that gets in the way of what you really want to do. That's why we've devoted this issue to the tips and tools you need to eliminate these and many other hassles. Read on, and bid annoyances adieu. ▶

SECTION EDITOR: EDWARD N. ALBRO   ILLUSTRATION BY EDWIN FOTHERINGHAM

Enough Already!

Had it with Windows glitches, hardware headaches, and Internet irritations? Here's how to get rid of them for good.

DUCK—THERE'S ANOTHER PC annoyance coming your way. And right behind it, an endless barrage of technology-induced irritations, aggravations, and stress-causing hassles. Stay calm—and prepare yourself to be a little less annoyed. The King of Kvetches (that's me) has plenty of remedies, 26 in fact, for dead external hard drives, missing desktop icons, unpleasant printer paper jams, and good e-mail that gets the spam treatment. I've also got cures for those times when your PDA, cell phone, digital camera, monitor, and network become royal pains. And just to show that we play fair, *PC World* editors gave two vendors a chance to respond to your gripes about their products, and one of the two actually took us up on our offer. ▶

BY STEVE BASS   ILLUSTRATIONS BY EDWIN FOTHERINGHAM

Inharmonious **Hardware**

Keep the Paper Flowing

THE ANNOYANCE: My year-old inkjet was driving me nuts with paper jams. No matter which kind of paper I used—plain or photographic—my output was kaput.

THE FIX: To avoid printer paper jams, make sure that all the paper in the tray is the same type and weight. (The most common paper weight is 20 pounds; it's usually listed on the package.) Don't mix photo paper, heavy card stock, and plain paper, for example. Always store your paper flat. If your printer comes with a vertical feed tray and you don't print often, flip the paper around to prevent it from curling in the tray. Use a can of compressed air (it costs about $6 at your local electronics store) to keep the insides of the

FIGURE 2: Clear the bricks away by plugging several devices into GoldX Products' PowerCore DC Hub.

printer free of dust and dirt. Gently remove bits of paper or labels that may be stuck on the feed rollers. Squirt a light coating of window cleaner on a sheet of paper (*don't* saturate it), and use the paper-feed button to send the sheet through the printer a few times. Then repeat the operation with several passes of dry paper to remove excess moisture from the rollers.

BONUS PRINTER TIP: You'll find dozens of additional tricks for laser printers at www.fixyourownprinter.com. (A buddy found a fix there for a paper pick-up problem on his HP LaserJet 5P printer, which is still chugging along after nine years.) Another great laser-advice site is PrinterTechs.com (find.pcworld.com/43524).

Quintuple Up Your Cables

THE ANNOYANCE: Since my MP3 player, my digital camera, my PDA, and all the other USB devices cluttering my office each came with its own USB cable, I had more USB cables snaking under my desk than Starbucks has lattes.

THE FIX: The $30 QuickConnect 5-in-1 USB cable from GoldX Products has five interchangeable tips that attach to either end—so instead of unplugging a cable when I want to switch from my MP3 player to an external hard drive, for example, I just change the cable's tip. The cable also connects my PDA directly to my printer. Go to find.pcworld.com/43518 for more.

FIGURE 1: Backing up is a breeze with the Network Storage Link.

No-Fuss Backups

THE ANNOYANCE: Though I love my home-office network, lugging my external USB hard drive to each computer one by one to back them up used to be a real bother. And no, no, no—I didn't want to set up a file server.
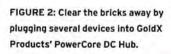
THE FIX: Instead of installing a server, I attached the drive to Linksys's Network Storage Link (see **FIGURE 1**), a $99 device that connects to a wired or wireless router. Now everyone on my network (well, my wife and I) can access the drive for quick and easy backups. Fair warning: During installation the Storage Link needs to format the external USB drive that it connects to, so make sure you've backed up the data on that drive first. Visit find.pcworld.com/43516 for more information on the Network Storage Link.

Lighten Your Power Load

THE ANNOYANCE: It never failed: I would fall in love with some handy little gadget for my PC only to find that it used an AC adapter large and heavy enough to double as an anchor for an oil tanker. I'm telling you, I amassed enough bricks under my desk to rebuild Hadrian's Wall.

THE FIX: A smart, though not cheap, fix for my power crisis came by way of the PowerCore DC Hub from GoldX (find.pcworld.com/43522; see **FIGURE 2**). This $30 hub powers up to five of my favorite electronic devices that would ordinarily need their own AC adapters. You can run one 12-volt, one 9-volt, and three 5-volt devices simultaneously. It's ideal for providing a constant stream of power to different devices. The downside? You also need to have the company's $30 PowerCore System Base Unit with surge protector to power the hub.

Quiet a Shrieking Monitor

THE ANNOYANCE: My six-year-old monitor, a 17-inch CRT that I affectionately call "Gramps," started making a high-pitched, drive-me-up-the-wall sound. I thought I'd landed in a low-budget sci-fi thriller.

THE FIX: This was no horror-movie soundtrack. It turns out the whine was caused by a vibrating flyback transformer (don't ask; it's a voltage thing). I was finally able to muzzle my monitor by changing its refresh rate. To do so, right-click the desktop and choose *Properties•Settings•Advanced*. In Windows 98 and Me, click the *Adapter* tab and change the setting under 'Refresh rate' to *72 Hz* or above (generally speaking, the higher your monitor's refresh rate, the less eyestrain you'll experience). In Windows XP and 2000, click the *Monitor* tab and change the setting under 'Screen refresh rate' (in XP, see **FIGURE 3**) or 'Refresh Frequency' (in 2000).

An alternate fix is to perform "percussive maintenance": Give the monitor a good, solid whack on the side. Really. This might stop the vibration, albeit temporarily. Keep in mind that repairing your monitor will likely cost more in the long run than replacing it. Of course, this may be your best excuse yet to buy that new LCD monitor you've had your eye on.

CD Burner Runs Hot and Cold

THE ANNOYANCE: How's this for irritating? Some days my external CD burner—which connected via FireWire to an add-in USB/FireWire card in my PC—worked perfectly, but other times my computer didn't recognize the darn thing. And here I thought it was the disc that was supposed to be burning, not me.

THE FIX: As I began to investigate the matter, my prime suspect was the add-in card. First I tried removing the FireWire cable from the PC, rebooting the system, and plugging in the cable again. Sometimes this got Windows to see the drive, but other times it didn't. The next thing I

tried was plugging the drive into a different port on the FireWire card: I turned off my PC, unplugged the external drive, turned the PC back on again; then, once Windows had loaded, I reconnected the FireWire cable and powered up the CD burner. This finally cured my system's glitch, but if it doesn't do the trick for you, try moving the add-in card to a different PCI slot on your motherboard (just make sure that you don't plug it into the slot nearest the AGP video adapter, since that could cause motherboard woes). And check your PC's manual to confirm that you're using a "bus-mastered slot."

FIGURE 3: Change your monitor's refresh rate in Display Settings to keep it from emitting an ear-piercing whine.

Straighten Up and Display Right

THE ANNOYANCE: My mother called recently with yet another gripe about her PC (kvetching must run in the family). This time she was upset because she couldn't figure out why all of the images on her screen were tilted at a slight angle. Sometimes I wish Mom weren't such a geek.

THE FIX: I quickly figured out that the problem was with her monitor's controls, which needed fine-tuning. Each monitor is different, but the controls are basically the same. Begin by looking for a button named 'Manual Image Adjustment' or something similar. The buttons on Mom's monitor enabled her to fix its tilt in a flash (with my help, of course). While she was fiddling, good ol' Mom found other settings that let her get more screen bang for her buck. Most monitors are factory-set with an annoying border, but she figured out how to enlarge her display to fill the entire screen by expanding the vertical and horizontal image areas until the black borders disappeared. (Note: Doing this may require that you adjust the image up or down, or maybe sideways, to keep it centered.) Sorry, folks: This screen-expansion trick works only on CRTs, not LCDs. ▶

Woeful **Windows**

One Click to Device Manager

THE ANNOYANCE: I often tweak my hardware settings in Windows' System Properties utility, but for the longest time opening it was a pain. Sure, I could get to it via the System applet in Control Panel or by right-clicking *My Computer* and choosing *Properties•Hardware•Device Manager* (or just *Properties•Device Manager* in Windows 98 and Me). But that was still too many clicks for my overworked fingers.

THE FIX: I finally wised up and created a desktop shortcut to System Properties. To make one of your own, right-click the desktop and select *New•Shortcut*. In Windows XP and 2000, type **devmgmt.msc** in the Location field. In Win 98 and Me, type c:\windows\control.exe sysdm.cpl,system,1 in the 'Command line' field. (Note that this direction assumes that control.exe is in the Windows directory; in a very few systems, the executable file may be located elsewhere.) Click *Next*, give the shortcut a name—say, **Hardware**—and click *Finish*.

Restore MIA Quick Launch Shortcuts

THE ANNOYANCE: The other day I accidentally deleted the Show Desktop icon in my Quick Launch toolbar—you know, the one that minimizes all open windows and shows the desktop. And it gets worse: In the process of trying to get the shortcut back, I inadvertently erased the clock from my system tray.

THE FIX: Sometimes my tendency to tinker gets me into trouble, but fortunately these two misadventures were easy to recover from. To restore the clock, first right-click the taskbar and select *Properties*. In Windows XP, check *Show the clock* under 'Notification area' on the Taskbar tab and click *OK*. In Windows 98, Me, and 2000, check *Show clock* on the General tab

FIGURE 4: You can defragment your disk without interruption if you first make sure that Windows' indexing is turned off.

(Taskbar Options in 98) and click *OK*.

To retrieve my Show Desktop shortcut, I used a great free utility written by Doug Knox and aptly named "Restore Missing Show Desktop Icon to Quick Launch." Go to find.pcworld.com/43254 to download the utility. After you unzip and install the program, run it to recover your shortcut. Now you can get back to fiddling with your PC's settings without losing track of time.

MY FAVORITE FIX

Ounce of Spam Prevention

BETH McINTIRE, systems support engineer, Raleigh, North Carolina

THE ANNOYANCE: If someone sends me a stupid "forward this to all your friends" urban-legend e-mail, I look it up on About.com's Urban Legends and Folklore page [find.pcworld.com/43616] and then send them the link. It's amazing what people will believe just because it comes in a nicely typed e-mail. I guess I've embarrassed enough people that they don't send those messages to me anymore, but I still get lots of other spam.

THE FIX: To keep this and other junk out of my inbox, I use Outlook Express's Message Rules to sort messages. I can make sure mail from people I know goes into a certain folder so that I don't miss anything important, and I filter out obvious spam (anything containing the words *viagra* or *mortgage*, for example). Though this doesn't eliminate all spam, every little bit helps. [Visit find.pcworld.com/43614 for instructions on creating e-mail filters.]

6% Percentage of Internet ads that popped atop or under Web pages

—NIELSEN/NETRATINGS ADRELEVANCE

Stop Defragus Interruptus

THE ANNOYANCE: Whenever I tried to defrag the hard drive on my old Windows 98 PC, the Disk Defragmenter tool would start, run to about 3 percent, and then restart—over and over. This happened even though I closed all of my open applications and shut down my antivirus, firewall, and other background programs.

THE FIX: Some program was interrupting the defrag by running in the background. I suspected Windows' indexing function. Indexing is supposed to make searches faster, but I've never noticed a speed-up. To turn off indexing in Windows 98 and Me, click *Start•Run*, type **msconfig**, and press **<Enter>**. If you see an entry for FastFind, uncheck it. In Windows XP, right-click the C: drive in My Computer or any Explorer window, select *Properties•General*, and uncheck *Allow Indexing Service to index this disk for fast file searching* (see **FIGURE 4**). Repeat these steps for all your hard-drive volumes.

Pump Up Your Icons

THE ANNOYANCE: I set my large, 21-inch monitor at a screen resolution of 1152 by 864 pixels to get a bigger view of all my open applications. That was cool, but what wasn't was the microscopic size of the desktop icons and fonts at that resolution.

THE FIX: Changing the size of your desktop icons may also change their positions on the screen, which is an annoyance in itself. So before you do anything, browse to find.pcworld.com/43562 and download the free Save My Desktop utility. Install and run the program before proceeding. Now, to adjust the size of your desktop icons, right-click the desktop and choose *Properties•Appearance* (and then, in Windows XP, click *Advanced*). Choose *Icon* from the 'Item' drop-down menu, and increase the number of pixels under 'Size'. Keep in mind, however, that many of your icons will look blurry when you make them bigger. A better way to raise

your icon profile is to use BestView (find. pcworld.com/43564), a free online tool that sets your icons to normal, large, or extra-large. (You may be asked for permission to download an ActiveX control.)

BONUS XP TIP: To make your Quick Launch icons bigger, right-click the toolbar's title (or the bar to its left), make sure that 'Lock the Taskbar' is unchecked, and select *View•Large Icons*. Neat, eh?

Tangled **Web**

Give Me Back Internet Explorer

THE ANNOYANCE: I experimented with a new browser, didn't like it, and uninstalled it; but afterward when I clicked a link in an e-mail message, the other browser tried to open instead of Internet Explorer.

THE FIX: To reset IE as your default

browser, open the program and click *Tools• Internet Options*. Choose the *Programs* tab and select *Internet Explorer should check to see whether it is the default browser* near the bottom (see **FIGURE 5**). If your third-party IE shell stops this from working, download Jem Berkes's SetBrowser (find.pcworld. com/43926), a free utility that uses a Registry setting to make IE your one and only.

Revive IE's Disabled Back Button

THE ANNOYANCE: Sometimes when I browsed with Internet Explorer, neither the Back button nor the <Backspace> key could return me to the prior Web page. Instead they sent me to the same page I was already on. How loopy is that?

THE FIX: Some sites use redirects in such a way that clicking the Back button puts you in a loop between the redirect page and the page you're trying to get away from. To get around these redirects, click the down arrow next to the Back button to display a list of the last ten pages you have visited. Go back to at least the second earlier entry to avoid the redirect page. The alternative is to click the Back button twice in quick succession so that you can beat the redirect at its own game. ▶

CNN Web site where you are most likely to encounter a pop-up ad
–Nielsen/NetRatings AdRelevance

Skip the Registration

THE ANNOYANCE: I really disliked giving every online news site I visited my personal information. Not only did it invade my privacy (I know, I could've fibbed), but it irritated me and took too much time.

THE FIX: True, many people use fake data for these annoying—and sometimes lengthy—registration forms. Me? Ethical considerations aside, I don't get bogged down with any of them now. Instead I use www.bugmenot.com, a nifty site that offers a database of accounts—passwords and user IDs—that let me gain access to registration-required news sites.

Bye-Bye, Busy Signal

THE ANNOYANCE: Whenever I used my dial-up account, people would be miffed because they always got a busy signal

FIGURE 5: Keep Internet Explorer as your default browser by checking this setting.

when they called me while I was online.

THE FIX: With the free Web product BuzMe (www.buzme.com), your callers hear a greeting recorded in your own golden voice. A box on your screen tells you that someone's calling (you'll see who it is if your pal hasn't blocked caller ID). You can type a short reply that is read to the caller by a robotic voice, send the call to voice mail, reject the call, or grab the phone and say hello. BuzMe requires your phone company's call-forwarding service, which costs about $4 per month.

Application Aggravation

Zoom in Word and Excel

THE ANNOYANCE: I often get Word documents from a buddy who sets the fonts on his 15-inch CRT at a space-saving 10 points. On my high-end LCD, the fonts look minuscule. Of course, the opposite occurs, too. When he opens Word docs on his screen from people using LCDs, the fonts are humongous.

THE FIX: On the Standard toolbar in Word and Excel is a Zoom box with a percentage setting. Increase or decrease the number to zoom in or out as if you were holding up a magnifying glass to the document. Even better, hold the **<Ctrl>** key as you roll your mouse wheel up (for larger) or down (for smaller). These tricks don't change the font-size setting. By the way, if this approach doesn't work, upgrading your mouse driver may do the job; for some drivers, changing an option is required. If you don't have a wheeled mouse, read about Windows' Magnifier tool in Scott Dunn's *Windows Tips* column from last May (find.pcworld.com/43594).

Tell Spam From Shinola

THE ANNOYANCE: I use every trick I can to avoid spam, but for a while I was *too* successful. Many great—and legitimate— lists and newsletters that I subscribed to weren't being delivered to my inbox.

THE FIX: I added each newsletter's sending address to my spam filter's white list. If you have a recent e-mail from the

sender, you're all set; if not, head to the newsletter site to get the sending address. In many Web-based e-mail services, clicking 'not spam' is often adequate. If you aren't receiving the mail at all, you'll have to add the newsletter address manually. In MSN Hotmail, click *Mail•Options* (on the far right), and then select *Junk E-Mail Protection•Safe List*. In Yahoo Mail, click *Mail Options* (on the right), choose *Filters• Add*, and enter the newsletter's sending address in the top row labeled 'From header'. In the 'Move the message to' drop-down list, choose *Inbox*. In AOL 9, open the newsletter and click *Add Address*, which adds it to your 'People I Know' list.

Excel's <Enter> Alternatives

THE ANNOYANCE: Whenever I used Excel, the way the <Enter> key worked would drive me nuts. Though I wanted it to take me one cell to the right, it always took me down the column instead.

THE FIX: After doing a little digging, I found out that you can make the <Enter> key move the active cell any way you want, provided it's up, down, left, or right (or even not at all). To change your <Enter> key's setting in Excel, click *Tools•Options• Edit* and choose your direction from the drop-down menu. Or uncheck 'Move selection after Enter' to keep the current cell active when you use <Enter>. ▶

FIGURE 6: Boot the brackets from your Outlook replies and forwarded messages via the E-mail Options dialog box.

16.7 billion Spam e-mail messages sent daily, worldwide, in 2004

–IDC

IMHO You'll Be ROTFLOL

THE ANNOYANCE: I do okay deciphering most e-mail messages, but I was stymied when it came to those wacky messaging acronyms. I never knew whether to LOL, sport a VBG, or be MAHANTIA.

THE FIX: FWIW (For what it's worth) and IMHO (in my humble opinion), these abbreviations can be TFAOCTKS (tough for an old codger to keep straight). IIRC (If I recall correctly), there's a handy online spot for sorting them out: the Acronym Finder (www.acronymfinder.com). Search for an abbreviation, and you, too, can be ROTFLOL (rolling on the floor laughing out loud). SGTM (Sounds good to me).

Excise Your E-Mail Brackets

THE ANNOYANCE: I don't get why people send me e-mail messages with columns of brackets before each line. In fact, I've seen some messages (mainly from my editor) that contain more brackets than words. (On second thought, maybe I shouldn't be complaining.)

THE FIX: Some e-mail programs insert a bracket automatically at the beginning of each line of the original text when you include it in your reply or forward it. Each time the message is replied to or forwarded, another layer of brackets is tacked on. To banish the brackets in Outlook Express, click *Tools•Options•Send*. Under 'Mail Sending Format', select *Plain Text Settings* and uncheck 'Indent the original text with > when replying or forwarding'. In Outlook, click *Tools•Options•Preferences•E-mail Options*, and under 'On replies and forwards', change both fields to anything except 'Prefix each line of the original message' (see **FIGURE 6**). In Eudora 5 or 6, reset the <ReplyPrefix>: Go to Eudora's tech support site (find.pcworld.com/43814), and scroll down to and click <*ReplyPrefix*> to open the Change Option dialog box back in Eudora. Make sure that the 'New value' field is blank, and click *OK*. Repeat the process for <QuotePrefix>. ▶

Good vs. Bad Tech Implementations

WE'VE ALL HAD OCCASION TO MARVEL at the ingenuity of the people who design our hardware and software, but just as often some feature leaves us shaking our heads. Here are three products that got it right, and three others that missed the mark.

Good

Bad

MP3 player carrying cases: GOOD: The IRiver IHP-200 (find.pcworld.com/43910) provides access to the controls even with the case on. **BAD:** With the Apple IPod (find.pcworld.com/43912), you have to take the case off to work the controls.

Good

Bad

Changing browser font size with your mouse's scroll wheel: GOOD: Opera enlarges both the page's images and its text. **BAD:** Internet Explorer enlarges only the text, leaving images their original size and throwing the page's design out of whack.

Good

Bad

USB ports: GOOD: The system on the left provides more-versatile powered USB ports on the case front. **BAD:** The only USB ports on the front are not powered.

PHOTOGRAPHS: MARC SIMON

129 Number of icons/links Yahoo Messenger adds to a PC by default

–PC WORLD RESEARCH

PDA Problems

Emergency Power for Palms

THE ANNOYANCE: I love my Palm PDA, but I'm lucky if I get a day's worth of battery life out of it. At the office I can easily recharge it while I work; when traveling, however, I used to have to schlep the cradle with me to recharge the darn thing.

THE FIX: Now I squeeze more juice out of my Palm by turning the gizmo's backlight brightness way down. When I'm on the road, I leave the cradle at home and instead use Tech Center Labs' $15 Power Adapter for Universal Connector Palms (find.pcworld.com/43604, see **FIGURE 7**). The device connects the cradle's AC adapter directly to my Palm. If you prefer, you can run your Palm with the company's $15 AA Emergency Charger, which uses rechargeable or regular AA batteries. And in dire emergencies, the company's 9-volt Emergency Charger, a $20 gadget, will give your Palm enough of a boost for you to win that last hand of solitaire.

Pocket PC File and Battery Woes

THE ANNOYANCE: That last tip was handy for Palm users, but what about all you Pocket PC users out there? You have two problems. Microsoft hides your battery-life indicator in the Settings•System•Power folder, requiring an annoying three clicks each time you want to see how much battery life you have left. And like Windows, the Pocket PC platform doesn't have a useful file management tool—you're stuck using the dreadful File Explorer to keep tabs on your files.

THE FIX: First, browse to find.pcworld.

com/43606 to grab a trial copy of Omega One's Battery Pack Pro, a $20 utility that not only displays a desktop bar indicating your Pocket PC's battery life, but also measures its expected life based on how you use the device. Visit find. pcworld.com/43618 for more information. Next, replace File Explorer with Resco's $25 Explorer 2003—a great productivity tool that allows you to move your files in a single window, as well as to search, zip, and encrypt files. Go to find.pcworld.com/43608 to download the trial version.

FIGURE 7: Use Tech Center Labs' adapter to power your Palm minus the cradle.

Media **Player** Madness

Good Riddance to Real

THE ANNOYANCE: The RealPlayer media player from RealNetworks added far too many icons to my desktop, and it constantly asked me if I wanted to change my media-file associations. RealPlayer also displayed lots of ads and pop-ups. And my firewall frequently alerted me that RealPlayer was trying to phone home.

THE FIX: It's easy to dump RealPlayer—and Apple's equally insistent QuickTime video player—and replace them with an app that is absolutely free and does just as good a job. First, uninstall RealPlayer and QuickTime via Windows' Add or Remove Programs applet in Control Panel. Then go to find.pcworld.com/43610 to download Real Alternative, which plays RealAudio

and RealMedia files and has plug-ins for Internet Explorer, Opera, Netscape, and Mozilla, so you can play music and videos right off the Web. (There's also a Quick-Time Alternative.) If your media-file associations go wacko, visit find.pcworld.com/43816 to read Lincoln Spector's instructions for reassociating your file types.

AutoPlay, Go Away (or Come Back)

THE ANNOYANCE: The other day I inserted a music CD in my CD-ROM drive and clicked 'Open folder to view file using Windows Explorer.' But then I foolishly clicked 'Always do the selected action'.

THE FIX: To reset Windows' AutoPlay, open *My Computer*, right-click your CD drive, select *Properties•AutoPlay*, and click *Restore Defaults*. If the AutoPlay tab is missing in XP or 2000, close the Properties dialog box, click *Start•Run*, type **services.msc**, press **<Enter>**, scroll to and double-click *Shell Hardware Detection*, set the 'Startup type' drop-down box to *Automatic*, choose *Start* or *Resume*, click *OK*, and close the Services window. The CD drive's Properties dialog box has other AutoPlay options for pictures, video files, and other CD content; this is your chance to reset them to their default values as well. ∎

Steve Bass is the author of PC Annoyances: How to Fix the Most Annoying Things About Your Personal Computer, *published by O'Reilly (find.pcworld.com/43818).*

PHOTOGRAPH: MARC SIMON

Hall of **Shame**

We spotlight people and products that pester us...

Demerit Badge

DMCA cosponsor Sen. Orrin Hatch, R-Utah

WE SUPPORT copyright—let's make that clear right off the bat; and it makes sense to clarify copyright law for the digital age. But the Digital Millennium Copyright Act is a perfect example of how not to do it. This overly broad act protects even laughably bad copy protection systems, letting vastly inferior products succeed by relying on a legal loophole. Worse, the DMCA stifles innovation. We can't count how often vendors building new wireless audio devices or digital media hubs

SEN. Orrin Hatch, R-Utah

have told us that they don't know if the DMCA will let them include a feature. That can't be good for any of us.

Historical Hassles

NO NEW TECHNOLOGY is perfect. Every time-saving advance since the wheel has carried its own unique set of difficulties. Here are a few historical annoyances you may not have heard of.

MID-NINETEENTH CENTURY Early pocket watches used by train engineers weren't very accurate, and each town's official time was slightly different, leading to head-on collisions between locomotives.

LATE NINETEENTH CENTURY Telegraph lines were useful, but insecure—anyone with a receiver could tap the line and listen in. Simple encryption was the fix.

1960s The UNIVAC mainframe came with a high-speed printer that got so hot it was equipped with a Fire indicator and an Extinguish button.

The Dirty Dozen

WE ASKED more than 250 *PC World* readers about a raft of tech annoyances. These are the worst, rated on a scale of 1 (not annoying) to 7 (extremely annoying).

1. Sites that hijack your browser home page	**6.87**
2. Downloads that come with spyware	**6.80**
3. Services you can't unsubscribe from	**6.60**
4. Viagra/prescription-drug spam	**6.54**
5. Animated ads blocking out a Web page	**6.52**
6. Pornographic spam	**6.50**
7. Pop-up/pop-under ads	**6.47**
8. Nigerian scam spam	**6.31**
9. Overpriced printer ink	**6.18**
10. All the work required to get a rebate	**6.10**
11. (tie) RealPlayer marketing tactics	**5.97**
11. (tie) Cryptic error text	**5.97**

Microsoft Annoyance Tracker

MICROSOFT has been annoying PC users for decades. But the company isn't all bad. Here's how it's fared over the years.

Helpful

Annoying

1977-1981
Sells a programming language (BASIC) and an OS (DOS) that it hasn't written yet.

1985
A buggy Windows 1.0 is finally released. Most of its bugs aren't fixed until 1987.

1993
Investigated for exclusionary licensing practices that tie other Microsoft products to its operating systems.

1995
Blowout launch for Windows 95—a more stable, 32-bit Windows.

& Hall of **Fame**

and the heroes saving us from annoyances.

The Good Citizen Awards

IMAGINE A WORLD with Lex Luthor and Dr. Octopus, but no Superman or Spider-Man. Not a pretty image, is it? Well, the computing world has its superheroes, too: people and companies working to eliminate hassles like spyware, spam, and crazy rebate policies. Here, then, are our awards to six courageous annoyance fighters.

THE CLEAN CLOSET AWARD to Hewlett-Packard, for its extensive programs to recycle PCs, printers, and ink cartridges. Here's a company that realizes you are more likely to buy new stuff from a company that helps you safely get rid of your old stuff.

THE OPEN WINDOWS AWARD to Mark Russinovich and Bryce Cogswell, the

brainy coders behind www.sysinternals.com. The site's collection of freeware utilities makes it easy to get the kind of under-the-hood info that

INSIDE HP's PC recycling plant

Windows either hides or doesn't provide at all.

THE INBOX RELIEF AWARD to Paul Graham and Tim Peters, who developed SpamBayes, the pioneering antispam software that's both free and effective.

THE BETTER BROWSER AWARD to the programmers of Mozilla, who have managed to build not one, but two browsers that are faster, smaller, more secure, and easier to use than the one created by the world's biggest software firm.

THE REBATE RELIEF AWARD to Best Buy, Circuit City, CompUSA, Costco, and other stores that actually make it easier to collect rebates by printing out separate rebate receipts at the cash register.

THE SENSIBLE OS PRICING AWARD to Apple Computer, for charging $129 for one copy of OS X Panther, but a very affordable $199 for a five-license family pack.

Let's Fix This!

A COUPLE OF suggestions that could simplify computing:

Lose the tiny wires.
BUILDING A PC shouldn't require the steady hands of a grizzled FBI bomb squad veteran. A standardized block connector could easily replace those little wires that go from your case to the motherboard. Until then, remember: It's always the green wire.

Stop the CD swap.
PRODUCT ACTIVATION works. So why do you have to keep a CD in the drive to play a game? ■

1996
Internet Explorer 3.0 is released. Nine days later, the first IE security hole is reported.

1997
Clippy the officious office assistant begins harassing Office users.

2000
The Bill and Melinda Gates Foundation earmarks $27 billion for global health and learning.

2001
Windows XP released to strong reviews.

2002
Trustworthy Computing pledge promises to make security a main priority. IE patches continue at normal frequency.

Keep It Simple

Cut the clutter on your PC and you can stop aggravations before they begin. Our 50 tips show you how to simplify Windows and your system from startup to shutdown.

WHEN SOMETHING annoys you, you might choose to get mad, or to get even. But there is a third path: Simplification. Eliminate unnecessary programs, icons, and Windows services, and you'll rid yourself of many of the sources of your PC angst. You'll better see the way to enlightenment (and that file you're working on) because so much stuff won't block your view.

You already have most of the tools you need. Most of the fixes we prescribe involve tweaking Windows and your programs so they only do what you want, and no more. We also recommend simpler programs that can replace some common but bloated and expensive apps. And if you go too far and instead turn your PC into a simpleton, we'll help you back to the path. ▶

BY SCOTT SPANBAUER   ILLUSTRATIONS BY MICHAEL WITTE

Streamline **Startup** and **Shutdown**

YOU DON'T BOOT and reboot your PC as frequently as you once did, thanks in part to Windows' greater stability in 2000 and XP. Nevertheless, those who seek the path of simplicity should start by closely examining the startup process. The fewer superfluous programs that load at startup, the faster the PC will boot and the more memory will be available for programs. As a side benefit, keeping tabs on startup programs will help you prevent problems caused by spyware apps or viruses.

Your first step to relieving the traffic jam at startup is to uninstall programs you never use, especially the ones that always put an icon in the system tray. Look first in the Start menu for an uninstall icon alongside the program's main icon. If no uninstall icon appears, launch *Add or Remove Programs* in Windows' Control Panel, highlight the unneeded program, and then click the *Remove* or *Change/Remove* button to start the process.

Once you've done that, you can take care of the programs that you probably want to keep installed but don't need to have running in the background all the time. One common example is Apple's QuickTime (which loads a file called qttask.exe at startup), or the QuickPlay component of Musicmatch Jukebox. Every time you watch a QuickTime movie, for example, the program puts itself back in the system tray. Get rid of such programs from your system tray, and you'll simplify your startup—but you can still use the programs when you want

them. To do this, you must look in all the places Windows uses to launch programs at startup, and disable the unwanted ones.

SLIM DOWN YOUR STARTUP

WINDOWS CAN LAUNCH programs automatically at startup four ways: with a shortcut to a program in the Start menu's Startup folder (in Start•All Programs• Startup); an entry in the Windows Registry; a reference in one of Windows' old-school initialization files like system.ini or autoexec.bat; or (if the program falls into a special category called a *service*) in the Computer Management console. You'll need to go through each location and disable or remove references to programs you don't want to run every time you boot.

One easy way to accomplish the task is to use Windows' System Configuration Utility, a tool that can remove such references from all four places. (If you're running Windows 2000, get the tool from find.pcworld.com/43692 and save it to the c:\winnt\system32 folder, first.)

SAY BYE-BYE to the Windows services you don't need, like Messenger, above.

Choose *Start• Run*, enter **msconfig** in the *Open* field, and click *OK* to launch the tool. Items listed under the *Startup* tab come from the Registry's startup path; though it's highly unlikely that a program might use the system.ini or win.ini file to start itself up, you can browse those tabs for a particular program if you can't find it anywhere else. You can manage services

GIVE STARTUP ITEMS the boot from the Start menu if you don't urgently need to run them the minute you boot Windows.

through Msconfig as well, but we'll get to a better way to turn them off in a minute.

To prevent a program from starting up, clear the check box next to it, click *OK*, and reboot. If problems occur as a result, just go back into the System Configuration Utility, and fill in the check box again to reenable the program.

You can save boot time and free some memory by stopping services you don't need, and then setting them so they don't start with Windows. Open the Services Console: Right-click *My Computer*, and select *Manage*. When the management console window opens, in the left pane double-click *Services and Applications* (or click its plus sign) to expand that item, and then select the *Services* item that appears beneath it.

The Services Console shows you which services are running (the ones that are listed as 'Started') and how a service is set up to start: Automatic (meaning it launches the service each time you boot up, whether you need it or not), Manual (it won't run at startup, but Windows may

---

launch the service if the operating system needs it to do something), or Disabled (it can't run at all, even if Windows needs it).

Of course, disabling one or more services that Windows might need in order to function could cause some problems. UK Security Online (find.pcworld.com/43694) maintains a helpful list of every Microsoft service, along with detailed information to help you decide what you can safely disable.

STANDBY TO SPEEDUP

NO MATTER how many programs and services you prune away, starting up and shutting down will still consume time. There's a better way to put your computer to bed: Put your PC into Standby or Hibernate mode instead of shutting it down completely. Standby powers off the display and drives but maintains power to the CPU and memory, allowing you to wake your PC and get back to work in a few seconds. Hibernate writes the contents of memory to disk and then shuts the PC off completely; on rebooting, your PC

reads back the session saved to disk so you can start up exactly where you left off.

Hibernation makes the most sense for notebooks (where you want to maximize battery life), while Standby suits desktop PCs. Double-click the *Power Options* applet in the Control Panel; select the *Power Schemes* tab; adjust the monitor, hard-disk, and standby options to your satisfaction; and then click *OK*. To enable hibernation, click the *Hibernate* tab, check *Enable hibernation*, and click *OK*. Some PCs, especially older ones, may not support Standby or Hibernate; if they don't, they won't have a Hibernate tab.

Desktop Cleanup Wizard

Shortcuts
The shortcuts selected below will be moved to the Unused De folder.

To leave a shortcut on your desktop, clear its check box.

Shortcuts:

Shortcut to Clean Up	Date Last Used
☑ Java Web Start	Never

TIDY YOUR DESKTOP'S unused icons with Windows' Desktop Cleanup Wizard.

Cut Desktop & Menu Clutter

BEFORE YOU CAN get to work on any job, you need to organize your tools and materials. But sometimes Windows makes it hard to tell what tools you have. By removing icons duplicated in the Start menu, in the taskbar's Quick Launch toolbar, and on the desktop, you'll more easily find what you need. You may want to have some icons in multiple locations, but the simplest arrangement is to just choose the best launch location for each individual icon, and remove it from the others.

ICON SEE YOU FROM HERE
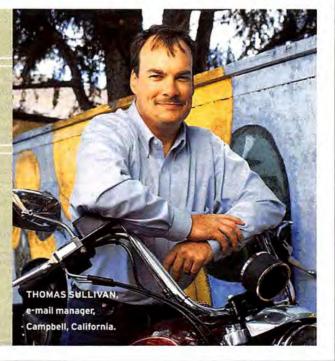
UNINSTALLING THE TRIAL and feature-limited software that came with your PC is a good start, but it won't remove ▶

MY FAVORITE FIX

Gamer Shuts Off Services

THE ANNOYANCE: I'm a gamer, so performance is very important to me. Unfortunately, when applications or services start running while I'm playing something, they can kick me out of the game and cause network lag.

THE FIX: I use a batch file to turn off a bunch of services all at once that would cause interruptions. I stop services like Automatic Updates because it could search for or start downloading an update while I'm in the game, and that would affect my network performance. I also turn off my antivirus utility because sometimes the antivirus update will start up while I'm in a game, and if it does, it kicks me out of the game. But I need some of these services, like Computer Browser, in order to connect to my office VPN, so I have another batch file I use to turn those services back on when it's time to get back to work. (For a sample batch file that turns off unnecessary services, head to find.pcworld.com/43940.)

THOMAS SULLIVAN,
e-mail manager,
Campbell, California.

49% Portion of Microsoft security advisories rated "Critical" in 2003

—MICROSOFT

every pointless shortcut. Thankfully, Windows XP introduced a handy tool for cleaning up unused desktop icons. Right-click the desktop, choose *Properties,* click the *Desktop* tab, and click the *Customize Desktop* button. Click *Clean Desktop Now* to launch a wizard that finds the icons you haven't used recently and moves them to an Unused Desktop Shortcuts folder. If you have just a few items left on the desktop (such as the Recycle Bin), link them to your taskbar so you won't have to minimize your running applications just to get to them: Right-click the taskbar and choose *Toolbars•Desktop.* Then right-click the new toolbar's name. (If 'Lock the Taskbar' is checked, select it to uncheck it, and right-click the taskbar again to add the Desktop toolbar to the taskbar.) At the top of the right-click menu, you'll find options that change the size of the icons and turn on or off the display of the toolbar's title or its icons' names.

The Windows Start menu is highly configurable—right-click the *Start* button, click *Properties,* choose the *Start Menu* tab, pick either *Start menu* (which is XP's default) or *Classic Start* (which changes the menu to something resembling that in Windows 2000), and then click the corresponding *Customize* button to see the wealth of options. Most are a matter of personal taste, but you can get rid of two duplicated icons in the nonclassic Start menu by unchecking the *Internet* and *E-mail* options (links to those programs appear in your

Quick Launch toolbar by default). Click the *Advanced* tab to see more streamlining options. If you seldom click the Start menu's Favorites, Search, Set Program Access and Defaults, Help and Support, or other links, you can make them go away by unchecking them in the 'Start menu items' list and clicking *OK.*

The Quick Launch toolbar, located to the right of the Start button, is the handiest way to launch oft-used applications—you can fire up your favorite programs with one click. (If your Quick Launch toolbar isn't visible, right-click the taskbar and select *Toolbars•Quick Launch.*)

Remove any seldom-used icons (right-click them and choose *Delete*). You can also resize the Quick Launch toolbar (drag the bar that appears on the toolbar's right when the taskbar is not locked), arrange the icons (drag each one), and hide the toolbar's title and icon names. Most programs, when you install them with default settings, plop their icons on the Desktop, in the Quick Launch area, *and* in the Start menu—it's overkill. To prevent future icon clutter, always choose the 'custom' option when you install a new application so that you can decide whether it should create Quick Launch or Desktop icons.
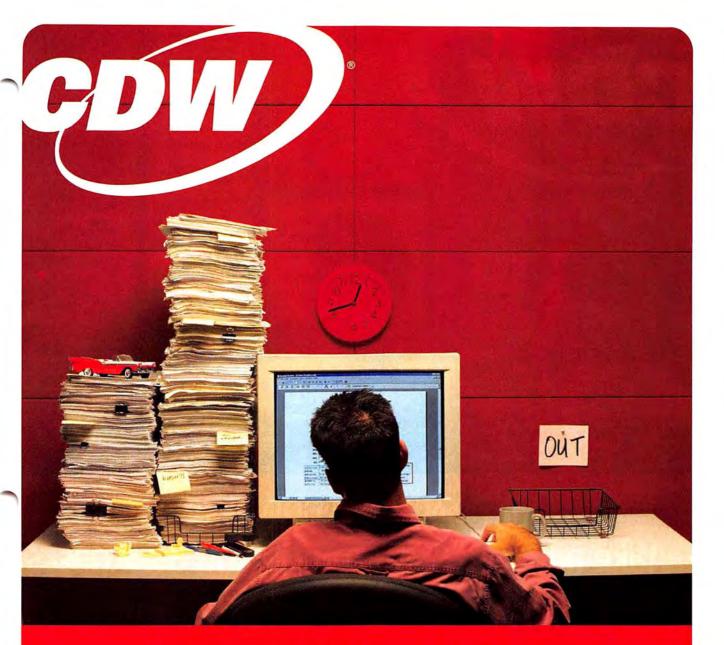
SYSTEM TRAY SURGERY

UNINSTALLING superfluous applications will reduce the number of system tray icons competing for your attention, but you can probably streamline things even more. Windows, hardware devices, and system utilities install icons to offer instant access to settings or to display the status of one thing or another. Simplifying the system tray frees space on the taskbar for more important stuff (see "15 Icons You Can Dump," at left, for some examples of the most common possibilities). ▶

5% Portion of instant messages received that are spam

—IMLOGIC

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Tackling the system tray is easier when all of its icons are visible: In Windows XP, right-click the *Start* button, choose *Properties*, click the *Taskbar* tab, uncheck *Hide inactive icons*, and click *OK* (you may want to reenable this when you're done). Left- or right-clicking each icon may reveal configuration options (every icon behaves differently). Even if the software doesn't let you disable its system tray icon, Windows can hide it using a slick system tray customization feature (see the Outlook item in "15 Icons You Can Dump").

Whack **Application** Weeds

LIKE WINDOWS ITSELF, the applications you use daily get cluttered over time. You need liberation from your overstuffed inbox, from too-smart menus that hide the commands you want, and from layers of toolbars you never use. Here's how to clip or remove what you don't want.

GET SECURITY SIMPLY

PC SECURITY IS CRUCIAL these days. Enabling every security feature on your PC, however, can handcuff your productivity. For example, enabling password protection on Windows XP's screen saver lets you walk away from your PC without worry that someone might view sensitive information. But during a phone call, say, you might have to enter your screen-saver password if your attention wanders from the computer. There's a grace period

between when the screen saver kicks in and when it starts demanding a password; the default is 5 to 10 seconds.

If you find that you often miss the cut-off and have to enter your screen-saver password repeatedly, you can change this grace period to something more reasonable. Microsoft's free Tweak UI PowerToys for Windows XP (find. pcworld.com/42714) can do the trick. Start Tweak UI, then click the plus sign next to Logon in the left pane, and click the Screen Saver category that appears beneath it. You'll be able to change the grace period to as long as 99999 seconds, but something in the range of 30 to 60 seconds is all you need.

Windows XP Service Pack 2 adds several cool security features you might not have seen before, most notably the Windows Firewall. When you install SP2, a small icon that looks like a shield appears in the system tray. It links to the Security Center Control Panel, which lets you manage settings that turn Automatic Updates and the Windows Firewall on and off. But if you use your own software firewall (which we recommend; see last month's "Windows XP's Big Fix" at find. pcworld.com/43836 for more on this

GIVE YOURSELF TIME to react to your screen saver kicking in by upping the "grace period" in Tweak UI.

point and about SP2), Microsoft recommends that you turn off its built-in one. If you do that, you'll get lots of confusing little balloon alerts from the system tray telling you to turn on the firewall. To end those alerts, double-click the icon to open the Security Center, click the link on the left that reads *Change the way Security Center alerts me*, and then uncheck the *Firewall Alert* check box.

This same tip can also save you from the weekly nag alert that Automatic Updates sends out. If you update Windows manually, and if you have disabled Automatic Updates, uncheck the *Automatic Updates* check box, as well.

PARE APPLICATION MENUS

DOCUMENTS and e-mail constitute only half the complicated-application problem. Microsoft Office and many other programs employ menus that hide infrequently used commands. Designed to help users simplify their experience of using the application, the feature ironically makes it more difficult to find menu commands you use less frequently. If this bothers you, you can just disable these so-called personalized menus in Outlook, Word, Excel, or Access by choosing *Tools•Customize*, checking *Always show full menus*, and clicking *Close*.

Sometimes you might not want to see the entire menu. Some applications, such as Internet Explorer and Outlook, let you drag and drop (or resize) toolbars to minimize the space they take up. Other programs, such as the Mozilla browser, ▶

SEE EVERYTHING clearly by eliminating personalized menus in Microsoft Office.

48 Number of emoticons in Yahoo Instant Messenger (all are animated)

-PC WORLD RESEARCH

allow you to collapse seldom-used elements. After you move or resize your Internet Explorer toolbars, lock them in place by right-clicking a toolbar or menu bar and selecting *Lock the Toolbars*.

SLIM THE 800-POUND INBOX

WHEN YOUR INBOX contains hundreds—or thousands—of messages, you're less likely to act on those that need attention, and finding a particular e-mail takes forever. But you can take remedial action.

First, use good spam-filtering tools to cull the most egregious junk and virus-laden bombs. *PC World's* editors gave a World Class award to Cloudmark Spam-Net (see find.pcworld.com/43696 for more information). You might need to keep some messages for future reference, but they don't need to languish in your inbox. Move them to subfolders. Delete ruthlessly. And use your e-mail application's archive feature to transfer messages that are older than a certain date (say, six months ago) to an archive file.

Achieve **Hardware** Nirvana

IN THEORY, any hardware installed and operating on your PC requires power, memory, and processor attention. Getting rid of the devices you don't use can speed things up. Some hardware devices, such as wireless network adapters, may also significantly shorten laptop battery life, even if you're not connected to a network, while exposing your notebook to security threats.

If you seldom use your modem, infrared connection, serial port, or parallel port, you can use hardware profiles to disable some or all of these as a group, sav-

ing battery power. The implications of this aren't minor: If you need to use your serial port in the future, you'll have to reboot with the hardware profile for that port enabled. But if the need is truly rare, disabling the function is worth the effort. To create a new hardware profile, right-click *My Computer* (on the desktop or in the Start menu), choose *Properties*, click the *Hardware* tab, and then click the *Hardware Profiles* button. Select an existing profile (you'll probably have just one), and click *Copy*, then *OK*. (Copying the existing profile is the easiest way to create a new one.) To make a particular profile the default, use the arrows at the right of the dialog box to move it to the top of the list. Windows will use it the next time it boots. To disable hardware within the current profile, right-click *My Computer*, choose *Properties*, click the *Hardware* tab, and then click the *Device Manager* button. Right-click the hardware item you want to disable in Device Manager's list (you may need to expand the list first), and choose

CUT THE FAT

STRIPPED-DOWN SOFTWARE ALTERNATIVES

IF YOU DON'T NEED COMPLEX SOFTWARE suites with dozens of features you never plan to use, why buy them in the first place? Many free applications do the job without complications like product activation or digital rights management schemes. Here are a few.
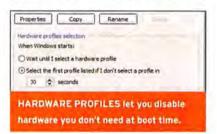
INSTEAD OF ...	you could use...	and save yourself...	Comments
Microsoft Office	OpenOffice	$300, 200MB of storage, and 128MB of RAM	OpenOffice (find.pcworld.com/42772), a completely free alternative, lacks the security problems, "assistants," and background apps Microsoft Office brings along.
Windows Media Player	Quintessential Player	from having to deal with the constraints of digital rights management	The Quintessential Player (find.pcworld.com/42800) can play any video or audio file format.
Internet Explorer	Mozilla, Opera, or any other browser	from the danger of ActiveX and security flaws that let spyware and worms get on your PC	Internet Explorer might get patches to fix its many bugs, but repairing our trust in the browser will take longer. (Visit find.pcworld.com/43914 for PCWorld.com's Downloads.)
McAfee VirusScan	AVG Anti-Virus	$50 to $70 to purchase the software, and $20 to $30 a year for renewals	AVG (find.pcworld.com/42742) is an award-winning, simple, powerful, and utterly free antivirus program.
Norton Internet Security	ZoneAlarm 5	$70	With free firewalls like this (find.pcworld.com/43032), who needs to buy one?

28 Average number of spyware applications on an infected computer

—EARTHLINK AND WEBROOT SOFTWARE

Disable. (A word of advice: Don't disable any hardware listed under the System Devices category.)

You can also save some of your laptop's battery life (and simplify matters) by ejecting any of the myriad accessories you may have plugged into the laptop, such as PC Cards and flash memory cards; disconnect any USB and FireWire devices, as

HARDWARE PROFILES let you disable hardware you don't need at boot time.

well. To avoid network complications and strengthen security, use just one network at a time—disable your wireless network connection if you're connected by wire (or if you don't want to use the Wi-Fi card). Most newer laptops with built-in Wi-Fi have a little on/off switch or button on the outside of the laptop's case. Use it.

Here's another important pull-the-plug suggestion: Not every PC needs to be connected to the Internet. If you have a second or third computer, dedicated to children's games or to other duties that don't require a connection, disconnect it from the Internet, literally—just pull out the phone or network cable, or disable the supporting hardware in the Device Manager as described above. If the PC isn't online, it can't catch most viruses.

Running out of free disk space affects performance and obviously prevents you from installing additional programs or creating new documents. You can usually free a significant amount of space by deleting junk files left behind by applications and Web browsers. To jettison the junk, open *My Computer,* right-click the drive that Windows is installed on, choose *Properties,* and then click *Disk Cleanup.* After scanning the drive, Windows will present a list

TOO MUCH OF A GOOD THING

The Pitfalls of Simplification

WHILE IT'S GOOD TO ELIMINATE unneeded services, applications, and other PC clutter, going too far can turn a PC that's merely annoying into a nonfunctioning one. If you run Windows XP, the System Restore tool can and will save your behind (and your system) if you ever cross the line that divides PC simplification from a PC lobotomy.

In general, if you're not sure whether uninstalling or disabling a program or service is a good idea, leave it be. Google is a great way to find out what a particular program is—just search for the file name. Be certain you know what a program or service does before you disable it, lest you turn off something Windows needs to boot.

To prepare for that possibility, make a bootable Windows XP emergency recovery CD before you start simplifying. (See find.pcworld.com/43698 for instructions.) Once you make the CD, test it, then put it somewhere safe and pray you'll never have to use it.

You're better off disabling those things you know are unnecessary, and then monitoring the PC for a day, just to make sure you haven't broken something. Always proceed with your simplification carefully, disabling one service or program at a time, and then rebooting to see if its absence causes a problem on startup.

If all is well, create a new restore point using Windows XP's System Restore tool, which takes snapshots of your system configuration and can restore a botched simplification effort with a few mouse clicks. Creating a restore

Name	Description	Status	Startup Type
IPSEC Services	Manages I...	Started	Automatic
Logical Disk Manager	Detects an...		Manual
Logical Disk Manage...	Configures...		Manual
Messenger	Transmits ...	Started	Manual
MS Software Shado...	Manages s...		Manual

TURNING OFF SERVICES is an easy simplification. But if you go too far, Windows might not be able to restart the next time.

point with this tool is easy: Choose *Start•All Programs* (or *Programs*)•*Accessories•System Tools•System Restore,* select *Create a restore point,* click *Next,* enter a description of the restore point (such as 'right before starting simplification'), and then click *Create.*

System Restore also lets you create a restore point before you install new software, allowing you to back out of any unwanted changes the new program makes to your system. Thanks to System Restore and the emergency recovery CD, you can feel relatively free to simplify without much risk of turning your PC into a paperweight.

of items, sometimes totaling hundreds of megabytes. Check the items in the list you want to delete, and then click *OK.*

FRAG YOUR DEFRAGGER

AND HERE'S ONE LAST TIP: Don't waste time defragging your hard drive. In the past, by rearranging the sectors of each file on your disk into contiguous and optimized locations, you could boost disk performance. Defragmenting will increase the amount of contiguous free space (which might help you install large programs, like games), but defragging provides minimal performance benefits on most typical PCs (see February's "Backing Up to Happiness," find.pcworld.com/43838). Instead, save precious time and try something other than a defrag if you need a speed boost. ■

Internet Tips *columnist Scott Spanbauer is a contributing editor for* PC World.

92% Portion of IT managers who found spyware apps on company PCs

–WEBSENSE AND HARRIS INTERACTIVE

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All Gain, No Pain

PC chores don't have to be drudgery. We show you quick and easy ways to complete six essential tasks.

THE COMMON WISDOM is that PCs, like your finances, require a lot of time-hogging good habits. That lengthy list of "shoulds" might make you weary enough to want to lie down. In sympathy, we've simplified six PC tasks, skipping all the complications and taking all the shortcuts. We also chose the recommended products for their no-hassle quotient.

There are many ways to approach any task, and these guides aren't definitive—just the best way to get the job done. ▶

EDITED BY REBECCA FREED　　　　ILLUSTRATIONS BY HAL MAYFORTH

THE ANNOYANCES ISSUE

Organize and Fix Up Your Photos in a Flash

Time to complete 5 minutes to install, 10 minutes to organize

Required product Jasc Paint Shop Photo Album 5, $49, www.jascsoftware.com

THERE'S A BETTER WAY to store your digital photos than dumping them onto your hard drive. With a little effort and the right program, your pictures can be cleaned up, oriented right side up, and meaningfully named.

1 Connect your camera to your PC and launch Photo Album 5. In the pop-up window, choose *Organize*.

GIVE YOUR photos recognizable names.

2 On the toolbar menu, click *Camera•Get All Images*. Rename the folder to something descriptive, such as 2004 Tahiti Vacation.

3 If some of the images aren't oriented correctly, you can rotate them all simultaneously. Hold down the <Ctrl> key and select the photos that you want to rotate. Then right-click a highlighted photo, select *Rotate*, and choose *Left* or *Right*.

4 Before you edit your photos, we recommend making copies of your images. Certain operations (such as the Quick Fix) cannot be undone, so it's good to keep a copy

in case you don't like the results of your edit.

5 Want to perk up a few dull shots? With a single click, the Quick Fix tool adjusts a photo's brightness, contrast, and color balance. To modify several photos at once, select the images, click *Batch* on the toolbar, and choose *Quick Fix*.

6 If you want to e-mail photos or post them to the Web, reduce their size for quicker uploads. Select the images to resize, click *Batch* on the toolbar, and select *Resize*.

7 Loaded straight from your camera, your images have cryptic file names (like "IMG_0001"). If you rename them, they'll be easier to locate later. To rename them all at once, select the photos, click *Batch* on the toolbar, and choose *Rename*. A Batch Rename window pops up. In the 'New filename' field, type your desired title—for example, 2004_Tahiti_Vacation. —*Grace Aquino*

Make Backups in the Background

Time to complete 10 minutes to install, 5 minutes to set up

Required products Iomega HDD 160GB USB 2.0 External Desktop Hard Drive with Iomega Automatic Backup software, $190, www.iomega.com; Windows 2000 or XP

YES, BACKING UP all your data is critical, but you probably never do it because getting started seems too hard. This method is dead simple to set up and ensures that you always have an up-to-date version of your data.

1 Set up your backup media. We recommend an external hard drive because all you have to do is plug it in, and Iomega's models come with the company's Automatic Backup software.

2 In Windows Explorer, select *Tools•Folder Options*. Click the *View* tab. Select *Show hidden files and folders*. Click *OK*.
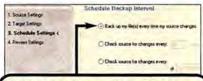
3 Install Iomega Automatic Backup. After the installation completes, it will bring you to the program's Setup Wizard.

4 On the wizard's first page, look at the selections listed under Easy Setup Default Source Folders. If you keep files in the My Documents, Desktop, and Favorites

folders, leave all the check boxes selected. Next, click the *Select Target* button. Select the hard drive you just installed, then click *OK* and *Customize*.

5 On the next page, locate the rest of your data by completing the following steps for each of the folders listed below: Click the *Add Folder* button, select a folder, and click *OK*. Here are the folders:
- ♦ Shared Documents
- ♦ C:\Documents and Settings\ *your_name*\Application Data
- ♦ C:\Documents and Settings\ *your_name*\Local Settings\ Application Data

LOCATE YOUR data by picking folders.

WE RECOMMEND constant backups.

6 Using the same procedure, select any other folders that you want backed up. When you've finished, click *Next*.

7 Complete the setup using the wizard. We recommend that you stick with the program's defaults, which will automatically back up your documents every time that a change occurs. —*Lincoln Spector*

Tidy Up Your Files and Folders

IT'S EASY TO JUST let Windows save every file where it wants to—in My Documents—but you can end up with a cluttered, unwieldy folder, and My Documents can be time-consuming to navigate to. You may instead want to store your files on another, larger hard drive, copy them to another location, or compress them in a jiffy. A couple of tricks will let you quickly and easily set up your filing system your way and keep it organized.

1 To change the location of My Documents, choose *Start,* right-click *My Documents,* and select *Properties.*

2 Click *Move,* and browse to the new location you want for My Documents. Click *Make New Folder* if necessary (the folder will still appear as My Documents in the Start menu and Explorer). Click *OK.*

3 Make the Send To menu your friend by putting the programs and folders you use most often into it: First, navigate to the Send To folder itself. Each user account has its own folder at *n:*\Documents and Settings\ *your_name*\SendTo, where *n:* is the drive Windows is installed on and *your_name* is the log-on name of the user. Use My Computer or Explorer to open this folder.

4 Create a shortcut to the folder you want to send documents to: Choose *File•New• Shortcut* (or right-click an open area of the Explorer window and choose *New•Shortcut*), and then browse to the program or folder you would like to add to the Send To menu. This works for applications as well: If you always open text documents in WordPad, for example, put a shortcut to WordPad in your Send To folder. Or make a shortcut to a network drive so that you can back up files and folders with two clicks.

5 Use the Send To command to compress large files (such as photos or audio or video clips) for storage or e-mailing. In Explorer or any File•Open dialog box (including when you choose Insert•File in Outlook), right-click the giant file (or group of files), and then choose *Send To•Compressed (zipped) Folder.* Note: If saving disk space is your main concern, you should delete the original file once the compression process has completed.   —Scott Spanbauer

CHANGE the location of My Documents.

Save Paper by Combining Print Jobs
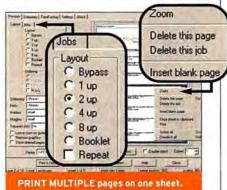
WANT TO DO something nice for the environment and your office-supplies budget? FinePrint lets you shrink multiple pages, make double-sided prints, and even combine print jobs. Here's how to merge two documents into one printout.

1 Install FinePrint, then set it as the default printer in the Settings•Printers menu so it will open whenever you print. To do so, right-click *FinePrint* and choose *Select as Default Printer.*

2 For your first document, choose *File• Print.* When the FinePrint dialog box appears, click the *Preview* tab. Click the *Layout* subtab to choose how many pages to print on one sheet and to preview your job.

3 Don't click the Print button or close the dialog box. Return to the application you were using and open the second document. Invoke the Print command again to add this document to FinePrint's preview window.

PRINT MULTIPLE pages on one sheet.

4 Right-click the preview window to inspect your print job or to remove or insert pages. Choose your printer from the drop-down menu, and click *Print & Close* or *Print* to finish.   —Rebecca Freed ▶

Install and Train a Firewall

Time to complete   10 minutes to download and install, 10 minutes to train

Required product   Zone Labs ZoneAlarm 5, free, www.zonelabs.com

ZONEALARM IS ABOUT the easiest-to-use firewall we can think of, but you still have to do some fine-tuning to minimize confusing alerts. To save time, you can use ZoneAlarm's Control Center to manage programs' Internet access.

1 Download and launch the ZoneAlarm installer. Accept the default settings when ZoneAlarm asks you to configure Web surfing access. (If you think your computer is infected with a worm, virus, or browser hijacker, choose *No* to manually control

VIEW PROGRAMS' Internet access permissions in the Control Center.

which programs have Internet access until you've cleaned up the problem.) Click *Next* to continue, and reboot when prompted.

2 Read through the brief ZoneAlarm tutorial that runs automatically and explains how to respond to ZoneAlarm alerts. ZoneAlarm will begin to display dialog boxes asking you to grant or block access to programs running on your PC that try to use the network or Internet connection.

3 When a dialog box pops up, look at the name of the program attempting to access the network. If you recognize it as legitimate, check the *Remember this setting* option, and then click *Allow*. If you're not sure about the program, click *More info* to

view a description on the Zone Labs Web site. If you remain unsure whether the program is legitimate, click *Deny*.

4 To review and change the permissions you've given programs, double-click the *ZoneAlarm* icon in your system tray to bring up ZoneAlarm's Control Center. In the menu bar on the left side of the screen, click *Program Control*. Next, click the *Programs* tab at the top right of the main window. In this view you can specify exactly what each program is allowed to do—on the Internet and on trusted networks such as your office or home network. Choosing 'Allow' for often-used programs will minimize the number of pop-up alerts you see.   *—Scott Spanbauer*

Create a Web Site in Minutes

Time to complete   10 minutes for installation, 15 minutes to create and upload content

Required products   Blogger, free, www.blogger.com; Picasa Hello, free, www.hello.com

EVERYONE DREAMS of having their own Web site, but learning HTML and tweaking code can be a big time sink. The words and pictures you want to share with the world are what really matter, and a Weblog (or blog) gives you a basic Web presence almost instantly. Even better, the services we've chosen to help you do it are free.

PICASA Hello automates photo blogging.

1 Browse to the Blogger Web site, click the *Create Your Blog Now* link, and follow the prompts to establish an account (be sure to jot down your user name and password), a blog title, and a blog address.

2 Select a blog template that suits your design sensibilities, and click the arrow at the bottom of the screen.

3 Click the *Start Posting* link, and then enter a title and message in the Posting sheet. When you're satisfied with your post, click the *Publish Post* link. To see how your

published blog looks, click the *View Blog* tab.

4 The Posting, Settings, and Template tabs let you control just about every aspect of your blog, including deleting entries (or entire blogs) and allowing others to add posts and comments. If you want to edit or delete an existing post, click *Posting*, then *Edit Posts*. To choose a different design template for your blog, select the *Template* tab, and then click *Pick new*.

5 Download and install Picasa's free Hello instant messaging utility. Again, make a
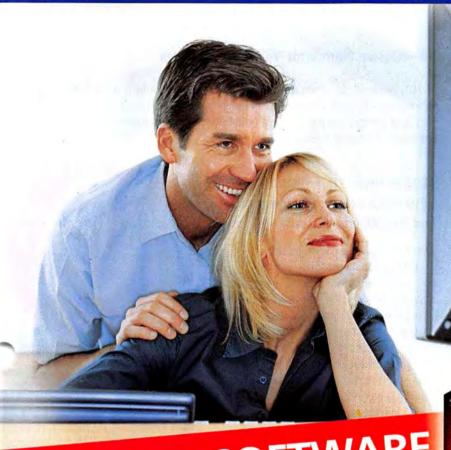
note of your Hello user name and password. Launch Hello, and then log in.

6 Click *Send Pictures*, and then browse to and select the photo that you want to post to your blog. When you're prompted, choose *BloggerBot* as the photo recipient, and click *Send*. Next, enter a photo caption and click *Publish*. That's it.

One note: The first time you send a photo using Hello, Blogger will also prompt you to log in with your Blogger user name and password.   *—Scott Spanbauer* ■

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Whether you need e-mail for personal use or business use, 1&1 has the perfect solution for you. 1&1 Instant Mail is ideal for home and individual users, allowing you to start sending and receiving personalized e-mails right away from 5 dedicated POP3 e-mail accounts. 1&1 Microsoft Exchange Hosting gives you or your entire business secure, reliable, affordable, up-to-date access to your most critical information — e-mail, contacts, calendars, public folders and more — anytime and from anywhere.

"Running a consulting company, I can be working from several locations each day. With 1&1's Microsoft Exchange service, I can easily access my Outlook data and important files from any computer. Whether I am on my desktop, notebook, PDA, or a client's computer, my work environment is synchronized with 1&1. For my small businesses maintaining my own Microsoft Exchange server had always been too costly or too difficult. With 1&1's service, it is now simple and affordable to work and share information virtually anywhere."

Michael Krupit

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- Launches right from the 1&1 Control Panel – no software to install.

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Market Your Website
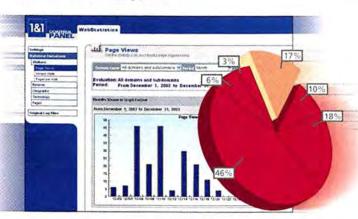
Make your site interactive and increase communication with 1&1.

Easily add features to enhance your website. 1&1 gives you the tools that let you effectively communicate with your customers and site visitors, keep them intrigued and keep them coming back for more. Your 1&1 hosting package comes complete with high performance features that let you connect with your visitors through live interaction, feedback forms, e-mail newsletters and more and gives them exactly what they are looking for. Best of all, these tools are so easy to use that no programming knowledge is needed!

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CHAT-TALK
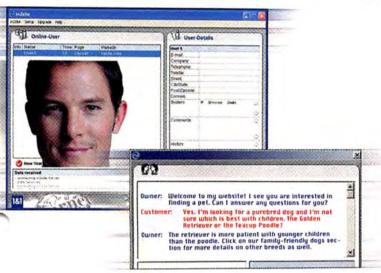
ELAINE36:	Hello, I saw your site and I have a question about one of your products
HOTCARDS2004:	Which product can I help you with?
ELAINE36:	I am interested in ordering some business cards. What is the difference between gloss and matte finish?
HOTCARDS2004:	Matte stock is a coated paper that has a dull or flat finish. It is often preferred for readability on projects that are text intensve 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 photographs, images and graphics appear more vivid, real and real and appealing.
ELAINE36:	I think I'm going to go with the gloss. Thanks so much for your help!

Thanks so much for your help!   senden

Chat & Forum
Provide a meeting place for your customers and add information and entertainment value to your site. Included with ALL shared hosting plans!

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In2site Live Dialogue*

Give site visitors personalized customer service and support live and in real time.

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Add template-driven contact forms, online polls and more and customize them to fit your site.

Invitation to:

Photo Exhibit
Hosted by: Susan Howard
Where: Impressions Gallery
Where: 293 Oregon Avenue, Denver, CO 80216

Your Name
Stephen Bradshaw

Email Address
bradshaws@myhost.com

Will You Attend?
○ Yes - Gladly
● No - Unfortunately Not

Owner: Welcome to my website! I see you are interested in finding a pet. Can I answer any questions for you?

Customer: Yes. I'm looking for a purebred dog and I'm not sure which is best with children. The Golden Retriever or the Teacup Poodle?

Owner: The retriever is more patient with younger children than the poodle. Click on our family-friendly dogs section for more details on other breeds as well.

Membership List

Alan Bishop		634 E. 39th Street, New York, NY 10019	alanb@myhost.com
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Tom	Stowe	26 N. Hills Road, Chandler, AZ 85226	webunited@gmx.net
Helen	McSweeny	817 Providence Hwy, Boston, MA 02116	helenmcsweeney@hotmail.com

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YOUR LOGO

NEWSLETTER

No. 12 / January 2004

Dear Sir, Dear Madam,

We are pleased to inform you that our new product in this newsletter

Digital Cameras

Send out the right message by fill you would like to change. It's so e

Accessories

CONTROL PANEL

ADDRESS OVERVIEW

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Easily create and integrate customized databases into your website with no programming knowledge needed.

1&1 Newsletter Tool*

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*Home packages do not include WebElements, In2site Live Dialogue, WebDatabase or Newsletter Tool.

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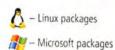
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🐧 – Linux packages

🪟 – Microsoft packages

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	🐧	🪟
PACKAGE FEATURES		
Web space	500 MB	500 MB
FTP accounts	1	1
Monthly Transfer Volume	25 GB	25 GB
1&1 Control Panel	✓	✓
Logfiles	✓	✓
MARKETING TOOLS		
1&1 Chat channels	1	1
1&1 WebStatistics	✓	✓
SITE-BUILDING TOOLS		
WebsiteCreator	12 pages	12 pages
Software bundle 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		
POP3 accounts	50	50
Aliases, auto-responders, forwarding	✓	✓
1&1 WebMail	✓	✓
Symantec Virus Scanners	1 account	1 account
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

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INCLUDES 3 DOMAINS

	🐧	🪟
PACKAGE FEATURES		
Web space	1,000 MB	1,000 MB
FTP accounts	5	5
Monthly Transfer Volume	50 GB	50 GB
1&1 Control Panel	✓	✓
Logfiles	✓	✓
MARKETING TOOLS		
1&1 Chat channels	5	5
1&1 WebStatistics	✓	✓
In2site Live Dialogue	✓	✓
1&1 Newsletter Tool	✓	✓
1&1 WebElements	✓	✓
SITE-BUILDING TOOLS		
WebsiteCreator	18 pages	18 pages
Software bundle worth $600	✓	✓
FrontPage extensions	✓	✓
CGI library	✓	✓
Active Server Pages	–	✓
ASP.NET, .NET Framework	–	✓
Perl, PHP3 and PHP4	✓	–
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		
POP3 accounts	150	150
Aliases, auto-responders, forwarding	✓	✓
1&1 WebMail	✓	✓
Symantec Virus Scanners	3 accounts	3 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

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INCLUDES 5 DOMAINS

	🐧	🪟
PACKAGE FEATURES		
Web space	2,000 MB	2,000 MB
FTP accounts	25	25
Monthly Transfer Volume	100 GB	100 GB
1&1 Control Panel	✓	✓
Logfiles	✓	✓
MARKETING TOOLS		
1&1 Chat channels	10	10
1&1 WebStatistics	✓	✓
In2site Live Dialogue	✓	✓
1&1 Newsletter Tool	✓	✓
1&1 WebElements	✓	✓
SITE-BUILDING TOOLS		
WebsiteCreator	25 pages	25 pages
Software bundle worth $600	✓	✓
FrontPage extensions	✓	✓
CGI library	✓	✓
Active Server Pages	–	✓
ASP.NET, .NET Framework	–	✓
Perl, PHP3 and PHP4	✓	–
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		
POP3 accounts	300	300
Aliases, auto-responders, forwarding	✓	✓
1&1 WebMail	✓	✓
Symantec Virus Scanners	6 accounts	6 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

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- Quickly and simply configure:
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  - Order processing
  - Tax clearing
  - Delivery methods
  - Payment settings

All-inclusive hosting solution

- No software installation
- Traffic and web space included
- Updates and enhancements handled automatically
- 1&1 WebStatistics included

SSL secured

- All shop-based settings created in SSL secured pages
- Maximum integrity of confidential data
- Fully protected from third-party access

Froogle Search

Help your customers find your online products quickly and easily. Available with 1&1 Professional and Developer eShops, Froogle allows users to find the products they want and provides links to the stores that sell them. Users can click through to your business and buy direct from you.

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BUSINESS eSHOP

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- 10 GB monthly transfer volume
- 50 item product catalog
- Choice of 2 shipping methods

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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
- Newsletter editor
- 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
- Newsletter editor
- Import/export customer data
- Online credit card clearing with PayPal and WorldPay
- Tax clearing server (calculates taxes by state, county and city)
- FTP access
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Annoyance
Busters

24 great utilities and tools that smack down hassles with data, security, Windows, and your hardware.

DO YOU SUFFER from high blood pressure, migraine headaches, and a near-irresistible urge to throw expensive computer gear out the window? Your PC may serve up more disappointments than the Boston Red Sox in a late-September swoon, but hope is not lost. An array of useful utilities and tools can do much to smooth over your system's most glaring flaws. And you may be surprised to learn that many of the fixes for these niggling annoyances can be had for free. ▶

BY MICHAEL DESMOND   ILLUSTRATIONS BY MARK MATCHO

Slowdown **Busters**

SLUGGISH PC performance can test the most even-tempered person's patience. These utilities help provide a boost.

Clogged Windows

OVER TIME, Windows can become so stuffed with spurious, forgotten, and corrupted Registry entries that it's amazing the operating system works at all; determining what exactly is slowing the works can be supremely difficult. **RegSeeker** gets things flowing again by cleaning out Windows' rusty pipes. Like other Registry cleaners on the market, RegSeeker can identify and then change or remove invalid or unused entries. Of course, every Registry tweak comes with an element of risk, so use the program's Registry backup feature before making any changes. Free, find.pcworld.com/43638

Painfully Slow Acrobat Loads

ADOBE READER 6 could be one of the slowest-loading applications around—and that's really saying something. The fault lies with all of the sundry plug-ins that Adobe Reader insists on loading every time it launches—plug-ins that most people never use. Put some snap back into Adobe Reader's step with **Adobe Reader Speed-Up**, which prevents those resource-hogging plug-ins from loading. You can even customize the utility to load only select modules. Without further ado, Adobe Reader launches in an instant. This must-have utility works with Reader versions 3.0 to 6.01. Free, find.pcworld.com/43640

Windows Bulge

WE ALL KNOW the frustration of Windows bloat. The operating system is loaded with programs, services, modules, and applets that most of us don't need and probably won't ever employ. An incredibly handy utility, **XPLite** lets you strip out unwanted Windows XP features and unnecessary modules. The result is a lean and mean operating system that loads more quickly, responds faster, and occupies significantly less space on your hard drive. You'll also find versions that are compatible with Windows 98 and Windows 2000, which could extend the life of aging PCs. $40, find.pcworld.com/43642

Dawdling Video Downloads

WHY DOES capturing video from MiniDV camcorders have to be so frustrating? Many applications that handle this task are complicated, confusing, and unstable; some, like Windows Moviemaker, force you to use their own proprietary format. Thank goodness for **Scenalyzer Live**. If not for it, you might be staring at countless hours of unedited footage. This snappy little applet does one important thing remarkably well: It grabs DV-format video off FireWire-equipped digital camcorders

MY FAVORITE FIXES

Easy Uploads and No Spam

THE ANNOYANCE: I didn't know what busy was until I left my consulting job at Accenture to launch a fan Web site and a monthly magazine about the Cleveland Browns football team. I found myself constantly jumping in and out of FTP programs to upload articles and layouts to remote servers. I spent precious time battling spam, too. Despite the improved filtering in Outlook 2003, the flood of garbage threatened to overwhelm my inbox.

THE FIX: I installed WebDrive (see page 128), a nifty FTP program that lets me place remote drives and folders directly within Windows Explorer. No more fussing with a clumsy FTP interface or with tools like Microsoft FrontPage—I just drag, drop, and transfer. To deal with spam, I rely on SpamNet (find.pcworld.com/43860). It flags and deletes unsolicited e-mail messages for me, using an automated feedback mechanism to identify spam broadcasts as they emerge on the Internet. I couldn't work without it.

BARRY McBRIDE,
Web site manager,
Mentor, Ohio

40% Percentage of Web users who say pop-ups are the most annoying ads

–JUPITER RESEARCH

and captures it to hard disk. On top of that, the program also provides automatic scene splitting—by detecting breaks in the original recording—to help you find and work with specific portions of footage. No more wrestling with wretched, crashing bloatware. Now you can simply launch, capture, and—at your leisure—edit. $39, find.pcworld.com/43652

Data Glitch
Busters

EVER WONDER exactly what your PC is up to? These utilities will help you unravel the mystery and find out the answer.

Is Windows Frozen?

SO YOU CLEVERLY stashed your home PC behind a desk or in a cabinet to clear some needed floor space. But now you can't see the LED that indicates hard-disk activity, so you can't tell whether Windows is frozen or whether the system is simply waiting for data to spool off the disk. **Diskmon** helps eliminate the guesswork. This tiny utility sets up shop in the Windows system tray and blinks whenever the disk is working—just like the activity light on the front of most PC cases. It also keeps detailed tabs on the activity, producing a staggering log of file reads and writes. Free, find.pcworld.com/43632

Disk Space Dilemma

MP3S, VIDEO FILES, digital photos...this stuff can fill up hard disks fast, and it can be tough to tell where the data is going. Sure, if you hover a mouse pointer over a folder in Windows XP, a tool tip pops up

showing how much data is in that folder and its subfolders. But to see precisely where all of the data is, you need **JDisk Report**, a utility that produces a highly detailed, graphical overview of files and folders on your hard disk. You can call up a pie chart that displays a great overview of the folders consuming the most disk space; dive into a detailed table that reveals file names, dates, and sizes; or explore an easy-to-peruse chart that shows the distribution of files by size ranges. Free, find.pcworld.com/43634

What's Really Going On?

HAVE YOU EVER wondered what's happening behind the scenes in Windows? The Windows Task Manager—which you access by pressing <Ctrl>-<Alt>-<Del>—shows a terse list of applications and processes running on your PC. Unfortunately, you can't tell what these processes are doing or where they come from. **Process Explorer** sheds some much-needed light on those mysterious background

apps, permitting you to drill down to see what folder an application started from and what resources it is using. This utility can also help you identify spyware and other nefarious background processes. Free, find.pcworld.com/43662

Can't Find Duplicate Files

A 250GB HARD disk can hold an awful lot of files—and the task of preventing duplicate files from piling up and getting misplaced can be difficult. Regrettably, Windows Explorer won't let you compare two directories side by side. **Xplorer2 Lite** is a Windows Explorer replacement that makes it easy to compare directories, sniff out duplicate files, and find the most recent version of files across directories. This is an especially terrific tool for people who need to sync the contents of desktop and mobile hard drives. For $25, you can obtain Xplorer2 Pro, a version that adds advanced searching, FTP and Web syncing, and subfolder disk usage statistics. Free, find.pcworld.com/43636 ▶

Scattershot Peripheral Hookups

VENDORS OFTEN CHARGE hundreds of dollars more for printers that can hook directly to your network, and most scanners aren't even networkable. But with so many homes sporting two or more computers these days, it would certainly be convenient to share these devices. Now you can, with the **Keyspan USB Server**, a four-port USB 1.1 module that plugs directly into your ethernet network. Just like that, you can hook any USB-equipped printer, scanner, or other compatible device into the Keyspan USB module and have it be available to all of the PCs on your network. Our only quibbles: A fast USB 2.0 model would be welcome for sharing hard drives, and we still have to get off our lazy duffs and walk to the printer to retrieve our documents. $129, find.pcworld.com/43674

29% Percentage of Web users who say spam is the most annoying ad type

−JUPITER RESEARCH

Clutter **Busters**

FINDING BURIED files and keeping your PC neat and tidy can insidiously eat away at your productivity. These utilities speed up the process without requiring you to take a crash course in new methods.

Hidden Windows Features

SOMETIMES Windows seems to be doing its utmost to hide information from your inquisitive eyes. Whether you want to scope out CPU utilization, check on free hard-disk space, or see right now how much data is moving to and from your system, Windows forces you to plunge into the Control Panel, the Task Manager, and various applets in search of the lowdown. One handy solution is to install **StatBar**, a sleek and slim status bar that tucks in neatly at the top or bottom of your screen and puts scads of controls—including program launch buttons, a master volume slider, and Winamp audio controls—right at your fingertips. Free, find. pcworld.com/43644
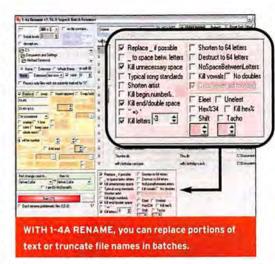
What's the Date Today?

WANT TO know the time? Easy: Look at the little time display in the Windows task pane. But if you want to check the date, you have to hover the mouse pointer over the readout until a tool tip appears—and half the time, the tool tip doesn't come up at all. **TClockEx** dispenses with extra mousing by displaying the current time, date, and day in the location where the Windows clock used to sit, in the format of your choice. It will even display CPU utilization and memory loading. It's tiny and efficient—you install it, set it up once, and never fiddle with it again. Free, find.pcworld.com/43646

Window Disorder

TOGGLING BETWEEN application windows can be a slippery business. Before you know it, you have a dozen separate

WITH 1-4A RENAME, you can replace portions of text or truncate file names in batches.

program windows open, all stacked up in a pile and obscuring your work. **AllSnap** helps clean up the multitasking mess by making the edges of your application windows sticky. Drag a browser window toward the upper-right corner of the screen, and AllSnap nudges it into the corner. Pull two Word document windows side by side, and AllSnap clicks them together. This little utility turns Windows from point-and-slide to point-and-click. Free, find.pcworld.com/43648

Renaming Files Can Be a Drag

AS A RESULT of the cryptic file names that digital cameras tend to assign to photos, many photography enthusiasts must laboriously rename dozens of files at a sitting. **1-4a Rename** takes the drudgery out of those makeovers, letting you rename multiple files (even in different folders) with the aid of its controls and an impressive set of filters. You can strip out a specific string of characters in unnecessarily long file names and replace it with, say, today's date; or you can remove capitalization, spaces, and nonstandard characters. The basic mode has a few useful rename filters, while the rather intimidating Expert Mode should meet the needs of all but the most sophisticated users. Free, find.pcworld.com/43650

HARDWARE HASSLE

Too Many Power Adapters

IF YOU CARRY a lot of electronics gear when you travel—a PDA, a cell phone, a digital camera, and perhaps even more—you probably haul around a wad of power cables and chargers, too. Cut the clutter with **Zip-Linq USB cables and power adapters.** You can plug these cables into a PC's USB port to send juice to handheld devices, or you can attach separate modules to allow the devices to draw power from either 110-volt wall sockets or 12-volt car cigarette lighters. Zip-Linq sells an array of adapters for different cell phone models and other products. Now you can lighten your load when you're on the road. $10 to $20, find.pcworld.com/43678

233 Number of adware applications that were in existence in June 2004

—PESTPATROL

So Many CDs, So Few Drives

EVERY TIME THE kids want to play Legoland, I find myself scanning multiple bookshelves, sorting through stacks of jewel cases, and scrounging around in desk drawers in search of the game's wayward CD. **Alcohol 52%** is a CD emulation program that lets you store on your hard drive images of the CDs that you use frequently. The software then tricks Windows into thinking that the CDs are in the drive when you launch the programs. Gone is the frustrating ritual of hunting for CDs—that is, if you have the disk space to hold all of them. Each CD that you store on the hard disk can consume up to 700MB of space. If you want to burn backups of your favorite CDs and DVDs, check out Alcohol 120% ($50). Now when Junior scratches a disc, it won't spell disaster. $35, find.pcworld.com/43654

Infection & Hacker **Busters**
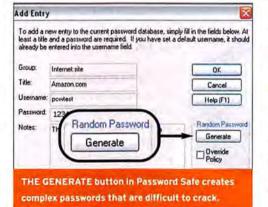
WHY IS IT such a struggle to keep your computer data secure and your privacy intact? This quartet of handy utilities will help you block unwanted intrusions and stave off legions of prying eyes.

Too Many Passwords

SO MANY WEB sites and networks require a log-on that people frequently resort to using easy-to-remember passwords that are a cinch for computer-literate lowlifes to crack. It doesn't have to be that way. **Password Safe** is an encrypted database that securely stores all your user name and password entries in a single place so

you can copy and paste complex passwords into Web pages and system log-on screens. The only password you have to remember is the one you use to access the scrambled Password Safe database. Most important, with this tool you can afford to use long and complicated passwords—the types that are highly resistant to being cracked—for all of your various log-ons. Free, find.pcworld.com/43660

The File Isn't Really Deleted

WHEN YOU DELETE a file in Windows, it isn't actually gone. Only the pointers to its locations on the hard disk (and the first letter of its file name) have been removed. Consequently, anyone who has access to your computer can come along with a half-decent file-recovery tool and pull up all sorts of valuable, confidential data from your disk. **BCWipe** clears out files for good by overwriting with random data the portion of the disk that contains a given file. You can adjust wiping levels to suit your degree of paranoia, from quick one-pass wipes to military-grade cleansings that will overwrite files half a dozen times or more. Also, BCWipe scrubs swap files and free disk space, both of which can house bits and pieces of private data. You can schedule relatively time-consuming operations—such as overwriting large swaths of the disk—to happen overnight. $40, find.pcworld.com/43656

THE GENERATE button in Password Safe creates complex passwords that are difficult to crack.

Stop Tailing Me!

ARE YOU SICK and tired of having your every move logged by nosy Web sites? Or having your files, including the sensitive ones, silently stored by Windows—for

BCWIPE CAN cleanse your hard drive according to standards set by the U.S. Department of Defense.

months on end—in cryptically named, hidden subfolders? **IE Privacy Keeper** is a compact utility that wipes the slate clean every time you start or exit Windows. Cookies, temporary files, lists of recently opened files, Internet Explorer URL history, AutoComplete lists—all of these and more are banished from your hard drive. You can even instruct the applet to delete specific files or Registry keys to ensure that every trace of your movements is lost. When you select the Secure Delete option, IE Privacy Keeper will overwrite the data that it deletes with random bits, thereby foiling outsiders' attempts to recover old files without your permission. Free, find.pcworld.com/43658

Flash Finagling

NOT ONLY CAN Flash animations make an unwelcome (and unexpected) racket when they launch automatically, but they can also bypass most pop-up blockers—which means that a Flash file carrying malicious ▶

50% Percentage of rebate seekers who had problems or got no rebate
—ABERDEEN GROUP

code has the potential to infect your computer with a virus. **TurnFlash** offers a trustworthy cure for this vulnerability: It enables you to toggle the Flash playback capability in Internet Explorer on or off anytime you want. When you arrive at a site where you would actually like to see the Flash animation play, all you have to do is click the taskbar icon. Afterward, if you click the TurnFlash icon again, Flash playback in IE will be disabled once more. It doesn't get much easier than that. Free, find.pcworld.com/43664

HARDWARE HASSLE

Weak Wireless Signals

WIRELESS networking is all about having room to roam. But laptops and handhelds can lose signal strength as you move from one side of the house to the next. The **D-Link DWL-G800AP Wireless Range Extender** can double the range of your 802.11g networking gear. Place it on a remote side of the house, and enjoy maximum signal strength and performance far from your access point. This device may not work with other vendors' routers, and it won't transmit 802.11b signals (the type produced by older Wi-Fi routers). $80, find.pcworld.com/43676

Online Bugaboo **Busters**

SOMETIMES SENDING files across the Internet, or dealing with issues with your home network, can be a big pain. These utilities keep the process smooth.

Frustrating FTP Interfaces

IF YOU FREQUENTLY publish files to Web sites or upload files to remote servers, you probably use file transfer protocol tools a lot. But even the best FTP programs rely on laborious log-ons and clunky interfaces that make connecting and transferring files from a local hard drive harder than necessary. **WebDrive** changes all that, displaying remote directories as just another folder in Windows Explorer. Simply enter the FTP server information in the WebDrive interface, and Explorer updates with a new, mapped network drive showing the contents of the remote server. The remote drives and folders you want to access are where you need them, all the time. $40, find.pcworld.com/43668

ONCE YOU CLICK the Connect at Login/Startup box, WebDrive links to the remote server.

Faulty FTP Transfers
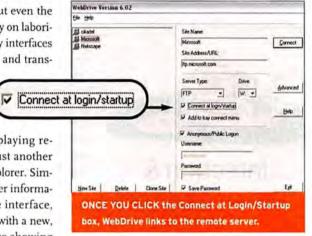
SPEAKING OF FTP transfers, how many times have you needed to get someone a file—absolutely, positively right now—but found yourself stymied by downed mail servers or arbitrary file-size limitations on e-mail attachments? Unless you or your cohort runs an FTP site, you

might be out of luck. **Pumpkin TFTP** lets you send files to another person, without requiring e-mail servers or FTP sites. You just find the local file, enter the target IP address, and then set up the connection with the required ID and password information. You can also enter the file location and name, along with a source IP address, to grab files from remote systems. Free, find.pcworld.com/43670

Network Nonsense

MORE WINDOWS PCs are networked than ever before, and yet Microsoft has barely lifted a finger to help users sleuth problems and mysteries with their home networks. If you want to check whether a computer at a particular IP address is working, you still have to open a DOS box to run the aged ping command. It's all so...so...1986. **Angry IP Scanner** lets you ping a range of IP addresses, and it returns ping rates, host names, and active IP addresses—all wrapped up in an attractive, easy-to-read Windows interface. It's the perfect utility to use when you need to figure out what PCs are actually connected to your home wireless network. Free, find.pcworld.com/43672 ∎

PC World contributor Michael Desmond is a freelance writer based in Vermont.

PHOTOGRAPH: MARC SIMON

R U
Annoying?

YOU DON'T HAVE TO SELL operating systems or advertise wireless spy cameras to exasperate people. Technology gives all of us the power to reach out to friends, family, coworkers, and people we've never even met and bug the bejesus out of them. Take this quiz to see where you stand on the annoyance scale.

You may be annoying if:

♦ Your instant messages average three emoticons, at least one of which is animated and makes cute remarks.

♦ Your personal Web page includes any of the following:
 – More than 12 photographs of your family pet
 – More than 10 photographs of you
 – Any picture of you naked

♦ When your best friend's PC crashes and destroys 3 hours of work, you say, "Of course, that wouldn't happen if you were on a Mac."

♦ Your PC announces the arrival of an e-mail message by playing a clip from *Joanie Loves Chachi.*

♦ You view a dinner party at a friend's place as a great opportunity to rip their CDs.

♦ You're so worried about the voice quality of your cell phone that fellow commuters have dubbed you Mr. Shouty.

♦ You forward long e-mail threads with no explanation of why you're sending the message or what the recipient should do with it.

♦ Your cell phone's ring tone is the entire *1812 Overture.* (One bonus point if you love it so much that you wait until it's over to answer your call.)

♦ You agree with the statement: "Riding the bus gives me a perfect opportunity to call my doctor and describe that wart I'm worried about."

♦ You send your coworkers files saved in WordPerfect's native format. Sooner or later, they'll realize it's superior to Microsoft Word!

♦ Your voice-mail greeting at work describes your exact hour-by-hour whereabouts over a two-day span. (Two

bonus points if you haven't changed the greeting since November 2003.)

♦ You wear more than three electronic devices in holsters on your belt.

♦ IYHO, it's gr8 2 uz creative spellings in msgs & LOL 2 ;-)!

♦ You figure that if you hold your BlackBerry in your lap below the table, your coworkers won't notice you're checking e-mail while they're talking.

♦ You end all of your e-mail messages with a quotation from an obscure nineteenth-century German philosopher. (One bonus point if the quote is *in* German.)

♦ You attached so many pictures to your last e-mail message that it brought down mail servers all along the eastern seaboard.

♦ Your six-year-old belts out "You Light Up My Life" on your voice-mail greeting. ■

DO THE MATH

Results: Pest or Paragon?

GIVE YOURSELF one point for each statement that describes you, plus bonus points where noted.

0-7: MENSCH
You're not bugging anyone. You'll have to try harder!

8-14: IRRITANT
Better block caller ID, or no one will take your calls.

15-21: PARIAH
Even your mother put you on her spam blacklist.

acer

Acer® TravelMate® C300
Convertible Tablet with 14.1" Display

The Acer TravelMate C300 is the convertible Tablet that you'll want to use as your primary computer. With a big 14.1" XGA display—a first for a Tablet PC—full-size keyboard and internal, modular optical drive, it's similar to a standard notebook but offers more. The screen becomes a writing surface when you rotate it and fold it back over the keyboard, perfect for taking notes, annotating documents and completing online forms.

14.1" TFT Display

- Intel® Centrino™ Mobile Technology
- Microsoft® Windows® XP Tablet PC Edition
- 4-in-1 card reader
- 14.1" XGA (1024 x 768) TFT display
- Intel® Extreme Graphics 2
- 802.11b/g WLAN, Bluetooth™, 10/100 LAN, V.92 modem

Acer TravelMate C303XMi
$2,299
INTEL® PENTIUM® M PROCESSOR 735
(1.70GHz, 2MB L2 CACHE, 400MHz FSB)
MICROSOFT® WINDOWS® XP TABLET PC EDITION
1GB DDR333 SDRAM, 80GB¹ HARD DRIVE
AND DVD-DUAL DRIVE (DVD+/-RW).
(LX.T280E.122)

Acer TravelMate C302XCi
$1,899
INTEL® PENTIUM® M PROCESSOR 1.60GHz
(1MB L2 CACHE, 400MHz FSB)
MICROSOFT® WINDOWS® XP TABLET PC EDITION
512MB DDR333 SDRAM, 60GB¹ HARD DRIVE
AND CD-RW/DVD-ROM COMBO DRIVE.
(LX.T280E.125)

Acer® TravelMate® C110
Compact, On-The-Go Tablet

You can use the innovative Acer TravelMate C110 like a clipboard by writing directly on the display with the included EMR pen or stylus. When you're ready to use the keyboard, just flip the display and you have a full-functioned notebook computer weighing just 3.2 pounds (without external drive). What could be more convenient?

- Intel® Centrino™ Mobile Technology
- Microsoft® Windows® XP Tablet PC Edition
- 512MB DDR333 SDRAM
- 10.4" XGA (1024 x 768) TFT display
- Intel® Extreme Graphics 2
- 802.11b/g WLAN, Bluetooth™, 10/100 LAN, V.92 modem

10.4" TFT Display

Acer TravelMate C112TCi-G
$1,699
INTEL® PENTIUM® M PROCESSOR 733
(1.10GHz, 2MB L2 CACHE, 400MHz FSB)
MICROSOFT® WINDOWS® XP TABLET PC EDITION
60GB¹ HARD DRIVE AND EXTERNAL CD-RW/DVD-ROM COMBO DRIVE.
(LX.T270E.236)

Acer TravelMate C112Ti-G
$1,499
INTEL® PENTIUM® M PROCESSOR 733
(1.10GHz, 2MB L2 CACHE, 400MHz FSB)
MICROSOFT® WINDOWS® XP TABLET PC EDITION
AND 40GB¹ HARD DRIVE. EXTERNAL OPTICAL DRIVE OPTIONAL.
(LX.T270E.235)

Acer 19.0" and 17.0" Flat Panel Displays

Complex spreadsheets, graphic design, CAD/CAE and videoconferencing are among the applications that call for a generously sized 19.0" LCD. Less scrolling and fewer keystrokes help workers be more productive.

Acer AL1931
- 19.0" TFT LCD
- 1280 x 1024 native resolution
- 700:1 contrast ratio
- 170° horizontal viewing angle
- 170° vertical viewing angle
- 2x 1.0W integrated speakers
- DVI and S-video
- Silver/black color

Acer AL1931
$639

Acer AL1912
- 19.0" TFT LCD
- 1280 x 1024 native resolution
- 500:1 contrast ratio

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

Acer recommends Microsoft® Windows® XP Professional.

Acer® TravelMate® 3200
Dressed for Professional Success

This travel-friendly notebook in the elegant new Acer Folio design weighs in at a mere 4.5 pounds with its optical drive and battery installed but packs enough power and features to be your desktop-replacement system. Add the optional EasyPort Port Replicator and you can quickly connect/disconnect from your printer and other office tools.

MOBILE TECHNOLOGY

- Intel® Centrino™ Mobile Technology
- Microsoft® Windows® XP Professional
- 512MB DDR333 SDRAM
- 60GB¹ hard drive
- CD-RW/DVD-ROM combo drive
- 3-in-1 card reader
- 14.1" XGA (1024 x 768) TFT display
- ATI® MOBILITY™ RADEON™ 9700 graphics, 64MB DDR
- 802.11b/g WLAN, Gigabit LAN, V.92 modem

Acer TravelMate 3201XCi-XPP

$1,499

INTEL® PENTIUM® M PROCESSOR 715
(1.50GHz, 2MB L2 CACHE, 400MHz FSB)
MICROSOFT® WINDOWS® XP PROFESSIONAL
(LX.T4806.040)

Acer® EasyPort

Acer EasyPort Port Replicator

$99

COMPATIBLE WITH THE TRAVELMATE 3200, 8000, 6000, 800, 660, C300 AND C110.
(LC.DS201.001)

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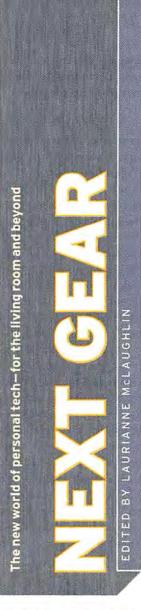
800-571-2237

www.acer.com/us

Whether creating spreadsheets, word processing or searching the Web, users will see sharp detail and vivid images on a 17.0" LCD. Ideal for businesses of all sizes.

- 140° horizontal viewing angle
- 140° vertical viewing angle
- Black color

Acer AL1912

$469

Acer AL1731
- 17.0" TFT LCD
- 1280 x 1024 native resolution
- 430:1 contrast ratio
- 160° horizontal viewing angle
- 130° vertical viewing angle
- 2x 1.0W integrated speakers
- DVI and S-video
- Silver/black color

Acer AL1731

$439

acer
Empowering People

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

acer

Acer® Aspire™ 1800
Desktop Power in Mobile Form Factor

Let the **Acer Aspire 1800** be your portable entertainment and creativity center. Play the latest games, watch your favorite movies, edit videos or use power-hungry productivity applications. You won't miss one show-stopping moment on the 17.0" wide-screen display, and thanks to the ATI® MOBILITY™ RADEON™ X600 chip, you'll experience new levels of graphics performance. Instead of being tied to your desk, enjoy the best in multimedia all around your home.

- Intel® Pentium® 4 Processor 530 with HT Technology (3.00GHz, 1MB L2 cache, 800MHz FSB)
- Microsoft® Windows® XP Professional
- 512MB DDR333 SDRAM
- 80GB¹ hard drive
- Integrated Super Multi Write Plus (DVD –RW, +RW, -RAM) drive
- 5-in-1 card reader
- 17.0" WXGA (1280 x 800) TFT display
- ATI® MOBILITY™ RADEON™ X600 graphics, 64MB DDR
- 802.11b/g WLAN, Bluetooth™, Gigabit LAN, V.92 modem

Acer Aspire 1802WSMi
$1,699
ALL FEATURES LISTED.
(LX.A2906.001)

Acer® TravelMate® 2600
Performance Teamed with Practicality

Savvy users know that a wide-angle display can make work easier and enhance productivity. You'll see sharp text and crisp images on the **Acer TravelMate 2600's** 15.4" wide-angle LCD and have the convenience of viewing spreadsheets side by side on a single screen. Combining practicality with first-class performance, the Acer TravelMate 2600 is an excellent choice for small/home offices and small-to-medium businesses as well as government/educational institutions.

- Intel® Pentium® 4 Processor 2.80GHz
- Microsoft® Windows® XP Professional
- 512MB DDR333 SDRAM
- 40GB¹ hard drive
- Modular CD-RW/DVD-ROM combo drive
- 15.4" WXGA (1280 x 800) TFT display
- ATI® MOBILITY™ RADEON™ 9000 graphics
- 802.11b/g WLAN, 10/100 LAN, V.92 modem

Acer TravelMate 2601WLCi
$1,199
ALL FEATURES LISTED.
(LX.T5506.051)

Acer 17.0" Flat Panel Displays

Whether creating spreadsheets, word processing or searching the Web, users will see sharp detail and vivid images on a 17.0" LCD. Ideal for businesses of all sizes.

Acer AL1715

- 17.0" TFT LCD
- 1280 x 1024 native resolution
- 450:1 contrast ratio
- 150° horizontal viewing angle
- 135° vertical viewing angle
- 2 x 1.0W integrated speakers
- Black or beige color

Acer AL1715
$385

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

Acer recommends Microsoft® Windows® XP Professional.

Acer® TravelMate® 4500
All-Around Business System

The Acer TravelMate 4500 strikes the right balance between performance and mobility. Equipped with an Intel® Pentium® M Processor and dedicated ATI® graphics, it was designed to be a perfect mainstream corporate notebook. Although powerful and flexible enough to replace your desktop system, the Acer TravelMate 4500 is sufficiently compact to be your constant traveling companion.

MOBILE TECHNOLOGY

- Intel® Centrino™ Mobile Technology
- Microsoft® Windows® XP Professional
- 512MB DDR333 SDRAM
- 40GB¹ hard drive
- Modular DVD-Dual drive (DVD+/-RW)
- 3-in-1 card reader
- 15.4" WXGA (1280 x 800) TFT display
- ATI® MOBILITY™ RADEON™ 9700 graphics, 64MB DDR
- 802.11b/g WLAN, 10/100 LAN, V.92 modem

Acer TravelMate 4501WLMi

$1,699

INTEL® PENTIUM® M PROCESSOR 715
(1.50GHz, 2MB L2 CACHE, 400MHz FSB)
MICROSOFT® WINDOWS® XP PROFESSIONAL
(LX.T5006.003)

Acer® TravelMate® 290E
Maximum Mobility, Affordable Price

The Acer TravelMate 290E is designed to deliver high performance in a portable package that's both appealing and affordable. This modular-design notebook with integrated wireless connectivity and 15.0" viewing area has the comprehensive feature set and flexibility needed for a busy lifestyle like yours.

- Intel® Celeron® M Processor 320
  (1.30GHz, 512KB L2 cache, 400MHz FSB)
- Microsoft® Windows® XP Professional
- 256MB DDR266 SDRAM
- 40GB¹ hard drive
- Modular CD-RW/DVD-ROM combo drive
- 15.0" XGA (1024 x 768) TFT display
- Intel® 852GM chipset with integrated DVMT
- 802.11b/g WLAN, 10/100 LAN, V.92 modem

Acer TravelMate 292ELCi-XPP

$949

ALL FEATURES LISTED.
(LX.T4006.053)

Acer AL1714

- 17.0" TFT LCD
- 1280 x 1024 native resolution
- 350:1 contrast ratio
- 160° horizontal viewing angle
- 120° vertical viewing angle
- Black or beige color

Acer AL1714

$375

acer
Empowering People

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

acer

Acer® Veriton® 7600GT
Business Productivity Tool - Minitower

The Acer Veriton 7600GT minitower, with a deep-charcoal chassis, is a superb business productivity tool that includes a powerful processor, integrated graphics, management software and room for expansion. The one-touch recovery feature easily returns the PC to its original configuration.

- Intel® Pentium® 4 Processor with HT Technology or Intel® Pentium® 4 Processor
- Microsoft® Windows® XP Professional
- 512MB DDR400 SDRAM
- 1.44MB¹ floppy drive
- Intel® Extreme Graphics 2
- Gigabit LAN

Acer Veriton 7600GT-U-P3201

$923

INTEL® PENTIUM® 4 PROCESSOR 540 WITH HT TECHNOLOGY
(3.20GHz, 1MB L2 CACHE, 800MHz FSB)
MICROSOFT® WINDOWS® XP PROFESSIONAL
80GB¹ HARD DRIVE AND CD-RW DRIVE.

Acer Veriton 7600GT-U-N2800

$745

INTEL® PENTIUM® 4 PROCESSOR 2.80GHz
(512KB L2 CACHE, 533MHz FSB)
MICROSOFT® WINDOWS® XP PROFESSIONAL
40GB¹ HARD DRIVE AND CD-ROM DRIVE.

Acer® Veriton® 5600GT
Business Productivity Tool - Standard Desktop

The Acer Veriton 5600GT standard desktop offers the ultimate balance between space-saving design and expandability, all in a handsome deep-charcoal chassis.

- Intel® Pentium® 4 Processor with HT Technology or Intel® Pentium® 4 Processor
- Microsoft® Windows® XP Professional
- 512MB DDR400 SDRAM
- 1.44MB¹ floppy drive
- Intel® Extreme Graphics 2
- Gigabit LAN

Acer Veriton 5600GT-U-P3201

$923

INTEL® PENTIUM® 4 PROCESSOR 540 WITH HT TECHNOLOGY
(3.20GHz, 1MB L2 CACHE, 800MHz FSB)
MICROSOFT® WINDOWS® XP PROFESSIONAL
80GB¹ HARD DRIVE AND CD-RW DRIVE.

Acer Veriton 5600GT-U-N2800

$745

INTEL® PENTIUM® 4 PROCESSOR 2.80GHz
(512KB L2 CACHE, 533MHz FSB)
MICROSOFT® WINDOWS® XP PROFESSIONAL
40GB¹ HARD DRIVE AND CD-ROM DRIVE.

Acer 15.0" Flat Panel Displays

A 15.0" LCD is appropriate when both space and budget are limited. It's suitable for most business applications as well as home activities, such as Web surfing and e-mail.

Acer AL1512
- 15.0" TFT LCD
- 1024 x 768 native resolution
- 450:1 contrast ratio
- 120° horizontal viewing angle
- 110° vertical viewing angle
- 2 x 1.5W integrated speakers

Acer AL1512

$319

Acer AL1511
- 15.0" TFT LCD
- 1024 x 768 native resolution
- 350:1 contrast ratio

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

Acer recommends Microsoft® Windows® XP Professional.

Acer® Veriton® 3600GT
Business Productivity Tool - Compact Desktop

The compact form factor of the deep-charcoal Acer Veriton 3600GT makes it the perfect desktop solution when space is at a premium.

intel inside
pentium 4

- Intel® Pentium® 4 Processor with HT Technology or Intel® Pentium® 4 Processor
- Microsoft® Windows® XP Professional
- 512MB DDR400 SDRAM
- 1.44MB¹ floppy drive
- Intel® Extreme Graphics 2
- Gigabit LAN

Acer Veriton 3600GT-U-P3201
$923
INTEL® PENTIUM® 4 PROCESSOR 540 WITH HT TECHNOLOGY
(3.20GHz, 1MB L2 CACHE, 800MHz FSB)
MICROSOFT® WINDOWS® XP PROFESSIONAL
80GB¹ HARD DRIVE AND CD-RW DRIVE.

Acer Veriton 3600GT-U-N2800
$745
INTEL® PENTIUM® 4 PROCESSOR 2.80GHz
(512KB L2 CACHE, 533MHz FSB)
MICROSOFT® WINDOWS® XP PROFESSIONAL
40GB¹ HARD DRIVE AND CD-ROM DRIVE.

Acer® AcerPower™ F2
All-Around Budget Performer

Proven technology, high-level reliability and expansion options help to make the AcerPower F2 minitower a sound investment for home, school or office needs.

- Intel® Pentium® 4 Processor or Intel® Celeron™ D Processor
- Microsoft® Windows® XP Professional
- 256MB DDR SDRAM
- 40GB¹ hard drive
- CD-ROM drive
- 1.44MB¹ floppy drive
- Intel® Extreme Graphics 2
- 10/100 LAN

AcerPower F2-U-N2800
$591
INTEL® PENTIUM® 4 PROCESSOR 2.80GHz
(512KB L2 CACHE, 400MHz FSB)
MICROSOFT® WINDOWS® XP PROFESSIONAL

AcerPower F2-U-C3000
$450
INTEL® CELERON® D PROCESSOR 330
(2.66GHz, 256K L2 CACHE, 533MHz FSB)
MICROSOFT® WINDOWS® XP PROFESSIONAL

Acer 17.0" CRT Monitor

A dependable CRT monitor is a great value for education, small business and home use, providing crisp text and graphics.

- 140° horizontal viewing angle
- 125° vertical viewing angle
- Black or beige color

Acer AL1511
$279

Acer AC711
- 17.0" CRT
- 16.1" diagonal viewing area
- 1024 x 768 @ 85Hz recommended resolution
- 0.27mm dot pitch
- Black or beige color

Acer AC711
$109

acer
Empowering People

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

The new world of personal tech—for the living room and beyond

NEXT GEAR

EDITED BY LAURIANNE McLAUGHLIN

VIDEO TO DVD, SANS PC

YOU CAN ARCHIVE OLD HOME MOVIES ONTO DVD WITHOUT EVER TOUCHING A PC. WE EXPLORE YOUR OPTIONS AND OFFER SOME TIPS ON DOING IT RIGHT. BY MICHAEL GOWAN

IN THE 25TH WEEK of my wife's pregnancy, she had an ultrasound taken at a facility where you can get a videotape of the event. If ever there was a visual that I wanted to last, this was it. But instead I had a tape. Videotape degrades with time. It wears down with each playback. So I needed to get this little keepsake onto DVD,

preferably before the kid was ready to enter high school.

Because doing the job is easier than ever, now's the time to preserve VHS memories like this one—and everyday home movies of beach weekends, recitals, and parties—by converting them to DVD. Compared with tape, a DVD captures better picture and sound

and does not degenerate in quality from repeated play. Plus, with a DVD, you can insert chapter marks to access a part of the story quickly. VHS-to-DVD conversion has been possible via the PC for a few years, but the latest DVD recorders offer a quick and convenient route to digital video.

I tried several options for

transferring VHS tape to DVD without PC: a GoVideo all-in-one combination unit consisting of a DVD recorder and a VCR; a Sharp DVD recorder with a built-in hard drive; and YesVideo, a mail-in service that handles the conversion for you. My conclusion: In general, you can't beat DVD recorders for hassle-free ▶

dubbing, but some units lack certain advanced video editing tools that PC products offer.
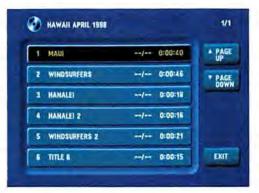
COPY THAT

NOW THAT PRICES have fallen to between $250 and $800, DVD recorders seem poised to replace VCRs. The basic method for transferring video from VHS to DVD using standard equipment isn't complicated. You connect an RCA cable from the VCR's video and audio outputs to the DVD recorder's inputs, press *Play* on the VCR, and press *Record* on the DVD recorder.

You don't need any additional gear such as a PC video capture card, because the DVD recorder has all the necessary capture and conversion features. Unfortunately there's no way to speed up this process: Every minute of tape takes a minute to record. And I had a hard time syncing the recording as closely as I wanted to, using the basic method. The devices I tried took from

A COMBINATION DVD recorder/VCR, such as GoVideo's VR4940, works great for straight copies. But this model's software shows only text, not images, to mark DVD chapters.

2 to 10 seconds to start after I pressed the Record button, so timing required some finesse. Inevitably I cut off the beginning or got snow at the end.

A combo DVD recorder/VCR, such as GoVideo's $399 VR4940, solves that problem. Because both devices are integrated into a single box, dubbing becomes a simple two-click process: Press *Copy* on the remote control, and then confirm that you want to do it.

This particular model will even stop recording when the videotape ends, if you haven't already pressed Stop. And you can copy video from DVD to VHS just as easily.

In addition to home movies, you may have a large library of commercially produced films sitting on the shelf. So why not turn your *Star Wars* VHS tape into a DVD, too? The copy-protection features on most VHS tapes prevent this.

When you try to record a protected tape, you'll receive an error message and get a disc full of blue screen.

How easy is it to improve your movie? If you use a DVD-RW or DVD+RW disc, you'll be able to edit the material on the disc by using Video Recording mode; if you format a DVD-RW disc in VR mode, however, the disc will work only in a player that supports DVD-RW.

VR mode permits editing only in the most liberal sense of the word. Working with the GoVideo recorder's on-screen display and remote control, I was lucky to edit material within a second of what I wanted. By comparison, when you edit video on a PC, software allows you to trim scenes by a fraction of a second if you wish.

You may also want to break your disc into chapters, like those that you see on a rented DVD movie. With most units, you have the option to do this manually or to insert a chapter automatically every so often— say, every 10 minutes. You can change the order of scenes in VR mode by making a chapter playlist; this kind of editing function is far easier to do on a PC, though, because you drag and drop instead of fiddling with a display and a remote.

HARD-DRIVE OPTION

IF YOU'RE INTERESTED in doing a fair amount of editing instead of just making direct copies, consider purchasing a DVD recorder that has a built-in hard drive, such as Sharp's $800 DV-HR300U. With this kind of recorder, you transfer video from VHS to the hard drive before burning it to disc.

HOW-TO

VIDEO-TO-DVD TRANSFER TIPS

FOLLOW THESE STRATEGIES to get the best results from your VHS-to-DVD conversion.

Use a good VCR: Your DVD can look only as good as the feed from the VHS player. There's nothing you can do to improve the quality of the VHS tape, but you can use a high-quality, four-head VCR. If you have an older model, upgrade, or borrow a better unit from a friend or a neighbor.

Adjust tracking first: Before pressing Record on the DVD player, make sure you've adjusted the tracking on the VCR. Doing so helps eliminate distortion. Many VCRs automatically calibrate the tracking when you play a videotape, so watch out for on-

screen displays, which the DVD player will record.

Use Standard Play quality: If your goal is to preserve priceless memories, don't skimp on the recording quality in order to pack more video onto one disc. You can find DVD-R or DVD+R discs for just $2 if you shop around.

Use DVD-R or DVD+R format when possible: Most DVD players can read these discs. Not all players can read rewritable discs, especially if they've been formatted in VR mode.

Finalize the disc: If you don't finalize— an option usually available in the recorder's setup menu—when you've finished converting, the disc won't play in other DVD players.

Using the Sharp DV-HR300U's 80GB hard drive, you can do the same kind of editing as in VR mode on a rewritable disc. But the main advantage here is that you can burn the result to a DVD-R or DVD+R disc; both are affordable, write-once formats that play in almost any current DVD player.

I ran into many of the same editing difficulties with the Sharp device as I had with GoVideo's; I had trouble controlling the timing, and using the remote control (rather than a mouse) wasn't easy at times.

On the bright side, a hard-drive recorder makes creating multiple copies of a home movie a snap. As the eager grandparents-to-be clamored for copies of our ultrasound movie, I cued it up again from the hard drive instead of redubbing the entire thing.

The Sharp DV-HR300U offered significantly better menu options than GoVideo's unit did. Thanks to movies, we're accustomed to attractive visual menus on our DVDs, with thumbnail pictures that show the start of chapters. But on DVD-R videos that I created using GoVideo's recorder, the menus were text-only (though VR mode did allow thumbnails). The Sharp recorder created menus with thumbnails that I could easily select from any frame in the chapter; but the result did not look as polished as a professional DVD.

Speaking of polish, I had to choose a quality level to record at. Settings differed, but the main modes available were SP (Standard Play) and LP (Long Play); the Sharp unit offered several other choices as well.

SP mode gave me about 2 hours of recording time; in LP mode, I could squeeze in 4 hours. When using DVD-R and DVD-RW discs, I could see the difference between the two speeds in copied home movies, but it wasn't glaring. Backgrounds seemed slightly rougher in LP mode, and facial features were less sharp. My goal was to preserve family events for posterity, though, so it wasn't worthwhile to pack in an extra 2 hours; instead, I just used another DVD-R disc. (I bought a five-pack for $10.)

MAIL IT IN

OF COURSE, YOU could pay someone else to do VHS conversion work for you. But the service doesn't always come cheap: One photo shop in Berkeley, California, offered to make me a DVD of a 1.5-hour VHS tape for $35, with no chapter stops. For any actual editing (including chapters), prices started at $75 an hour. A store located in San Francisco

AN ATTRACTIVE case is another YesVideo benefit, but delivery takes a while.

told me that it transfers tapes for $15 per hour, plus $2.50 per title or chapter insert. At those rates, you might as well buy your own recorder.

Mail-in services, however, offer a more affordable route. A company such as YesVideo (www.yes-video.com) will create a DVD copy of a VHS tape for just $25, including chapter stops. I sent in the ultrasound tape and some vacation travel footage to YesVideo. The video transferred to DVD sounded and looked as good as the source. And the company did a pretty good job of inserting chapters, too, although at the end of the disc the technician missed several obvious spots to put new chapters. The disc comes in a nice-looking package, with a case that displays a thumbnail from each chapter.

It's a straight copy, though. YesVideo doesn't edit out the bad parts, like interference, on the tape. And completing the job takes up to two weeks from the time you drop off the tape, whereas local stores perform conversions in a day or two.

YOUR BEST CHOICE

ALL IN ALL, which option will be smartest for you? If you have relatively few tapes that you want to convert, a service like YesVideo is the way to go. Just be sure to make a copy of your priceless movie before you send the original on its way. (If you don't have a second VCR, try to borrow one.)

If you expect to work with tapes often, you can't beat the convenience of a combination recorder like GoVideo's for producing straight copies of

YESVIDEO DOES the conversion work for you, with great results.

VHS movies. But if you need to perform basic editing and make multiple copies, moving up to a DVD recorder with a hard drive makes sense, especially if you also plan to use it to record TV shows.

After the converting is done, you can relax and relive your favorite memories—without fear that they'll fade away.

Michael Gowan is a freelance writer in the Bay Area.

PROJECTOR

SCREENPLAY 4805 PACKS REAL VALUE

THE INFOCUS SCREENPLAY 4805 and the Optoma H30 Digital Cinema Projector were two of the most talked-about products at the 2004 Consumer Electronics Show in Las Vegas because of their combination of exceptional prices and power. Though each still shines brightly, the ScreenPlay 4805—reviewed here—may be the real star.

Both are DLP (Digital Light Processing by Texas Instru-

ments) projectors priced under $1500: The Optoma H30 costs $1395 (list), while the InFocus 4805 is $1495.

The specs of the ScreenPlay projector roughly resemble the H30's: It has high-definition compatibility and 854 by 480 resolution (versus 800 by 600 for the H30). The InFocus puts out 750 ANSI lumens (versus 800 for the Optoma). I was greatly impressed by the rich color and smooth imaging from the ScreenPlay 4805—though out of the box, I found the default settings resulted in a slightly bluish cast in my test movies (very similar to the Optoma

ALL YOU NEED is a ScreenPlay: InFocus's home theater projector is an excellent entry-level unit.

H30's imaging). But I easily adjusted the colors by using the on-screen menu.

Many of the InFocus's advantages over the Optoma are in its conveniences. For one, the 4805's menu is easier to understand. More important, it has a much better range of inputs on the back of the box than the H30 does. And the Optoma produced annoying

light spillage about 3 feet above the video because of a too-short lens hood, but I had no such problem with the InFocus.

Working from my projection position of 8.3 feet from my screen, the 4805 produced a 66-inch diagonal image in 16:9 format. That's pretty good, but short of the 72 inches I get from my NEC LT240K projector, which costs about $1000 more.

This InFocus projector is boxy and gray. But it does its job exceptionally well and would be a great choice for anyone who wants a high-quality entry-level projector.

—*Ramon G. McLeod*

ScreenPlay 4805

InFocus

★★★★☆

Excellent imaging capabilities and well built. A terrific entry-level home theater projector.

List: $1495

find.pcworld.com/43428

RADIO RECEIVER

SAVE RADIO PROGRAMS ON YOUR PC

AS SOON AS I cracked open the box, I saw how the RadioShark (no relation to the store) got its odd name: The slim, USB-powered radio receiver looks like a dorsal fin. Designed to act as a radio recorder, this $69 unit proved to be easy to install and fun to use— with one significant limitation.

After installing the software that provides the radio-dial interface, I plugged the fin into one of my PC's free USB ports, and broadcast radio started playing through my machine's speakers. Once

I had tuned the device to a radio station, I could save that setting as a preset.

Recording broadcasts to my hard disk was easy: I pressed the Record button, and the LED turned red to indicate that the RadioShark was at work capturing live audio. The recording can be saved in various formats, depending on your PC's audio drivers. I chose uncompressed WAV files to ensure the best sound quality.

The RadioShark's scheduling features make it easy to

pause playback and then return to your PC later to continue listening from where you left off. However, you can't save the recording to the PC's hard drive. Rather than recording the audio that's in the RadioShark's memory buffer, the application records what's currently being played on the radio. Ideally, I would like to search through the

time-shifted audio and select a portion to record and keep.

Still, the feature that lets you schedule recordings may come in handy, and it's possible to record shows as long as 2 hours. You can schedule recordings on a daily, weekly, or monthly basis.

I could integrate the songs and shows I'd recorded with Apple ITunes software. By dragging the recorded segments into the ITunes interface, I could add them to IPod playlists and listen anywhere.

Although RadioShark will please radio buffs, for the rest of us, its recording limitation makes it a dispensable toy.

—*Chris Manners*

SLEEK SOUND: RadioShark records radio programming.

RadioShark

Griffin Technology

★★⅟☆☆

Will please radio buffs, but its recording power needs more teeth.

List: $69

find.pcworld.com/43916

PHOTOS: KEVIN CANDLAND

GADGET FREAK

DAN TYNAN

WHEN WI-FI WON'T FLY

IT ALL started with chickens.

We have six birds—three hens, two bantams, and one speckled rooster named Colorful. Mostly they stay in the coop, but every morning before dawn, Colorful escapes and patrols the neighborhood. I wanted to see how he was getting out (without crawling out of bed at 4 a.m.), so I decided to install a wireless Webcam in the coop and hook it up to my home network.

But before I could get Roostercam running, I needed to solve a few problems with my Wi-Fi net, namely interference and range. That proved harder than I thought.

CROWING PAINS

PROBLEM NUMBER ONE: interference. We love our cordless Plantronics phone, but every time it rings—such as when our neighbors call to report a loose rooster—our network crashes. Like 802.11g the phone wants the 2.4-GHz spectrum to itself. Our solution: a dual-band 2.4/5.8-GHz cordless, the Motorola MD751 (www.motorola.com). Since it's a digital cordless phone, it constantly changes frequencies to reduce interference. It's nifty, but at $90 it cost as much as my Wi-Fi gear. And unfortunately it doesn't fix interference caused by the Wi-Fi media servers, LCD TVs, MP3 radios, speakers, and headsets we have around the house, which interrupt one another like old married couples when we try to use them.

A solution may be out soon, thanks to Propagate Networks' AutoCell technology, which automatically switches channels and cranks down the power of a device's transmitter to keep RF waves from jostling each other. Netgear will introduce Wi-Fi equipment using AutoCell in the fall, with consumer electronics vendors close behind. I can't wait.

ROOSTER BOOSTER

OUR SECOND PROBLEM is that our Wi-Fi signal doesn't reach the chicken coop. Because I have a Linksys router, I decided to install a Linksys Wireless-G Range Expander ($80 to $100 street price; www.linksys.com), a sleek little box with a 5-inch antenna. Big mistake. I plugged it in and ran the setup CD. Not only did the extender not work, but it killed my cable Internet connection. (Turns out the Expander temporarily changed my network's IP address and then crashed before it could restore the old settings.)

After two excruciating tech support calls and a (probably unnecessary) trip to get a new cable modem, my network was back, but the Expander was still DOA. Another long call, with Linksys product manager Chris Chapman, uncovered the problem: I needed a firmware upgrade for my new Linksys router. At this point, a chicken dinner was starting to sound really good.

Downloading and installing a firmware upgrade solved the problem. But when I tried to install the Linksys Wireless-B Internet Video Camera ($180),

I ran into similar snafus. After another painful support call and more futzing with IP settings, I had a working camera. Now all I needed was a 200-foot extension cord—the cam runs only on AC power.

I had other options. I could forgo Wi-Fi and install an X10 camera, or I could spring for a solar-powered Proxim Solacam (a steal at $2999; www.proxim.com). Instead the cam is on hold. Our neighbors will have to put up with Colorful a bit longer. And while I still love my Wi-Fi network, it's definitely not for the birds. ∎

Contributing Editor Dan Tynan loves his farm-fresh eggs.

ILLUSTR^N: GORDON STUDER

We'll help you build your dream computer.
What you do with it is up to you.

Cube cases are all the rage nowadays. So surf in style with our infinitely configurable Aria. This dashing little number sports all kinds of features guaranteed to turn your friends sea-green with envy. Like a whisper-quiet 300-watt power supply. A multi format card reader for all your audio/photo/video applications. And unlike the other cubes, Aria can work with your choice of microATX motherboards and the latest accessories. To start building your dream computer, simply visit www.antec.com or your local Antec retailer.

Antec.
The Power of You

TOP 100

EDITED BY THE REVIEWS STAFF

Spot LIGHT Multifunction printers vary widely in ability. The Canon MP390 (left) can fax in color. The Brother MFC-8840DN makes two-sided prints.

SPOTLIGHT: MULTIFUNCTION PRINTERS

Multitalented Office Machines

Whether in the office or at home, we can all benefit from a little extra space on our desks. A multifunction printer reduces the number of separate pieces of equipment you need within reach by performing several tasks in one spot, and it could cost less than buying multiple devices. But to help you make sure your investment isn't squandered, we tested both inkjet and laser MFPs on a variety of tasks. We measured how quickly the models made prints, copies, and scans, and we judged the output quality of each function.

The average price of inkjet MFPs we've tested has dropped roughly $50 over the past year. For this story we tested seven inkjet MFPs, ranging from $100 to $200, most of which printed about as fast as the average stand-alone inkjet printer. The MFPs' photo print quality, however, still lags behind that of recent stand-alone inkjets we've seen.

We also tested six laser MFPs that cost from $350 to $1730. (We've never tested this many laser MFPs at once.) We found that, on average, these models printed text faster than small-office monochrome laser printers do, and printed graphics at about the same ▶

INSIDE THE TOP 100

speed. For both text and graphics, their print quality scores were about equal to those of small-office lasers.

Scanning speeds for inkjet and laser MFPs, however, were a mixed bag: While half of the MFPs on the chart scanned a photo at low resolution in roughly 17 seconds (about 1 second faster than the average for SOHO scanners), the remaining models took anywhere from 28 seconds

to 40 seconds to perform the same task.

Our pick for the best inkjet was the Canon MultiPass MP390, which combines extensive features with fairly good performance. At $200, it incorporates a media card reader and a fax machine. It printed text and photographs well, and it's speedy enough for light use.

Among the laser MFPs, we liked the Brother MFC-8840DN the best. Though

its speeds were about average compared with other lasers, it earned high marks in all of our output quality tests. The scan function was the only disappointment, due to its stripped-down features.

INKJET MFPs IN THE OFFICE

INKJET MFPs offer a lot of handy features, and they don't skimp on print speed. This group of inkjet MFPs printed

TOP 100

TEST Center

Multifunction Printers

THE PRINT SPEEDS of both inkjet and laser MFPs impressed us, but copy and scan speeds—as well as output quality—were mixed.

INKJET MULTIFUNCTION PRINTER	Street price (07/15/04) and features[1]	Performance[2]	Print/scan output quality[3]	Comments
Editor's Pick Canon MultiPass MP390 find.pcworld.com/43390	• $200 • USB 2.0 • Printing: 4800 by 1200 dpi • Scanning: 1200 by 2400 optical dpi, 48-bit	• Print speed: 5.3 ppm text, 0.9 ppm color graphics • Copy speed: 3.6 ppm • Scan time: 28 seconds	• Text: Very good • Color graphics: Good • Color photos: Very good • Color scans: Very good	Of the inkjet models, the MP390 made the sharpest copies. Can fax documents in color, includes a multiformat media card reader, and prints on legal-size paper. (★★★★✩)
Dell All-in-One Photo Printer 922 find.pcworld.com/43388	• $119 • USB 2.0 • Printing: 4800 by 1200 dpi • Scanning: 600 by 2400 optical dpi, 24-bit	• Print speed: 7.5 ppm text, 1.0 ppm color graphics • Copy speed: 2.1 ppm • Scan time: 15 seconds	• Text: Good • Color graphics: Fair • Color photos: Good • Color scans: Poor	Fast scanning speeds, but poor color scan quality. Print quality overall was below average; printouts of line art looked unattractive. Maximum paper size is 8.5 by 19 inches. (★★★✩✩)
Epson Stylus CX6600 find.pcworld.com/43396	• $199 • USB 2.0 • Printing: 5760 by 1440 dpi • Scanning: 1200 by 2400 optical dpi, 48-bit	• Print speed: 4.7 ppm text, 1.4 ppm color graphics • Copy speed: 3.2 ppm • Scan time: 28 seconds	• Text: Good • Color graphics: Fair • Color photos: Good • Color scans: Outstanding	Made excellent scans of color photos; printouts of line art, however, were unappealing. Has a multiformat media card reader. (★★★✩✩)
HP PSC 1315 All-in-One find.pcworld.com/43384	• $130 • USB 2.0 • Printing: 4800 by 1200 dpi • Scanning: 600 by 2400 optical dpi, 36-bit	• Print speed: 4.6 ppm text, 1.0 ppm color graphics • Copy speed: 0.5 ppm • Scan time: 37 seconds	• Text: Very good • Color graphics: Good • Color photos: Very good • Color scans: Good	Produced impressive prints overall and the best-looking monochrome scans from an inkjet, but copies were the least attractive. Prints on legal-size paper. (★★★✩✩)
Lexmark X5270 All-in-One find.pcworld.com/43386	• $130 • USB 2.0 • Printing: 4800 by 1200 dpi • Scanning: 600 by 2400 optical dpi, 24-bit	• Print speed: 7.7 ppm text, 1.0 ppm color graphics • Copy speed: 2.2 ppm • Scan time: 15 seconds	• Text: Good • Color graphics: Fair • Color photos: Good • Color scans: Very good	Fast at printing text and scanning, but prints of line art showed lots of banding. Prints banners up to 8.5 by 17 inches. (★★★✩✩)
LASER MULTIFUNCTION PRINTER				
Editor's Pick Brother MFC-8840DN find.pcworld.com/43382	• $650 • Ethernet, USB 2.0, and parallel • Printing: 2400 by 600 dpi • Scanning: 600 by 2400 optical dpi, 24-bit	• Print speed: 15.1 ppm text, 6.5 ppm grayscale graphics • Copy speed: 5.7 ppm • Scan time: 36 seconds	• Text: Outstanding • Grayscale graphics: Very good • Line art: Very good • Color scans: Very good	Produced the highest-quality prints overall, and printed quickly, though scanning speeds were slow. Duplexer included. (★★★★✩)
Dell Multifunction Laser Printer 1600n find.pcworld.com/43378	• $399 • Ethernet and USB 2.0 • Printing: 1200 by 1200 dpi • Scanning: 600 by 1200 optical dpi, 24-bit	• Print speed: 15.9 ppm text, 2.4 ppm grayscale graphics • Copy speed: 5.7 ppm • Scan time: 18 seconds	• Text: Outstanding • Grayscale graphics: Fair • Line art: Very good • Color scans: Fair	Printed text and scanned quickly, but scan and copy quality were lower than those of other, more expensive laser models. Can fax documents in color. (★★★✩✩)
HP LaserJet 3380 find.pcworld.com/43370	• $699 • Ethernet, USB 2.0, and parallel • Printing: 1200 by 1200 dpi • Scanning: 600 by 600 optical dpi, 24-bit	• Print speed: 16.4 ppm text, 3.1 ppm grayscale graphics • Copy speed: 4.7 ppm • Scan time: 40 seconds	• Text: Outstanding • Grayscale graphics: Fair • Line art: Good • Color scans: Very good	Color scans looked very attractive, though scanning speeds were slow; has a legal-size scan area. (★★★✩✩)
IBM Infoprint 1410 MFP find.pcworld.com/43372	• $1596 • Ethernet and USB 2.0 • Printing: 1200 by 1200 dpi • Scanning: 600 by 600 optical dpi, 24-bit	• Print speed: 16.8 ppm text, 8.5 ppm grayscale graphics • Copy speed: 5.9 ppm • Scan time: 18 seconds	• Text: Outstanding • Grayscale graphics: Good • Line art: Good • Color scans: Good	Nearly identical to the Lexmark X422: Fast at printing graphics, but scan quality is about average. Includes a duplexer and has a legal-size scan area. (★★★✩✩)
Lexmark X422 MFP find.pcworld.com/43376	• $1479 • Ethernet and USB 2.0 • Printing: 1200 by 1200 dpi • Scanning: 600 by 600 optical dpi, 24-bit	• Print speed: 16.9 ppm text, 8.0 ppm grayscale graphics • Copy speed: 6.0 ppm • Scan time: 19 seconds	• Text: Outstanding • Grayscale graphics: Good • Line art: Good • Color scans: Good	Fast scanning, copying, and graphics printing, much like the IBM 1410. Duplexer included; legal-size scan area. (★★★✩✩)

FOOTNOTES: [1] Listed specs are the maximum enhanced printing resolution, the scanning resolution without software enhancements, and the maximum external bit depth for files exported by included software. [2] Listed copy speed is for a letter-size text document; listed scan time is for a 4-by-5-inch photo at 100 dpi. [3] Color graphics were printed at default settings on plain paper, color photos were printed at best settings on glossy paper, and grayscale graphics were printed at default settings on plain paper. **HOW WE TEST:** Go to find.pcworld.com/43854 for a full description of our test methodology. **CHART NOTES:** Data based on tests designed and conducted by the PC World Test Center. All rights reserved. All units have flatbed scanners. All laser multifunction printers have an automatic document feeder and print on legal-size paper. See find.pcworld.com/10860 for details on *PC World*'s Star Ratings. Visit find.pcworld.com/43852 for reviews of all products.

text at an average speed of 5.3 pages per minute, which is slightly faster than the average of 4.9 ppm for the inkjet printers we tested in the August issue. The speediest inkjet MFP, the Lexmark X5270 All-in-One, printed text at 7.7 ppm.

Although every inkjet MFP in our test group printed sharp text, even the best output wasn't as razor-sharp as that printed by the laser models. The Canon MP390 and the HP PSC 1315 All-in-One were the only inkjets to earn a Very Good score for their text quality and for glossy photos. The same two models also earned a Good mark for graphics quality on plain paper; most of the others received a Fair rating for their prints, which tended to have garish colors or to appear too dark for detail to show.

For our copying test we duplicated a text document. Most of the inkjet MFPs proved inferior to the laser models in this test; the Canon MP390 was the only inkjet whose score matched that of most of the laser MFPs, while some of the other inkjet units made copies that either had fuzzy text or looked too light.

Inkjet MFPs print color graphics just as fast as stand-alone inkjet printers do, at an average of 1.1 ppm, compared with the 1.2 ppm average of inkjet printers. The quickest inkjet MFP

THE $130 LEXMARK X5270 ALL-IN-ONE produced attractive color scans, but was slow to make copies.

on the chart, the Epson Stylus CX6600, printed graphics at 1.4 ppm.

Making copies on an inkjet MFP isn't that quick; almost all of the models we tested took between 17 and 30 seconds to copy our one-page newsletter (versus 10 to 12 seconds for the laser MFPs). The HP PSC 1315 was the biggest disappointment, taking almost 2 minutes to make a copy that resembled an old mimeograph.

Unlike laser MFPs, inkjets tend not to have built-in faxes. The only exceptions were the Canon MP390 and the Brother MFC-3820CN; though we tested the latter, it didn't make the chart.

INKJET MFPs AND PHOTOS

INKJET MFPs tend to look more like photo printers with flatbed scanners grafted onto them than they do typical office workhorses. The Canon MP390 and the Epson CX6600 have multiformat media card readers; the HP PSC 1315 has a front-mounted USB port that can receive photos from PictBridge-compatible digital cameras. All three can print photos without going through a PC.

Stand-alone inkjets generally print photos very well, but you can't expect quite the same quality from an MFP. None of the inkjet MFPs earned our top score of Outstanding for their glossy photos,

THE $199 EPSON CX6600 made great-looking scans, and has a media card reader.

although the Canon MP390 and the HP PSC 1315 did earn Very Good ratings. By comparison, 6 of 16 recently tested general-purpose inkjet printers received a score of Outstanding for their color photos.

The software packages that come with inkjet MFPs tend to have more photo editing features than do the application bundles of their laser counterparts. The driver usually includes controls for adjusting color, brightness, and contrast. The Epson CX6600 has a particularly extensive software bundle that includes ArcSoft's Photo Impression 5 for image editing.

SCANNING AND WAITING

ALL OF THE INKJET MFPs we tested have a convenient one-touch scan button on their control panel, so you don't have to use your PC to initiate scans. The inkjet MFPs' average speed for previewing and then scanning a 4-by-5-inch photo at 100 dpi was about 26 seconds, versus 18 seconds for recently tested small-office scanners. Two of the inkjet MFPs, however, scanned more quickly than the average for small-office scanners. The Dell 922 turned in the fastest speed on this test, 15 seconds; but it also earned a Poor rating for its color scan quality. By contrast, the Lexmark X5270, though it turned in nearly the same time on that test, still earned a Very Good score for the quality of its color scans. The HP PSC 1315 took a very slow 37 seconds to scan a photo at 100 dpi, but it was the fastest MFP (including the laser models) in our 600-dpi scan test. Similarly, the Canon MP390 scanned at a roughly average speed in the 100 dpi test, but it was the second-fastest model at 600 dpi. (To see more detailed test results, go to find.pcworld.com/43852.)

LASER MFPs: WORKPLACE WORKHORSES

A LASER MFP is the better choice for a workgroup. For one thing, you can put the device on your network. For another, a laser MFP typically prints professional-quality text, and it does so much more ▶

quickly than an inkjet model does. (We have yet to see a multifunction laser that prints in color, however.) For this story, *PC World* pitted laser MFPs against one another for the first time, and overall these models held up well.

All but one of our test models printed text quickly—between 15 and 17 pages per minute—with sharp lettering even at very small sizes. Most of the lasers also did well with the narrow lines and intricate graphics of our line art document, something inkjets rarely do. The only laser MFP that disappointed us on these tests was the Sharp AL-1661CS, which missed the chart in part because of its slow text speed—just 11.8 ppm—and fuzzy lettering. One plus, however: The AL-1661CS produced the most attractive scans of all the laser models.

Unfortunately, our tests showed mixed results on grayscale graphics. Among the six laser models we reviewed, the Brother MFC-8840DN produced the best full-page

grayscale graphics, with smooth transitions, good contrast, and fine details. At 6.5 ppm, though, the Brother was not the fastest unit at printing graphics; the IBM Infoprint 1410 MFP and Lexmark X422 MFP printed graphics at 8.5 and 8.0 ppm, respectively—but they also cost more than twice as much as the $650 Brother device. Of the laser units on the chart, the Dell Multifunction Laser Printer 1600n and the HP LaserJet 3380 earned the lowest scores for their graphics prints; the Dell's prints looked faded, with slight banding, while the HP's output appeared too dark, with exaggerated contrast. The Dell 1600n, while being the most affordable laser model we tested, also was the slowest MFP in this group at printing graphics, going at a poky 2.4 ppm.

THE $1596 IBM 1410 printed and scanned quickly, but it lacks a scan button.

COPY, YES; SCAN, MAYBE

MOST OF THE LASER MFPs we tested made copies of text that were quite sharp. The Brother MFC-8840DN won out again, with very accurate copies. On the other hand, the Dell 1600n's copies didn't look quite as sharp, resembling the ▶

MFP PROFILE

The Oddball Office Inkjet

THE HP OFFICEJET 9130 isn't a typical inkjet MFP: It's designed for office workgroups. At $999, it's by far the most expensive inkjet MFP we looked at, and it includes office-oriented features, such as a network adapter, an internal print server, automatic duplexing, 128MB of internal memory, and the ability to accept an optional paper tray (for a maximum of 650 sheets). It also offers a media card reader. Its most compelling feature, however, is a 3-by-8-inch pull-out QWERTY keyboard. With it you can type e-mail addresses and subject headers and send a document to an e-mail address without going through a PC. You can also enter speed-dial information quickly, rather than typing names on a cumbersome number pad.

But you pay a premium for color printing. At its price, you'd expect the Officejet 9130 to outperform inexpensive inkjet MFPs, and though it printed text at a respectable 5.4 pages per minute, it was slower than either the Dell 922 or the Lexmark X5270. It did, however, print color graphics faster than any inkjet MFP, at 2.2 ppm.

At 18 seconds for a text page, the 9130 made copies much faster than many other inkjet MFPs, but the $200 Canon MP390 and $100 Lexmark X2250 beat it. Scanning speed was the biggest letdown: The 9130 was the slowest inkjet MFP, taking 40 seconds to scan a 4-by-5-inch photo at 100 dpi. Two laser MFPs, though, were even slower: the Sharp AL-1661CS and the HP LaserJet 3380.

The HP Officejet 9130 had an edge over other inkjet MFPs on text quality, however. It printed sharp lines and clean type that even rivaled some lower-end lasers in quality. And while not stellar, its graphics prints showed realistic color as well as much fine detail.

If your cramped office needs a space-saving MFP, and if your work requires color prints, the Officejet 9130 is one of your only options. But the 9130 is slow on most functions. If you have the room and the budget, you may be better served by buying a laser MFP and putting an inkjet printer on your network for color printing.

THE HP 9130 has many office features, but isn't fast.

copies of an inkjet MFP. Making a copy was quick and easy, however; every model performed the task in 13 seconds or less.

Though most laser MFPs have a one-touch scan button as the inkjet MFPs do, the IBM Infoprint 1410 and the Lexmark X422 don't, requiring you to scan documents through software on a PC. Still, all of the laser MFPs we tested allow you to scan to a variety of locations, such as an e-mail message, a file folder, or an OCR application. Though they print only in monochrome, laser MFPs do scan in color, and the color scans from our test models looked slightly better on average than scans from inkjet MFPs. But only one laser MFP received an Outstanding score for scan quality: the Sharp AL-1661CS, whose overall performance nevertheless kept it off the chart.

The scanning speeds of laser MFPs vary as widely as those of inkjet models. A few of the laser MFPs we tested scanned at roughly the average speed for small-office scanners. With a time of 18 seconds, the Dell 1600n was the quickest laser unit to scan a 4-by-5-inch color photo at 100 dpi; the slowest model, the Sharp AL-1661CS, took 40 seconds. The differences were similar at higher resolution: The Dell 1600n scanned a 2-by-2-inch color photo

THE $399 DELL 1600n made copies swiftly, though scan quality was low.

at 600 dpi in 26 seconds; the HP LaserJet 3380 took 1 minute, 47 seconds. (The IBM Infoprint 1410 and the Lexmark X422 can scan only up to 300 dpi in color, and so did not complete this test.)

OFFICE FEATURES

LASER MULTIFUNCTIONS typically have fax capability, ethernet connections, and more memory than inkjet MFPs.

All of the laser MFPs we tested can send faxes, store a considerable list of speed-dial numbers, broadcast faxes to numerous numbers at once, poll other machines to automatically receive faxes, and track accounts with a billing number or PIN. Also, the Brother MFC-8840DN and the Dell 1600n can send color faxes.

THE BOTTOM LINE

FOR BUSY OFFICES, choosing a laser MFP over an inkjet model is a no-brainer, in part because of a laser's extensive paper-handling features. All the laser MFPs we tested had an automatic document feeder. The Brother MFC-8840DN, the IBM Infoprint 1410, and the Lexmark X422 include a duplexer for double-sided printing.

The real question is whether to spend the extra money on an expensive model that can handle high paper volumes. The $1596 IBM Infoprint 1410 and $1479 Lexmark X422 can be expanded to hold up to 850 sheets. If you don't plan to clear forests quite as fast, the $650 Brother MFC-8840DN can expand to hold 500 sheets.

Inkjet MFPs differ significantly in print and scan quality. But if those scores aren't enough to sway you, some have unique features to consider. For example, the Canon MP390 and Epson Stylus CX6600 have a media card reader. The Canon MP390 and the HP PSC 1315 can print onto legal-size paper, but only the Dell 922 and Lexmark X5270 can print on extra-long banner paper. And if you want to fax your documents in color, you have only one choice: the Canon MP390.

—*Lisa Cekan* ■

PRINT

Inkjet Multifunction Printers: Best and Worst Prints

THOUGH NONE OF THE INKJET MFPs earned an Outstanding score for their glossy photos, a couple of models came close. One, the HP PSC 1315, got a Very Good rating, producing photos with realistic textures and natural-looking skin tones. Photo prints from the Lexmark X5270 earned a Good score. Though they had sharp details, textures were grainy and skin tones looked unnaturally yellow.

Because monochrome laser printers typically print sharp line art, we expected laser MFPs to do the same, which they did. Inkjet printers usually print sloppier lines, and so did the inkjet MFPs. A couple of laser MFPs earned a Very Good mark for their prints of line art, but none of the inkjet MFPs did. However, one inkjet MFP, the Canon MP390, received a Good for its line art. It printed fine lines with few blobs. Three models earned a Poor, including the Dell 922; its prints showed obvious banding, and parallel lines often overlapped.
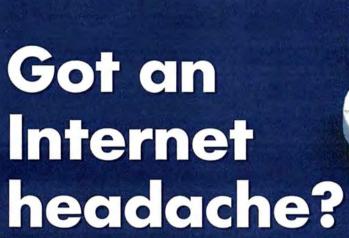
BEST

HP PSC 1315 All-in-One

Canon MultiPass MP390

WORST

Lexmark X5270 All-in-One

Dell All-in-One 922

TOP 15 DESKTOP PCs

	POWER SYSTEM	Overall rating	Street price (7/20/04)	WorldBench 5 performance score [1]		Comments
1	**Best BUY** Dell Dimension 8400 **NEW** find.pcworld.com/43544	86	Average $2999[3]	Windows XP Home	Good 98	This PC's new Intel processor and chip set, top-performing graphics card, and attractive LCD monitor are a winning combination. (★★★★⯪)
2	Alienware Aurora Extreme find.pcworld.com/42162	84	Very expensive $4562	Windows XP Professional	Very good 109	Quick, gaming-centric, and very pricey; this Aurora's sci-fi-themed case is exotic without being horrendously gaudy. (★★★★ July 04)
3	Compaq Presario 8000Z find.pcworld.com/41740	83	Inexpensive $2154	Windows XP Professional	Good 98	The 8000Z sped through our tests, but the model we reviewed lacked open drive bays to boost storage. (★★★★⯪ June 04)
4	Xi Computer MTower 64FX **NEW** find.pcworld.com/43534	83	Expensive $3636	Windows XP Home	Very good 103	This swift system comes with a great selection of software, has room for expansion, and offers wireless support. (★★★⯪⯪)
5	Micro Express MicroFlex 34A find.pcworld.com/42574	83	Average $2699	Windows XP Home	Very good 104	A generally well-equipped system with USB 2.0 ports on the top of its chassis, it earned low scores for sound quality. (★★★★⯪ Aug 04)
6	Sony VAIO PCV-RS630G **NEW** find.pcworld.com/43548	82	Inexpensive $2069	Windows XP Home	Fair 83	Though a bit sluggish in our performance tests, this PC has some nice features, such as the ability to record and play back TV. (★★★⯪⯪)
7	Velocity Micro Vision FX **NEW** find.pcworld.com/43536	82	Expensive $3745	Windows XP Professional	Very good 104	A computer that shines in every category, especially case design and documentation. It's a little expensive, though. (★★★★⯪)

	VALUE SYSTEM	Overall rating	Street price (7/20/04)	WorldBench 5 performance score [1]		Comments
1	**Best BUY** Dell Dimension 4700 **NEW** find.pcworld.com/43542	85	Average $1564[8]	Windows XP Home	Very good 83	This update of a previous Best Buy uses a new Intel chip set to provide better integrated graphics and sound. (★★★★⯪)
2	Sony VAIO PCV-RS520 find.pcworld.com/42158	84	Expensive $1600	Windows XP Home	Very good 84	Stylish design and competitive performance are undermined by an inferior keyboard and tinny-sounding speakers. (★★★⯪⯪ July 04)
3	Dell Dimension 2400 find.pcworld.com/41174	84	Very inexpensive $699[7]	Windows XP Home	Fair 66	A large CRT monitor and a generous, home-oriented software bundle highlight this bargain system. (★★★⯪⯪ May 04)
4	Polywell Mini-Box 900VX **NEW** find.pcworld.com/43540	84	Average $1399	Windows XP Home	Outstanding 93	This small system offers good performance and plenty of ports, but it has extremely limited expansion options. (★★★⯪⯪)
5	IBuyPower Back To School find.pcworld.com/42576	83	Expensive $1694	Windows XP Home	Outstanding 98	Though this machine performed well in our tests, its outlandish front panel might give even gamers pause. (★★★★ Aug 04)
6	Sys Technology Sys Performance 3200+/64 find.pcworld.com/42672	82	Expensive $1695	Windows XP Home	Very good 86	Nondescript black tower has a terrific software bundle and an attractive balance of features, speed, and price. (★★★★⯪ Aug 04)
7	HP Compaq Business Desktop Dx2000 Microtower find.pcworld.com/42150	79	Inexpensive $1198	Windows XP Professional	Good 75	No-frills, attractively priced business system performs sufficiently well for light to moderate duties. (★★★⯪⯪ July 04)
8	Amax Max 3000+ find.pcworld.com/43228	77	Average $1389	Windows XP Home	Very good 81	Model works as a low-profile desktop or thin tower; silver-gray design fits nicely in most business or home settings. (★★★⯪⯪ Sept 04)

Go to find.pcworld.com/10860 for details on *PC World's* Star Ratings.

Go to find.pcworld.com/39209 for details about the weightings we give to the various factors that contribute to a desktop PC's overall rating in each of the two categories.

[1] Performance word scores reflect comparisons of PCs in the same category (power or value) running the same operating system. See find.pcworld.com/15720 for more details.

[7] Total capacity in gigabytes (may represent multiple drives).

[3] Vertical cases are towers (over 20 inches), midsize towers (15.5 to 20 inches), or mini-towers (under 15.5 inches). Compacts are small-footprint or thin horizontal cases.

NEW DESKTOPS FROM DELL take the top spots in both the power and value sections of our chart this month. The Dimension 8400 earns the power Best Buy, thanks to strong components that provide plenty of performance in both games and business software. It's the first system we've tested that uses the new Intel 925X chip set, which supports fast 533-MHz DDR2 memory. The chip set also supports the new PCI Express graphics card socket, and our test computer came equipped with a high-end

PCI Express ATI Radeon X800 XT board.

Our top value PC, the Dimension 4700, uses another new chip set from Intel (the 915G), but with more-common DDR400 memory. Like many other value PCs, the 4700 uses the chip set to process graphics. Though the 4700 produced reasonable frame rates in our tests, its scores were significantly lower than those of similarly priced systems that rely on dedicated

CPU	RAM (MB/ type)	Hard drive [2]	Monitor	Graphics	Case type [3]	Optical drives	Other features [4]	Graphics quality	Setup and ease of use	Vendor's reliability/ service
3.6-GHz Pentium 4	1024/ DDR2-533 SDRAM	320 (RAID)	19-inch LCD	256MB ATI Radeon X800 XT	Midsize tower	12X DVD+RW and 48X CD-RW drives	Gigabit network adapter, Dell 5650 speakers, Microsoft Works Suite 2004	Very good	Good	Good/Fair
2.4-GHz Athlon 64 FX-53	1024/ DDR400 SDRAM	398 (148GB RAID)	22-inch CRT	256MB ATI Radeon 9800 XT	Tower	8X DVD±RW and 48X CD-RW drives	Media-card reader,[5] Logitech Z-680 speakers, Microsoft Works Suite 2004	Very good	Very good	'/'
2.2-GHz Athlon 64 3400+	1024/ DDR400 SDRAM	160 (RAID)	17-inch LCD	256MB ATI Radeon 9600 Pro	Midsize tower	8X DVD+RW and 48X CD-RW drives	Altec Lansing 221 speakers, Microsoft Works 7, Money 2004, MSN Encarta Plus	Very good	Good	Fair/Poor
2.4-GHz Athlon 64 3800+	1024/ DDR400 SDRAM	148 (RAID)	19-inch LCD	256MB Asus V9980 NVidia FX 5950U	Midsize tower	12X DVD±RW and 16X DVD-ROM drives	Gigabit network adapter, 802.11g wireless adapter, Logitech X-620 6.1 speakers, WordPerfect 11 Productivity Pack, Arcsoft Digital Xpressions, no modem	Very good	Good	'/'
2.2-GHz Athlon 64 3400+	1024/ DDR400 SDRAM	250	19-inch LCD	256MB ATI Radeon 9800 XT	Midsize tower	8X DVD±RW drive	Media-card reader,[5] gigabit network adapter, Klipsch Promedia Ultra 5.1 speakers, no modem	Outstanding	Good	'/'
3.2-GHz Pentium 4	512/ DDR400 SDRAM	250	17-inch LCD	128MB ATI Radeon 9200	Midsize tower	8X DVD±RW and 16X DVD-ROM drives	Media-card reader,[5] Sony Active speakers, Quicken 2004, Microsoft Works 7, Click to DVD, TV-tuner card with DVR software	Very good	Fair	Good/Fair
2.4-GHz Athlon 64 FX-53	1024/ DDR400 SDRAM	194 (74GB RAID)	19-inch CRT	256MB GeForce 6800 Ultra APG	Midsize tower	12X DVD±RW and 52X CD-RW drives	Gigabit network adapter, Creative T7700 speakers, Corel WordPerfect Productivity Pack, no modem	Outstanding	Very good	'/'

CPU	RAM (MB/ type)	Hard drive [2]	Monitor	Graphics	Case type [3]	Optical drives	Other features [4]	Graphics quality	Setup and ease of use	Vendor's reliability/ service
3-GHz Pentium 4	512/ DDR400 SDRAM	160	17-inch LCD	Integrated Intel Media Accelerator 900	Minitower	16X DVD-ROM and 48X CD-RW drives	Dell ADA-425 speakers, Microsoft Works 2004	Good	Good	Good/Fair
3-GHz Pentium 4	512/ DDR333 SDRAM	160	17-inch LCD	128MB ATI Radeon 9200	Midsize tower	8X DVD±RW and 16X DVD-ROM drives	Media-card reader,[5] Microsoft Works 7, Sony PictureGear Studio, Quicken 2004 New User Edition	Good	Fair	Good/Fair
2.67-GHz Pentium 4	256/ DDR333 SDRAM	80	19-inch CRT	Integrated Intel 845GL graphics using main memory	Minitower	16X DVD-ROM and 48X CD-RW drives	Dell A425 speakers, Microsoft Works Suite 2003, Sonic MyDVD, Britannica 2003, Quicken 2002, Jasc Paint Shop Pro 8	Poor	Very good	Good/Fair
2-GHz Athlon 64 3000+	512/ DDR400 SDRAM	160 (RAID)	19-inch CRT	128MB ChainTech SA5900X	Compact	12X DVD±RW drive	Media-card reader,[5] Aopen MS805-B speakers, no modem	Outstanding	Good	'/'
2.2-GHz Athlon 64 3400+	512/ DDR400 SDRAM	80	19-inch CRT	256MB ATI Radeon 9800 XT	Midsize tower	8X DVD±RW drive	Media-card reader,[5] Logitech Z-640 speakers, no modem	Very good	Very good	'/'
2-GHz Athlon 64 3200+	512/ DDR400 SDRAM	120	17-inch LCD	128MB PNY FX5900SE	Midsize tower	8X DVD±RW drive	Media-card reader,[5] gigabit network adapter, Altec Lansing 251 speakers, Corel WordPerfect Productivity Pack, Ulead PhotoImpact, no modem	Outstanding	Good	'/'
3-GHz Pentium 4	256/ DDR400 SDRAM	40	15-inch LCD	Integrated Intel 3D Extreme graphics using main memory	Minitower	16X DVD-ROM/48X CD-RW combo drive	JBL Platinum speakers, Microsoft Works 7, Dantz Retrospect Express Backup 6.5, no modem	Fair	Good	Fair/Fair
2.167-GHz Athlon XP 3000+	512/ DDR400 SDRAM	120	17-inch LCD	Integrated NVidia GeForce4 MX graphics using main memory	Compact	16X DVD-ROM/52X CD-RW combo drive	Media-card reader,[5] Microsoft Works Suite 2004	Fair	Good	'/'

[4] Unless otherwise stated, systems come with a modem and a 10/100 network adapter.
[2] Use Dell Value Code 6V411-B40REV to get this price.
[5] Includes support for some combination of CompactFlash I/II, Memory Stick, Memory Stick Pro, MultiMediaCard, Secure Digital Card, SmartMedia, and XD-Picture Card.
[3] Insufficient data to give a rating.
[6] Use Dell Value Code 6V411-470REV to get this price.
[7] Use Dell Value Code 6V411- D24REV to get this price.

THE DELL DIMENSION 8400 sports a zippy new 3.6-GHz Intel Pentium 4 CPU and 925X chip set.

graphics (such as the Polywell Mini-Box 900VX, another newcomer this month).

New power PCs from Xi and Velocity Micro made the chart; the Xi MTower 64FX came with an 802.11g PCI wireless adapter and gigabit ethernet. The Velocity Micro system had the same tidy interior we've seen previously from the company.

Several systems that we tested this month didn't make the chart: At $2069, Sony's VAIO PCV-RS630G (find.pcworld. com/43548) is nicely priced for a 3.2-GHz Pentium 4 machine, but it turned in a disappointing WorldBench 5 score of 83. IBuyPower's Gamer-EX PC (find.pcworld. com/43546) had much stronger performance (with a WorldBench 5 score of 92), but its audio was subpar; a flat-sounding two-channel speaker system isn't what you'd expect from a gaming rig. ■

TOP 15 NOTEBOOK PCs

TEST Center

DESKTOP REPLACEMENT	Overall rating	Street price (7/16/04)	WorldBench 5 performance score [1] ▶Faster	Comments
1 **Best BUY** HP Compaq Nc6000 find.pcworld.com/41093	82	Average $2021	Windows XP Professional — Very good 74	Lightweight corporate notebook comes with dual wireless capabilities and great battery life. (★★★★☆ May 04)
2 Gateway M405CS find.pcworld.com/42184	80	Inexpensive $1333	Windows XP Home — Good 69	Model performs well and has a low price. Order it with the lithium ion battery (as we did) to get the battery life we saw in our tests. (★★★✦ July 04)
3 Dell Inspiron 9100 **NEW** find.pcworld.com/43352	78	Expensive $2330	Windows XP Home — Very good 81	This thick desktop replacement has a DVI port and dual pointing devices; built-in speakers and a subwoofer put out loud, rich sound. (★★★★☆)
4 Acer Aspire AS2003LMi find.pcworld.com/40448	78	Inexpensive $1599	Windows XP Professional — Very good 75	Very good performer offers an alluring wide-aspect 15.4-inch screen, but sound is only so-so. (★★★★ Apr 04)
5 Dell Inspiron 5150 find.pcworld.com/41147	78	Average $1751	Windows XP Home — Good 71	This notebook has a high-resolution screen. It's hefty, however, and you can't remove its optical drive to swap in a second battery. (★★★☆☆ May 04)

ALL-PURPOSE NOTEBOOK	Overall rating	Street price (7/16/04)	WorldBench 5 performance score [1] ▶Faster	Comments
1 **Best BUY** IBM ThinkPad R51 find.pcworld.com/43118	82	Inexpensive $1699	Windows XP Professional — Good 67	Slim R51 suits users who care more about mainstream features than bells and whistles. Excellent keyboard. (★★★★✦ Sept 04)
2 IBM ThinkPad T42 find.pcworld.com/43080	81	Expensive $2299	Windows XP Professional — Very good 83	IBM pays great attention to detail in this impressive business notebook, which has terrific speed and an outstanding keyboard. (★★★★☆ Sept 04)
3 Toshiba Tecra M2V-S310 find.pcworld.com/42558	79	Inexpensive $1499	Windows XP Professional — Fair 61	Lightweight business notebook offers good battery life and storage expansion. At this price, model includes just 256MB of RAM. (★★★ Aug 04)
4 Chem USA ChemBook 2056 find.pcworld.com/42910	78	Average $1999	Windows XP Home — Very good 83	Strong performance and long battery life distinguish this unit. The optical drive is mounted on the front for easy access. (★★★☆☆ Sept 04)
5 Acer Ferrari 3200 **NEW** find.pcworld.com/43364	78	Average $1999	Windows XP Professional — Very good 77	This nicely equipped Ferrari-red notebook features a slot-fed DVD burner and a plethora of ports. (★★★★☆)

ULTRAPORTABLE	Overall rating	Street price (7/16/04)	WorldBench 5 performance score [1] ▶Faster	Comments
1 **Best BUY** IBM ThinkPad X40 find.pcworld.com/43066	75	Expensive $2299	Windows XP Professional — Fair 55	Ultraportable ThinkPad boasts the finest keyboard for its size. Optical drive is USB- or dock-based. (★★★★☆ Sept 04)
2 Toshiba Portégé M205-S810 find.pcworld.com/43120	75	Expensive $2399	Windows XP Tablet Edition — Good 64	This stylish convertible tablet/notebook handles both jobs adequately. It has good battery life and is very responsive to screen taps. (★★★★✦ Sept 04)
3 Sony VAIO PCG-TR3AP3 find.pcworld.com/42188	74	Expensive $2200	Windows XP Professional — Fair 52	The VGA camera mounted on this unit's small, easy-to-read screen supports video and stills. The tinny speakers are a drawback. (★★★★✦☆ July 04)
4 JVC Mobile Mini Note PC MP-XV841US find.pcworld.com/43084	72	Expensive $2300	Windows XP Professional — Fair 52	Well-equipped ultraportable boasts an integrated DVD burner and a wide-format screen. Includes Pinnacle Studio 9 SE. (★★★☆☆ Sept 04)
5 HP Compaq Tablet PC Tc1100 find.pcworld.com/43076	71	Expensive $2299	Windows XP Tablet Edition — Fair 53	This tablet PC converts into a smoothly working notebook with a keyboard addition. Screen taps require more force than we'd like. (★★✦☆☆ Sept 04)

Go to find.pcworld.com/10860 for details on *PC World*'s Star Ratings. Go to find.pcworld.com/40049 for a breakdown of the weightings we give to the various factors that contribute to a notebook's overall rating in each of the three categories.

[1] See "Your Guide to the Top 100" at find.pcworld.com/15720 for more details. [2] Except where noted, all Intel CPUs are SpeedStep chips, which run at a slower speed on battery power. (We performance-test all notebooks plugged in.) [3] Features listings are not exhaustive.

[4] Unless otherwise noted, all notebooks come with a lithium ion battery. [5] Includes computer, AC adapter, power cord, optical drive, and floppy drive (if offered).

HERE'S A NOTEBOOK THAT DOES JUSTICE to DVD soundtracks and multimedia presentations: Dell's wide-screen Inspiron 9100—with internal stereo speakers, a built-in subwoofer, and an extra-thick case that improves acoustics—produces the loudest, deepest sound we've ever heard from a notebook. Debuting at number three on the desktop replacement portion of our chart, this portable is one of the first that can be ordered with a 100GB internal hard drive.

The $1999 Acer Ferrari 3200—with a daring red chassis, a slot-fed DVD burner, and all-around good performance—just squeaked past some lower-priced

PHOTOGRAPH: RICK RIZNER

CPU [2]	Screen (inches)	RAM (MB)	Hard drive (GB)	Pointing device	Bays and optical drives	Other features [3]	Overall design	Battery life (hours:min) [4]	Average weight (pounds) [5]	Vendor's reliability/service
1.6-GHz Pentium M	14.1	512	60	Touchpad, eraserhead	One multipurpose bay with DVD-ROM and CD-RW combo drive	802.11a/g, Bluetooth, gigabit ethernet, SD Card slot, embedded security chip	Very good	Outstanding/6:23	Light/6.6	Fair/Fair
1.5-GHz Pentium M	15.0	512	40	Touchpad	Fixed DVD-ROM and CD-RW combo drive	802.11g, Microsoft Works 7	Good	Very good/5:15	Average/7.1	Good/Good
3.2-GHz Pentium 4 [6]	15.4	512	60	Touchpad, eraserhead	One multipurpose bay with DVD+R/RW drive	802.11a/g, Bluetooth, DVI	Outstanding	Limited/1:26	Very heavy/11.5	Good/Fair
1.6-GHz Pentium M	15.4	512	60	Touchpad	Fixed DVD-ROM and CD-RW combo drive	802.11b, three-in-one media card reader	Good	Very good/4:33	Average/8.1	[7]/[7]
3.1-GHz Mobile Pentium 4	15.0	512	60	Touchpad	Fixed DVD+R/RW drive	802.11g	Good	Good/4:02	Very heavy/10.3	Good/Fair

CPU [2]	Screen (inches)	RAM (MB)	Hard drive (GB)	Pointing device	Bays and optical drives	Other features [3]	Overall design	Battery life (hours:min) [4]	Average weight (pounds) [5]	Vendor's reliability/service
1.5-GHz Pentium M	15.0	512	40	Touchpad, eraserhead	One multipurpose bay with DVD-ROM and CD-RW combo drive	802.11g, gigabit ethernet	Outstanding	Good/3:54	Average/7.4	Good/Good
1.7-GHz Pentium M	15.1	512	40	Touchpad, eraserhead	One multipurpose bay with DVD-ROM and CD-RW combo drive	802.11g, gigabit ethernet	Very good	Good/4:09	Average/6.9	Good/Good
1.5-GHz Pentium M	14.1	256	40	Touchpad	One multipurpose bay with DVD-ROM and CD-RW combo drive	802.11g	Good	Good/4:02	Light/5.7	Good/Fair
1.7-GHz Pentium M	15.0	1024	60	Touchpad	One multipurpose bay with DVD±RW drive	802.11g, SD Card slot	Good	Good/4:07	Average/7.3	[7]/[7]
1.8-GHz Low-power Mobile Athlon 64 2800+	15.0	512	80	Touchpad	Fixed DVD±RW drive	802.11g, Bluetooth, gigabit ethernet, four-in-one media card reader	Very good	Fair/2:37	Average/8.0	[7]/[7]

CPU [2]	Screen (inches)	RAM (MB)	Hard drive (GB)	Pointing device	Bays and optical drives	Other features [3]	Overall design	Battery life (hours:min) [4]	Average weight (pounds) [5]	Vendor's reliability/service
1.2-GHz LV Pentium M	12.1	512	40	Eraserhead	External DVD-ROM and CD-RW combo drive	802.11g, Bluetooth, SD Card slot	Good	Fair/2:36	Light/5.6	Good/Good
1.5-GHz Pentium M	12.1	512	60	Touchpad	External DVD-ROM and CD-RW combo drive	802.11g, Bluetooth, SD Card slot	Fair	Good/3:20	Average/7.1	Good/Fair
1-GHz ULV Pentium M	10.6	1024	40	Touchpad	Fixed DVD-ROM and CD-RW combo drive	802.11g, Memory Stick slot, integrated VGA camera	Good	Good/3:20	Very light/4.0	Good/Poor
1-GHz ULV Pentium M	8.9	256	40	Eraserhead	Fixed DVD-RW/-RAM drive	802.11g, SD Card slot	Fair	Very good/4:47	Very light/3.9	[7]/[7]
1-GHz ULV Pentium M	10.4	512	40	Eraserhead	External DVD-ROM and CD-RW combo drive	802.11g, Bluetooth, SD Card slot	Good	Good/3:15	Average/7.1	Fair/Fair

[6] Single-speed desktop CPU.
[7] Insufficient data to give a rating.

THE EXTRA-THICK Dell Inspiron 9100 has great sound.

models to nab the number five slot on the all-purpose notebooks list.

Four other newcomers failed to make our chart. The stylish Asus W1N came with sharp edges and mediocre stereo speakers. Sony's VAIO VGN-A190 entertainment notebook with bundled external speakers proved difficult to set up as a video server (a touted feature). Fujitsu's thin and light LifeBook S7010 lacks a user-upgradable hard drive. And MPC's TransPort T2200 offers a biometric fingerprint reader but comes equipped with an uncomfortable keyboard. ∎

COMPU, ...REEN
GRAPHICS: JOHN GODDARD

TOP 10 MONITORS

Visit find.pcworld.com/43872 for reviews of all products tested this month and ranked in this chart.

TWO NEWCOMERS displace the reigning Dell UltraSharp 1703FP. Propelled by excellent image quality and a very low price, LG Electronics' Flatron L1710SK vaults to the top of the chart, while the Sharp LL-172A-B's superb text reproduction earns it the second spot. ViewSonic's well-rounded VP171s takes fourth place with its blend of performance and adjustability. Sony's new SDM-HS74P wowed our panelists with the best graphics we've seen on a 17-inch monitor lately, but its high price kept it from climbing above number six. NEC's stylish MultiSync LCD1735NXM debuts at number seven.

	17-INCH LCD MONITOR		Street price (7/23/04)	Overall rating	Quality of text/ graphics	Comments
1	**Best BUY** LG Electronics Flatron L1710SK **NEW** find.pcworld.com/43420		$399	92	Outstanding/ Outstanding	**FEATURES:** 13.2 pounds; analog video input; tilt and swivel adjustments; TCO'99 compliant; three-year warranty; 24-hour daily toll-free tech support. **SUMMARY:** Well-organized controls include Lightview button to let users choose the best settings for text, movie, or photo viewing by day or night. With the lowest price on the chart, this model is as easy on the wallet as it is on the eyes. (★★★✦☆)
2	**Best BUY** Sharp LL-172A-B **NEW** find.pcworld.com/43422		$479	91	Outstanding/ Very good	**FEATURES:** 13.2 pounds; analog video input; tilt adjustment; built-in speakers; headphone jack; color- and image-adjusting software; TCO'99 compliant; three-year warranty; 24-hour daily toll-free tech support. **SUMMARY:** Document and spreadsheet screens look remarkably crisp, earning this moderately priced unit the best text score of any monitor on the chart. (★★★★☆)
3	Dell UltraSharp 1703FP find.pcworld.com/39407		$529	91	Very good/ Very good	**FEATURES:** 15.4 pounds; dual video inputs;[1] tilt, swivel, height, and pivot adjustments; optional speakers; headphone jack; four-port USB 2.0 hub; TCO'99 compliant; three-year warranty; 24-hour daily toll-free tech support. **SUMMARY:** A smaller version of Dell's top-performing 19-incher, the 1703FP offers the same lithe design and great adjustment options. (★★★★☆ Mar 04)
4	ViewSonic VP171s **NEW** find.pcworld.com/43412		$549	89	Outstanding/ Outstanding	**FEATURES:** 14.3 pounds; dual video inputs;[1] tilt, swivel, height, and pivot adjustments; TCO'99 compliant; three-year warranty; 24-hour daily toll-free tech support. **SUMMARY:** This great all-around performer offers several kinds of physical adjustments and serves up perfectly good text, but its screen's greatest strengths are its rich color and uniform brightness. (★★★✦☆)
5	Samsung SyncMaster 173P find.pcworld.com/39383		$630	88	Very good/ Outstanding	**FEATURES:** 13.2 pounds; dual video inputs;[1] tilt, swivel, height, and pivot adjustments; color-adjusting software; TCO'03 compliant; three-year warranty; 24-hour daily toll-free tech support. **SUMMARY:** The swank SyncMaster 173P's outstanding image quality (and good looks) are great for graphics and entertainment—but this model is also the most expensive on the chart. (★★★★☆ Mar 04)
6	Sony SDM-HS74P **NEW** find.pcworld.com/43408		$600	88	Outstanding/ Outstanding	**FEATURES:** 12.6 pounds; dual video inputs;[1] tilt adjustment; image-adjusting software; TCO'99 compliant; three-year warranty; 24-hour daily toll-free tech support. **SUMMARY:** Dual-input monitor improves on its predecessor, the similar-looking but analog-only SDM-HS73P, by turning in the highest image-quality score we've seen in a 17-inch monitor recently. (★★★★☆)
7	NEC MultiSync LCD1735NXM **NEW** find.pcworld.com/43416		$500	87	Outstanding/ Very good	**FEATURES:** 10.4 pounds; dual video inputs;[1] tilt adjustment; built-in speakers; headphone jack; color- and image-adjusting software; TCO'99 compliant; three-year warranty, 24-hour daily toll-free tech support. **SUMMARY:** Instead of the usual bezel-mounted buttons, this sleek unit sports smooth, touch-sensitive controls that light up in the base of the stand. (★★★☆☆)
8	Samsung SyncMaster 172X find.pcworld.com/40877		$549	87	Very good/ Good	**FEATURES:** 8.3 pounds; dual video inputs;[1] tilt and height adjustments; color- and image-adjusting software; TCO'99 compliant; three-year warranty; 24-hour daily toll-free tech support. **SUMMARY:** Light, small-footprint monitor offers multiple viewing modes and a swift 12-ms response time for comfortable gaming and DVD viewing; graphics quality could be better, however. (★★★★☆ July 04)
9	IBM ThinkVision L170p find.pcworld.com/37499		$569	86	Very good/ Outstanding	**FEATURES:** 12.6 pounds; dual video inputs;[1] tilt, swivel, and height adjustments; TCO'99 compliant; three-year warranty; 24-hour daily toll-free tech support. **SUMMARY:** Vivid colors and uniform brightness contribute to this model's high graphics rating; nevertheless, the sturdy and adjustable L170p is suitable primarily for users who are content with a minimum of advanced features. (★★★✦☆ Mar 04)
10	Eizo Nanao FlexScan L557 find.pcworld.com/39377		$599	86	Very good/ Very good	**FEATURES:** 12.3 pounds; dual video inputs;[1] tilt and height adjustments; built-in speakers; headphone jack; TCO'03 compliant; five-year warranty (three for backlight); 24-hour daily toll-free tech support. **SUMMARY:** Well suited for graphics use, the L557 has both preset color modes and a bevy of advanced on-screen menu options for refining screen and printout images. (★★★★☆ Mar 04)

FOOTNOTE: [1] Includes both digital (DVI) and analog inputs. DVI requires a graphics card with a DVI digital output, which we use to test all monitors that offer DVI. **HOW WE TEST:** Judges rate how well each monitor displays 13 text and graphics images at a native resolution of 1280 by 1024. Some screens are from DisplayMate for Windows (www.displaymate.com). See find.pcworld.com/34613 for testing details. Data based on tests designed and conducted by the PC World Test Center. All rights reserved. **CHART NOTES:** Overall ratings are based on text and graphics quality (20 percent each), price (15 percent), features (20 percent), ease of use (15 percent), and service and support (10 percent). With LCD monitors, the entire screen area is viewable. Weight includes the base. See find.pcworld.com/10860 for details on *PC World*'s Star Ratings.

TOP 10 DVD DRIVES

Visit find.pcworld.com/43878 for reviews of all products tested this month and ranked in this chart.
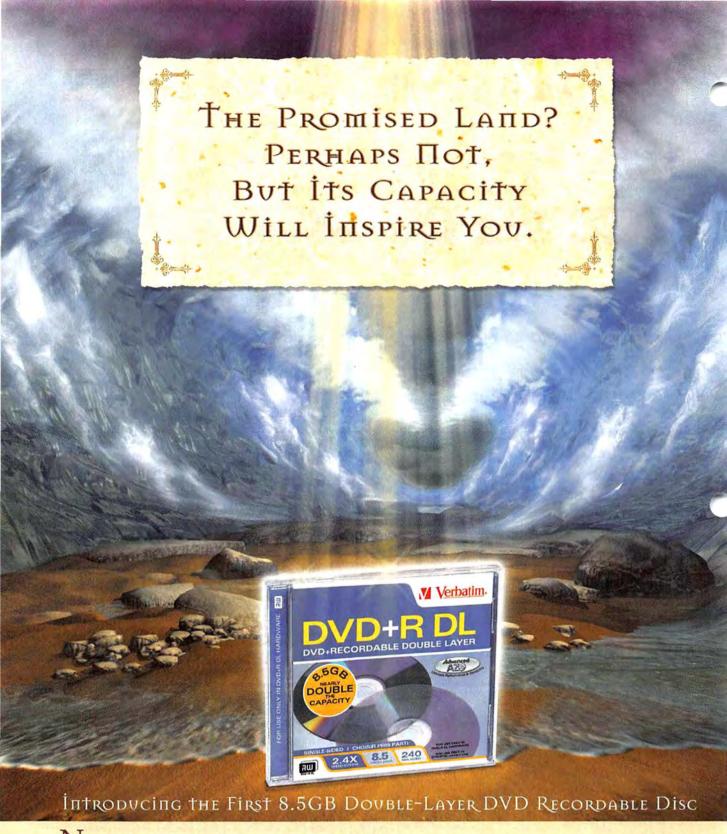
THE DVD-BURNER SPEED RACE CONTINUES. Four new 12X drives join our internal drives list this month, including LG Electronics' Super-Multi GSA-4120B. The LG is inexpensive, supports double-layer writes, and is the only chartmaker to write to DVD-RAM. But Plextor's PX-712A still has a performance edge, and it retains the top spot. All five 12X models can achieve these fast write speeds using 8X media—a boon since you won't find 12X media on store shelves.

	INTERNAL DVD DRIVE	Street price (7/30/04)	Overall rating	Performance	Write performance (min:sec) [1]		Comments
1	**Best BUY** Plextor PX-712A find.pcworld.com/42466	$165	90	Outstanding	• DVD+R 6:31 • DVD+RW 10:09 • CD-R 2:50		FEATURES: IDE drive, 12X DVD+R, 4X DVD+RW, 8X DVD-R, 4X DVD-RW, 48X CD-R, 8MB buffer; Roxio Easy CD & DVD Creator 6.2 (with Drag-to-Disc and DVD Builder) and PhotoSuite 5 SE; 11-hour weekday toll-free support. SUMMARY: Zippy performer stays ahead of the latest 12X contenders, posting our fastest writes times with DVD+R. Drops $40 in price. (★★★✦☆ July 04)
2	**Best BUY** LG Electronics Super-Multi GSA-4120B **NEW** find.pcworld.com/43252	$100	90	Very good	• DVD+R 7:11 • DVD+RW 12:04 • CD-R 3:21		FEATURES: IDE drive, 12X DVD+R, 2.4X double layer, 4X DVD+RW, 8X DVD-R, 4X DVD-RW, 5X DVD-RAM, 40X CD-R, 2MB buffer; Ahead Nero Express 6.3 (with Nero Vision Express 6.3 and InCD 4.2), CyberLink PowerDVD 5 and Power-Producer Gold; 13-hour weekday, plus 8-hour Saturday, toll-free support. SUMMARY: Only drive on the chart to write to bare DVD-RAM discs. (★★★✦☆)
3	Lite-On SOHW-1213S **NEW** find.pcworld.com/43810	$95	88	Very good	• DVD+R 7:42 • DVD+RW 10:03 • CD-R 3:04		FEATURES: IDE drive, 12X DVD+R, 4X DVD+RW, 8X DVD-R, 4X DVD-RW, 48X CD-R, 2MB buffer; Ahead Nero Express 6.3 (with Nero Vision Express 6.3 and InCD 4.2), CyberLink PowerDVD 5; 24-hour daily toll-free support. SUMMARY: Lite-On improves upon its 8X drive by bundling the latest software version and boosting write-once performance (by 96 seconds). (★★★✦☆)
4	TDK Internal IndiDVD 12x+/8x- Multiformat Burner **NEW** find.pcworld.com/43812	$160	85	Very good	• DVD+R 7:48 • DVD+RW 9:04 • CD-R 2:44		FEATURES: IDE drive, 12X DVD+R, 4X DVD+RW, 8X DVD-R, 4X DVD-RW, 48X CD-R, 2MB buffer; Roxio Easy CD & DVD Creator 6.2 (with Drag-to-Disc and DVD Builder), PhotoSuite 5 SE, DVDMax Player; 8-hour daily toll-free support. SUMMARY: Drive has solid write-once and rewritable DVD performance; and, by a hair, it's the fastest drive we've seen at writing to CD-R. (★★★☆☆)
5	Pacific Digital Mach 8 8x+/- DVD-Burner find.pcworld.com/42468	$115	79	Good	• DVD+R 9:39 • DVD+RW 8:52 • CD-R 3:39		FEATURES: IDE drive, 8X DVD+R, 4X DVD+RW, 8X DVD-R, 4X DVD-RW, 40X CD-R, 2MB buffer; Roxio Easy CD & DVD Creator 6.2 (with Drag-to-Disc and DVD Builder); 9-hour weekday toll-free support. SUMMARY: Performance is in line with what we'd expect from a drive with these write speeds, but the 12X Lite-On costs less and writes a DVD+R in 2 minutes less. (★★★☆☆ July 04)
6	Sony DRU-540A **NEW** find.pcworld.com/43802	$140	76	Very good	• DVD+R 6:57 • DVD+RW 16:25 • CD-R 3:27		FEATURES: IDE drive, 12X DVD+R, 4X DVD+RW, 8X DVD-R, 4X DVD-RW, 40X CD-R, 2MB buffer; Ahead Nero Express 6.3 (with Nero Vision Express 6.3, InCD 4.2, and BackItUp); 12-hour weekday and Saturday toll-free support. SUMMARY: Required nearly twice as long as comparable drives to complete our +RW tests (Sony says a firmware update will be on its Web site to fix this). (★★★✦☆)
7	Pioneer DVR-A07 find.pcworld.com/40421	$130	73	Good	• DVD+R 8:23 • DVD+RW 9:32 • CD-R 4:46		FEATURES: IDE drive, 8X DVD+R, 4X DVD+RW, 8X DVD-R, 4X DVD-RW, 24X CD-R, 2MB buffer; Ulead MovieFactory 3 SE, Burn.Now 3.5, VideoStudio 7 SE and Photo Explorer 8, NovaStor Nova Backup 7.1; 10.5-hour weekday toll-free support. SUMMARY: A versatile software bundle complements this drive's solid write-once performance, but its CD-R speed is slow. (★★★★☆ Apr 04)

	EXTERNAL DVD DRIVE	Street price (7/30/04)	Overall rating	Performance	Write performance (min:sec) [1]		Comments
1	**Best BUY** LaCie D2 DVD±RW Double Layer **NEW** find.pcworld.com/43808	$195	84	Good	• DVD+R 9:36 • DVD+RW 8:52 • CD-R 3:41		FEATURES: USB 2.0 and FireWire drive, 8X DVD+R, 2.4X DVD+R double layer, 4X DVD+RW, 8X DVD-R, 4X DVD-RW, 32X CD-R, 2MB buffer; Roxio Easy CD & DVD Creator 6.2 (with Drag-to-Disc and DVD Builder), Easy Media Creator 7.1, and Toast Lite 6; 10-hour weekday toll-call support. SUMMARY: This stylish drive is housed in an aluminum case that can be mounted in a rack. (★★★★☆)
2	Memorex True 8X External Dual-Format DVD Recorder find.pcworld.com/42872	$190	83	Good	• DVD+R 9:40 • DVD+RW 9:58 • CD-R 3:40		FEATURES: USB 2.0 and FireWire drive, 8X DVD+R, 4X DVD+RW, 8X DVD-R, 4X DVD-RW, 24X CD-R, 2MB buffer; Ahead Nero Express 6.3 (with NeroVision 2.1, InCD 4.1, BackItUp, and ReCode 2); 9-hour weekday toll-free support. SUMMARY: Sleek, moderately priced external model has a well-rounded software bundle and good documentation. (★★★★☆ Aug 04)
3	TDK External IndiDVD+/-R 880N Multiformat Burner find.pcworld.com/42470	$250	76	Good	• DVD+R 9:42 • DVD+RW 8:54 • CD-R 3:39		FEATURES: USB 2.0 and FireWire drive, 8X DVD+R, 4X DVD+RW, 8X DVD-R, 4X DVD-RW, 32X CD-R, 2MB buffer; Roxio Easy CD & DVD Creator 6.1 (with Drag-to-Disc and DVD Builder), PhotoSuite 5 SE, DVDMax Player, and Toast Lite 6; 9.5-hour daily toll-free support. SUMMARY: Speed is nearly identical to the LaCie's, but this drive lacks double-layer support and costs more. (★★★★☆ July 04)

FOOTNOTE: [1] Write speed is the time (in minutes: seconds) to write 4.35GB to DVD, to format a blank rewritable DVD disc and copy 2.64GB of data to that disc, and to write 700MB to a CD-R.
HOW WE TEST: See find.pcworld.com/42952 for our testing methodology and for a breakdown of the overall rating, and see find.pcworld.com/10860 for details on PC World's Star Ratings.

TOP 10 DIGITAL CAMERAS

Visit find.pcworld.com/43850 for reviews of all products tested this month and ranked in this chart.

THIS MONTH'S ONLY NEW ranking camera, the Canon PowerShot S60, exemplifies some of the best attributes of both point-and-shoot and advanced cameras: It offers lots of manual controls, such as aperture- and shutter-priority modes, as well as good ranges of settings, yet it remains relatively compact. Soon we'll review the PowerShot S70, a 7-megapixel camera in a body identical to the S60's. This month we also tested the slim Casio Exilim EX-Z40, the 10X-optical-zoom Kyocera M410R, and the $310, 5-megapixel Concord 5345z; you'll find reviews of these cameras online.

	POINT-AND-SHOOT CAMERA	Street price (7/26/04)	Overall rating	Image quality	Ease of use	Battery life/ shots	Comments[1]
1	**Best BUY** Sony Cyber-shot DSC-W1 find.pcworld.com/42834	$400	82	Very good	Very good	Very good/ 342	FEATURES: 5.1-megapixel resolution, 32MB Memory Stick, 38mm to 114mm focal range, 640 by 480 video with audio, 8.8 ounces. SUMMARY: What's not to like—the DSC-W1 is relatively compact but boasts a huge 2.5-inch LCD, provides some advanced controls (such as full manual exposure), and takes optional lenses. (★★★★✰ Aug 04)
2	**Best BUY** Nikon Coolpix 3200 find.pcworld.com/42054	$249	81	Very good	Good	Good/ 220	FEATURES: 3.2-megapixel resolution, 14.5MB internal memory plus SD Card slot, 38mm to 115mm focal range, 640 by 480 video with audio, 6.7 ounces. SUMMARY: Small, inexpensive, and easy to use, the Coolpix produces fine images for a 3.2-megapixel model. Includes 15 scene modes and white-balance calibration. (★★★✰ July 04)
3	Canon PowerShot A75 find.pcworld.com/42004	$300	81	Good	Very good	Very good/ 325	FEATURES: 3.2-megapixel resolution, 32MB CompactFlash card, 35mm to 105mm focal range, 640 by 480 video with audio, 10.8 ounces. SUMMARY: A great price for a camera with semiautomatic and manual shooting modes, and optional accessory lenses. Photos had fine color but erratic sharpness. (★★★✰✰ Aug 04)
4	HP Photosmart R707 find.pcworld.com/41998	$349	80	Very good	Good	Good/ 270	FEATURES: 5.1-megapixel resolution, 32MB internal memory plus SD Card slot, 39mm to 117mm focal range, 320 by 240 video with audio, 7.4 ounces. SUMMARY: Flexible and simple-to-use compact camera has built-in help for novices and some advanced controls, such as white-balance calibration and manual focus. (★★★✰ July 04)
5	Kodak EasyShare DX7630 Zoom find.pcworld.com/42264	$500	78	Very good	Very good	Very good/ 355	FEATURES: 6.1-megapixel resolution, 32MB internal memory plus SD Card slot, 39mm to 117mm focal range, 320 by 240 video with audio, 9.6 ounces. SUMMARY: A dazzling 2.2-inch LCD highlights this relatively small camera, which also has controls for aperture-priority, shutter-priority, and full manual exposure. (★★★★✰ July 04)
6	Olympus C-60 Zoom find.pcworld.com/42830	$449	78	Outstanding	Good	Good/ 225	FEATURES: 6.1-megapixel resolution, 32MB XD-Picture Card, 38mm to 114mm focal range, 320 by 240 video with audio, 7.1 ounces. SUMMARY: Powerful yet compact unit offers a fine selection of semiautomatic and manual exposure modes; a wireless remote trigger makes for easy self-portraits. (★★★✰ Aug 04)
7	Canon PowerShot S60 **NEW** find.pcworld.com/43541	$499	78	Very good	Very good	Good/ 233	FEATURES: 5-megapixel resolution, 32MB CompactFlash, 28mm to 100mm focal range, 640 by 480 video with audio, 10 ounces. SUMMARY: A faster update of the PowerShot S50, this unit has revised buttons, longer zoom, slightly better battery life, and lots of manual controls. (★★★★✰)
8	Olympus D-580 Zoom find.pcworld.com/41948	$250	78	Very good	Good	Fair/ 127	FEATURES: 4-megapixel resolution, 16MB XD-Picture Card, 35mm to 105mm focal range, 320 by 240 video with audio, 7.6 ounces. SUMMARY: No frills, but bargain-priced for a 4-megapixel camera. Most controls are in well-designed menus, but deleting photos is a chore. The small rocker zoom control is awkward. (★★★✰✰ July 04)
9	Canon PowerShot S1 IS find.pcworld.com/42038	$499	77	Very good	Very good	Fair/ 144	FEATURES: 3.2-megapixel resolution, 32MB CompactFlash card, 38mm to 380mm focal range, 640 by 480 video with audio, 17.6 ounces. SUMMARY: The S1 IS is nicely designed, but it combines high-end features (including image stabilization) with a relatively low 3.2-megapixel resolution. (★★★★✰✰ July 04)
10	Canon PowerShot S500 Digital Elph find.pcworld.com/41916	$499	75	Very good	Very good	Fair/ 178	FEATURES: 5-megapixel resolution, 32MB CompactFlash card, 36mm to 108mm focal range, 640 by 480 video with audio, 8 ounces. SUMMARY: Rugged, finely crafted camera fits easily into a small bag or large pocket and has exceptionally fast startup; no scene modes to help novice photographers, however. (★★★★✰ July 04)

FOOTNOTE: [1] Resolutions are expressed in effective pixels, focal range is identified as 35mm equivalent, and camera weights include batteries. HOW WE TEST: To gauge picture quality, we take a series of shots, with and without flash, at the camera's highest resolution and at its default automatic settings. We photograph a complex still life and a mannequin to see how well each camera captures details and subtle colorings. A panel of judges reviews the on-screen and printed photos and assigns image-quality scores; we then average those scores. Data based on tests designed and conducted by the PC World Test Center. All rights reserved. CHART NOTES: Each camera's overall rating is based on price (25 percent), picture quality (25 percent), ease of use (20 percent), features (10 percent), battery life (10 percent), and support (10 percent). For all ratings, higher is better. See find.pcworld.com/10860 for details on *PC World's* Star Ratings.

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MORE REVIEWS

MISSED AN ISSUE OF *PC World* or passed your copy along to a friend? Here's a recap of other *Top 100* topics from previous issues. To read reviews of the products ranked on these Top 10 charts, go online and type in the *PC World* Find-It URL at the top of each chart. Next month in the *Top 100*, we'll look at point-and-shoot digital cameras, monochrome laser printers, and hard drives. Our Spotlight review will take a look at wide-screen monitors.

CANON'S 8-megapixel PowerShot Pro1 feels like an SLR, and has a $1000 price tag to match. Its barrel ring controls both zoom and manual focus.

THE MEMOREX True 8X External Dual-Format DVD Recorder costs $205, which is reasonable for an external DVD drive. It also comes packaged in a slick case.

#	ADVANCED DIGITAL CAMERAS	#	15-INCH LCD MONITORS		#	REWRITABLE DVD DRIVES	#	19-INCH LCD MONITORS
	find.pcworld.com/43324		find.pcworld.com/43140			find.pcworld.com/42934		find.pcworld.com/42874
1	**Best BUY** Olympus C-8080 Wide Zoom find.pcworld.com/41860	1	**Best BUY** Iiyama ProLite E380S-B find.pcworld.com/41198		1	**Best BUY** Plextor PX-712A find.pcworld.com/42466	1	**Best BUY** Dell UltraSharp 1901FP find.pcworld.com/35777
2	**Best BUY** Olympus C-5060 Wide Zoom find.pcworld.com/39527	2	**Best BUY** Eizo Nanao FlexScan L367 find.pcworld.com/41246		2	**Best BUY** Lite-On SOHW-812S find.pcworld.com/41850	2	**Best BUY** Samsung SyncMaster 193P find.pcworld.com/42444
3	Canon PowerShot Pro1 find.pcworld.com/43164	3	Sharp LL-T15G4 find.pcworld.com/43106		3	AOpen 8X DVD+/-RW Burner (DRW8800) find.pcworld.com/41846	3	NEC MultiSync LCD1980SX find.pcworld.com/42434
4	Olympus C-770 Ultra Zoom find.pcworld.com/43174	4	LG Electronics Flatron L1515SK find.pcworld.com/41258	INTERNAL DRIVE	4	Pacific Digital Mach 8 8x+/- DVD-Burner find.pcworld.com/42468	4	Sharp LL-T19D1 find.pcworld.com/35765
5	Canon EOS Digital Rebel find.pcworld.com/38810	5	NEC MultiSync 1560NX find.pcworld.com/40808		5	Asus DRW-0804P find.pcworld.com/42472	5	ViewSonic VP191b find.pcworld.com/42442
6	Nikon Coolpix 8700 find.pcworld.com/41862	6	HP L1530 find.pcworld.com/41204		6	Sony DRU-700A find.pcworld.com/42880	6	HP L1902 find.pcworld.com/42436
7	Panasonic Lumix DMC-FZ10S find.pcworld.com/42260	7	IBM ThinkVision L150p find.pcworld.com/41201		7	Pioneer DVR-A07 find.pcworld.com/40421	7	Sony SDM-X93 find.pcworld.com/38303
8	Olympus C-5000 Zoom find.pcworld.com/39530	8	ViewSonic VG510s find.pcworld.com/43094		1	**Best BUY** TDK External Indi DVD 840G 8x Multiformat find.pcworld.com/40475	8	Philips Brilliance 190P5EB find.pcworld.com/42438
9	Casio Exilim Pro EX-P600 find.pcworld.com/42832	9	BenQ FP557s-v2 find.pcworld.com/43102	EXTERNAL DRIVE	2	Memorex True 8X External Dual-Format DVD Recorder find.pcworld.com/42872	9	IBM ThinkVision L190p find.pcworld.com/42864
10	Sony Cyber-shot DSC-F828 find.pcworld.com/40802	10	CTX Technology S500B find.pcworld.com/41333		3	I/O Magic External 8X USB 2.0 Dual DVD IDVD8DBE find.pcworld.com/42474	10	Princeton Digital SENergy 914 find.pcworld.com/39395
	From the September 2004 issue		From the September 2004 issue			From the August 2004 issue		From the August 2004 issue

HERE'S HOW

INTERNET TIPS

SCOTT SPANBAUER

Tweak Windows XP SP2 Security to Your Advantage

WINDOWS XP IS A safe and secure operating system. Really, it is—as long as you don't connect it to the Internet. To be fair, other operating systems, including Linux and Mac OS X, are vulnerable to online attacks, too. But Windows gets more attention, and hackers were quick to discover serious flaws in the OS that made possible the Blaster and Sasser worms, along with a legion of other exploits.

Trying to make Windows more secure, Microsoft released Windows XP Service Pack 1 in 2003, and Service Pack 2 recently (find.pcworld.com/43020). Whereas SP1 focused on remedying antitrust violations with bundled Windows utilities, almost all of SP2 is devoted to beefing up Internet security. SP2 doesn't thoroughly shield you from attacks, but it's definitely worth installing for its firewall improvements, Internet Explorer pop-up blocking, and security-configuration changes. Once you've installed it, you'll probably want to tweak some of SP2's new settings, and to know where—tweaked or not—the reinforced OS remains vulnerable.

SP2's most noticeable change to Windows XP is its introduction of a new Security Center Control Panel applet (see **FIGURE 1**). Security Center itself doesn't do much, but it provides a single location where you can view the status of the Windows Firewall (formerly known as Internet Connection Firewall) and of Windows' Automatic Updates service. The utility also tracks if you have an antivirus program installed, running, and updated.

If any of these three key security tools has been disabled or is less than fully functional, Security Center changes their corresponding status lights from green to either red or amber. The program also displays a warning icon in the system tray. A red light means that you should probably take steps to beef up security in the indicated area. An amber light signifies a service that is only partly enabled, or that a third-party product handles.

But even if all your dashboard security lights are green, you aren't necessarily safe. Conversely, certain red or amber conditions—triggered when Windows doesn't recognize your third-party firewall or antivirus program, for example—may be acceptable to you. So how do you disable that pesky tray icon?

Start by opening the Security Center: Choose *Start•Control Panel* and click *Security Center*. Many people will see a bank of green lights, thanks to SP2's more secure default settings. The firewall is now enabled by default for all Internet connections, which is a good thing if you don't have a third-party firewall program. The Automatic Updates feature downloads and installs often-crucial security updates

ILLUS*: JOHN PIRMAN

FIGURE 1: MONITOR WIN XP'S security status and modify settings in SP2's Security Center.

from Microsoft while you're online. Unless you went out of your way to disable it during installation of Service Pack 2, this option will be fully enabled as well. And if you've installed an antivirus program that Microsoft recognizes, you'll get a green light in the virus-protection area.

TWEAK THE FIREWALL

WINDOWS FIREWALL, which is enabled by default, blocks incoming worms, like Blaster, that try to enter your PC through a network connection; but it can't stop malicious apps that are already on your PC from making outgoing connections. You get no protection from viruses, worms, Trojan horses, and spyware that sneak onto your computer via your Web browser, e-mail, or instant messaging program. I recommend using a bidirectional third-party firewall such as Zone Labs' free ZoneAlarm (see "Security Must-Haves" on page 168 for download details). For *PC World*'s most recent review of firewalls, see June's "Bigger Threats, Better Defense" (find.pcworld.com/42886).

Once you've installed a bidirectional firewall, I recommend disabling the Win-

dows Firewall altogether. Occasionally, firewalls obstruct an application you're trying to use over a network connection—and there's nothing more frustrating than spending a half hour tweaking, disabling, and even uninstalling a firewall, only to discover that the other firewall was the culprit. To disable the Windows Firewall in the Security Center, click the *Windows Firewall* link at the bottom of the dialog box, check *Off (not recommended)* in the next window, and click *OK*.

Alas, Windows may not recognize the third-party firewall installed on your PC. (It didn't see my copy of Sygate Personal Firewall, for example.) In such cases, Windows displays the security-warning icon in the system tray. That's no big deal, except that when other security lapses crop up they probably won't come to your attention. To disable the firewall security warning in the Security Center, click *Recommendations* in the Firewall pane, check *I have a firewall solution that I'll monitor myself*, and click *OK* (see **FIGURE 2**). Windows will then switch your firewall status to amber, and stop pestering you with firewall warnings in the system tray.

If Windows fails to recognize your antivirus program, you can easily disable Security Center false alarms: Click *Recommendations* in the Antivirus Protection pane, check *I have an antivirus program that I'll monitor myself*, and click *OK*.

AUTOMATIC UPDATES

IN GENERAL, it's unwise to let your computer automatically connect to the Internet, and then download and install software on its own. After all, that's how

viruses, worms, Trojan horses, and spyware do their dirty work. But the tremendous threat posed by Internet attacks has changed the rules. Because viruses and worms often take advantage of flaws in Windows or its Internet Explorer Web browser, you need to install patches as soon as Microsoft makes them available (the same is true of your antivirus program's signature database files).

For most PC users, enabling Automatic Updates is the way to go. Nevertheless, situations may arise in which the default settings aren't optimal. For example, by default the service downloads and installs updates at 3 a.m., without inquiring into the user's preferences. But if your computer is always asleep or disconnected from the Internet at 3 a.m., you might never get any updates under the default arrangement. And if, like me, you regard Microsoft with less than complete trust, you might want to inspect the updates that are available for downloading before agreeing to install them on your PC.

To change Automatic Updates' set- ▶

FIGURE 2: STOP ANNOYING alerts when SP2 fails to detect other firewall utilities.

FIGURE 3: TWEAK AUTOMATIC updates in Win XP with SP2 to suit your situation.

tings, click the *System* link at the bottom of the Security Center window (or choose *Start•Control Panel*, and click or double-click the *System* icon). Select the *Automatic Updates* tab. To choose a time when you know your PC will be awake and available to download and install updates, select *Automatic (recommended)*, and pick a time from the drop-down list (see **FIGURE 3**). To instruct Windows to download but not automatically install updates until you can inspect them, select *Download updates for me, but let me choose when to install them.*

Finally, if you frequently rely on dial-up or wireless links that aren't suitable for Automatic Updates' sometimes-massive downloads, choose the option labeled *No-*

FIGURE 4: CUSTOMIZE IE'S NEW pop-up blocker to allow desired ones at select sites.

tify me but don't automatically download or install them. This setting gives you the greatest control over updates, enabling you to veto downloading or installing any update. On the other hand, it also increases your risk of getting hit by an exploit that Microsoft has already issued a fix for, so use it with caution. (I can't think of a single good reason to turn off Automatic Updates altogether.) Click *OK* to save your settings.

POP-UPS BEGONE

THE ABILITY to block pop-up browser windows, besides being convenient, can protect you from browser hijacking (where an unscrupulous Web site installs itself as your home page or runs ActiveX programs). Some other browsers, including Mozilla, Netscape, and Opera, have had pop-up blockers for a while. SP2 adds this long-needed feature to IE and activates it by default. (On a related note, SP2 also disables Windows' Messenger service, which formerly allowed spammers and other miscreants to pop up message windows on your Internet-connected PC.)

Though Internet Explorer's newfound pop-up blocking prowess is generally a positive thing, it can cause problems when you visit Web sites that use subsidiary, pop-up style windows for logging in, completing surveys, displaying videos, or performing other special tasks. If you discover that your favorite site doesn't work as expected after you've installed SP2, don't get too upset.

First, to test whether IE's pop-up blocker is responsible, disable it by choosing *Tools• Pop-up Blocker•Turn off Pop-up Blocker.* If that tactic solves the problem, you can instruct IE not to block pop-ups from that one site. To do so, first copy the site's address in IE's Address field (click the address to select it, and then press **<Ctrl>-C**). Choose *Tools• Pop-up Blocker• Pop-up Blocker Settings*, press **<Ctrl>-V** to paste the address into the 'Address of Web site to allow' field, and click *Add* (see **FIGURE 4**). Alternatively, you can type addresses directly into the field, if you prefer.

SP2 introduces a related security feature in the Outlook Express e-mail pro-

Security Must-Haves

WINDOWS XP MAY BE getting safer with SP2, but it's still a good idea to download and install the latest versions of the following free (and excellent) utilities to plug remaining security gaps.

ZoneAlarm 5: Despite Microsoft's efforts to beef up security in Windows, the operating system's built-in firewall can't block outgoing traffic, including the dastardly activities of worms, backdoor programs, and other menaces to your privacy and online security. Zone Labs' $40 ZoneAlarm Pro recently received a *PC World* Best Buy, but you don't need to spend a dime to get its essential features. The free version of ZoneAlarm omits Pro's pop-up blocker and e-mail virus filter, but none of its top-notch firewall capabilities. 5.6MB; find.pcworld.com/42946

Spybot Search & Destroy 1.3: Patrick M. Kolla's indispensable tool for detecting and removing spyware and adware is now better than ever. The latest version significantly improves Spybot's real-time spyware scanner, blocks unsafe downloads in Internet Explorer, and preserves Windows system settings from spyware and adware attacks. 4.15MB; find.pcworld.com/42654

gram. To block the tiny invisible images called Web bugs that sites use to identify you online, Outlook Express by default now blocks downloads of any external images referenced in HTML messages. If you receive one of those slick-looking e-mail newsletters, it may not look so slick after you've installed SP2.

To re-enable the display of these image links in e-mail messages (and risk having your e-mail newsletter–reading habits monitored by the newsletter's publisher), choose *Tools•Options•Security*, uncheck *Block images and other external content in HTML e-mail*, and click *OK*. ∎

Send your questions and tips to nettips@ spanbauer.com. We pay $50 for published items. Go to find.pcworld.com/31523 for more Internet Tips. Scott Spanbauer is a contributing editor for PC World.

WINDOWS TIPS

SCOTT DUNN

THE FAST LANE TO YOUR FILE PATHS   **GIVE YOUR START MENU MORE ZING**   **SHUT DOWN APPS WITH ONE CLICK**

Toggle Your Screen Saver With a Single Click

WHEN I EDIT and burn my own DVDs, it's bothersome to navigate to my Display Properties dialog box repeatedly to switch my screen saver off so I don't end up with just a nice coaster. Deactivating my screen saver takes no fewer than four clicks. That may not seem like a lot, but it's a hassle to deactivate and restore all the time. Is there a way to create a desktop icon to toggle the screen saver on and off?

Jeffrey McCullough, Baltimore

IT'S HELPFUL TO turn off a screen saver before burning CDs or DVDs, running backup software, defragmenting a drive, or performing other PC activities. Unfortunately, Windows makes doing so unduly difficult. But you can create shortcuts for this purpose that you can access with a single click or keystroke combination.

First, create a Registry file that turns off your screen saver. Choose *Start•Programs* (or *All Programs*)•*Accessories•Notepad*. On the first line, type **Windows Registry Editor Version 5.00** and press **<Enter>** twice to add a line break. Then type **[HKEY_CURRENT_USER\Control Panel\Desktop]** and press **<Enter>**. Finally, type **"ScreenSaveActive"="0"** and press **<Enter>** (see **FIGURE 1**).
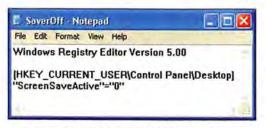
FIGURE 1: DISABLE YOUR SCREEN SAVER with a single click by using this custom Registry file.
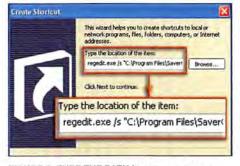
FIGURE 2: TYPE THE PATH to your new screen-saver Registry file in the Create Shortcut Wizard.

Choose *File•Save As* and navigate to a convenient location (write down the path to the file; you'll need to know it later). Type a name like **SaverOff.reg** (be sure to include the three-letter file extension) and click *Save*. Now change the '0' to **1** and select *File•Save As* again. This time, type a name like **SaverOn.reg** and click *Save*.

The next step is to create two shortcuts that each merge one of these Registry files into the Windows Registry. Right-click the desktop and choose *New•Shortcut*. In the box, type **regedit /s** followed by a space. After the space, type **SaverOff.reg** preceded by the path to the file (see **FIGURE 2**). Note that the next tip describes a quick and easy way to add the file path without typing. Click *Next* and type a name for your shortcut—something like **Turn Off Screen Saver**. Click *Finish*. Finally, repeat these steps, but use the path to SaverOn.reg and give it a name such as **Turn On Screen Saver**.

At this point you have two desktop shortcuts—one for deactivating your screen saver and the other for activating it. To disable the screen saver, just launch your *Turn Off Screen Saver* icon. To enable it again, run the other shortcut.

Finding the desktop shortcuts could slow you down as you minimize windows (press **<Win>-D** to minimize everything, or click the Show Desktop icon in the Quick Launch toolbar). To activate the shortcuts via your keyboard, right-click the *Turn Off Screen Saver* shortcut and choose *Properties*. With the Shortcut tab in front, click in the *Shortcut key* box and press the key combination you want to use to turn off your screen saver. You can press a single function key (like <F2>), but it's better to use a key or key combination that you will not need in another application. You can select almost any key on your keyboard for this purpose, but if you choose something other than function keys, your shortcut must begin with **<Ctrl>-<Alt>**, **<Ctrl>-<Shift>**, **<Shift>-<Alt>**, or **<Ctrl>-<Shift>-<Alt>**.

While you're in the shortcut's Properties dialog box, you may want to use the *Change Icon* button to give the shortcut a distinctive appearance. Type **%windir%\system32\shell32.dll** in the box at the top to see a large number of icons to choose from (see **FIGURE 3**). Once you've made your selection, click *OK* to close the Properties box for the shortcut icon. Repeat these steps for the other screen-saver shortcut, giving it a different key combination. You'll press one combi-

FIGURE 3: PICK AN ICON for your screen-saver shortcuts in the Change Icon dialog.

nation to turn the screen saver off, and the other to turn it back on. After you're done, you can place these shortcuts in any subfolder of the Start Menu folder.

You can disable or enable your screen saver with a single click of your mouse if you add the shortcuts to your Quick Launch toolbar (see **FIGURE 4**). If you don't

FIGURE 4: YOUR SHORTCUTS work with one click when put on the Quick Launch toolbar.

see this toolbar on your taskbar, right-click the taskbar and choose *Toolbars• Quick Launch*. Select both of the shortcut icons you created, click and hold down the right mouse button as you drag them
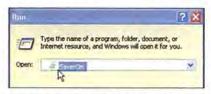
FIGURE 5: INSTANTLY COPY the path to any file by dragging its icon to the Run text box.

to the Quick Launch area, release the button, and choose *Move Here*. If you don't see the shortcuts, you may need to drag the border of the Quick Launch toolbar to make it larger. If the toolbar border does not budge (in Windows XP only), right-click the taskbar and choose *Lock the Taskbar* to unlock it. Resize your toolbars, and then repeat the command to relock it.

NO-FUSS FILE PATHS

Windows ME 98 XP 2K WHETHER YOU'RE creating a batch file or sending an e-mail message telling someone on your network how to find a certain file, typing a file path can be a pain. And if you mistype, you might not discover the mistake until something goes wrong.

To make Windows do the typing for you, start by locating the icon for the file whose path you need to know. Next, select *Start• Run* or press **<Win>-R**. Press **<Delete>** or **<Backspace>** to remove the text in the Run dialog box. Drag the file icon to the text box in the Run dialog box (see **FIGURE 5**). Voilà! The entire path appears in the

text box. Windows even adds quotation marks for paths that need them. Right-click the path, choose *Select All*, right-click again, and choose *Copy*—and you're ready to paste the path wherever you need it.

A SNAPPIER START MENU

Windows ME 98 XP 2K IF YOUR Start menus appear tardily, you might be able to speed them up by editing the Windows Registry. Choose *Start• Run*, type **regedit**, and press **<Enter>**. Navigate in the left pane to *HKEY_CURRENT_USER\ Control Panel\Desktop*. With the Desktop icon selected on the left, right-click and choose *Export*. Pick a spot for your Registry key backup, give the file a name like 'Registry Desktop Backup', and click *Save*.

Now choose *MenuShowDelay* in the right pane. If you don't see it, right-click in the right pane, choose *New• String Value*, type **MenuShowDelay**, and press **<Enter>**. Double-click the icon, change its 'Value data' setting (the default is 400) to something smaller, even 0, and click *OK*.

There's yet another way for you to goose your menus in Windows XP: Right-click the desktop, choose *Properties• Appearance• Effects*, uncheck *Show shadows under menus*, and then click *OK* twice.

LET THE GOOD TIMES SCROLL

Windows • • XP 2K YOU CAN DRAG the scroll box (the little elevator car in the shaft of the scroll bar on the right side of many application windows) to move through a document. You can also click above or below the box to advance or back up one screen at a time, or move through the file incrementally by clicking the arrows at the top or bottom of the bar.

New versions of Internet Explorer, Notepad, Windows Explorer, and other apps add more scroll-bar tricks. To get to the middle of a long document, Web page, or file list, position your pointer in the middle of the scroll bar, right click, and choose *Scroll Here*. The right-click menu has commands for jumping to the

FIGURE 6: SCROLL easy via the right-click options.

Close or Minimize Windows With a Single Keystroke

IF YOU SPEND WAY too much time positioning your pointer over the little Close or Minimize buttons in your open windows, or futzing with keyboard shortcuts like <Alt>-<F4>, try EscapeClose. This dandy piece of freeware can turn your keyboard's <Esc> key into an instant shutdown button that works with most applications. It can also turn the ~ (tilde) key into a minimize button for moving the currently open window to the taskbar. If

using these keys for windows management makes you nervous, EscapeClose has a safer mode in which the <Esc> key just moves the pointer to the window's close or minimize button, creating a two-step escape (<Esc>, click). EscapeClose is free, but for more windows-management options, spend $15 and get EscapeClose Pro. Visit find.pcworld.com/43034 to download the free version.

top or bottom of a file as well (see **FIGURE 6**). The Page Up, Page Down, Scroll Up, Scroll Down commands are less helpful since they require two clicks for actions you can already accomplish with one. Note that Word-pad doesn't use this Windows feature, nor do Microsoft Word and Excel prior to version 2003. ■

Send Windows-related questions to scott_dunn@pcworld. com. We pay $50 for published items. See find.pcworld. com/31607 for more Windows Tips. Scott Dunn is a PC World contributing editor.

HARDWARE TIPS

KIRK STEERS

LAPTOP POWER CONSERVATION   **MORE ON SERIAL ATA POWER CABLES**   **CHECK BACKUP DISCS FOR ERRORS**

Maximize the Power From Your Notebook's Battery

SOONER OR LATER, every laptop owner asks the same question: How long will my battery last? For most people, sadly, the answer is the same: not long enough. But there are plenty of things you can do to get every last minute of power out of your notebook's battery.

Use power management: Judicious use of your notebook's power-management software can translate into many minutes of extra computing time. If your notebook comes with a power console applet that lets you create customized power profiles, use it to adjust the settings until you get the right mix of functions and battery life. If your laptop doesn't have such a program supplied by the notebook vendor, use Windows' perfectly adequate Power Options utility in Control Panel (it's called Power Management in Windows 98).

Dimmer is a winner: A big laptop energy sink is its LCD screen. Reducing the

screen's brightness conserves battery life. For example, when I work on a red-eye flight, I can squeeze up to 45 additional minutes out my Sony VAIO notebook by toning down the screen brightness. Most notebooks have an easy-to-access keystroke sequence, function (Fn) key, or software utility for adjusting this variable.

If a dim screen is good for battery life, a blank one is better. Windows' Power Options/Power Management utility lets you tell your notebook how long to wait before blanking the screen. In Windows XP and 2000, open Control Panel, select *Performance and Maintenance* (if you're in Category view), and click or double-click *Power Options*. In Windows 98, open Control Panel and double-click *Power Management*. On the Power Schemes tab, choose *Portable/Laptop* in the 'Power schemes' drop-down menu. In the menu next to 'Turn off monitor', choose the length of time the screen can sit idle before it goes blank (see **FIGURE 1**). The shorter the interval, the more power you'll save. The shortest option, 'After 1 min', may drive you nuts, however.

The Power Options and Power Management programs have settings for your notebook's other big power glutton—the hard drive—as well. Once again, you'll need to find the setting that works best for you. Remember to reduce the frequency of auto saves in PIMs, word processors, and other software; your hard drive may otherwise lose power-saving sleep.

Go unplugged: Remove PC Cards and USB or FireWire devices that you don't need.

If your PC has a built-in wireless card, turn it off or disable it when not in use.

Make like a bear: Most PCs have Hibernate and Suspend modes that are easy to activate from the keyboard. Check your notebook's documentation for its setting. Suspend (also called Stand By mode) typically holds your current information in RAM with a minimum of power, so the system comes back to life quickly. Hibernate writes everything to disk and shuts off, so it saves more power than Suspend, although it also makes reactivating your PC take longer. Still, awakening a hibernating system is much faster than cold-booting one that has been turned off.

Lean is green: To keep your laptop's CPU from doing unnecessary work, shut down any hardware or software you don't need. Check the icons in your system tray (on

FIGURE 1: USE WINDOWS' POWER options to set your screen to shut down frequently.

the bottom right near the clock); there's a good chance you can shut most of these down, though they will likely restart the next time Windows loads. Browse to find.pcworld.com/43266 and scroll down to "Stop Autostart Apps" for instructions from last June's *Windows Tips* column on how to disable programs that start automatically with Windows.

To track the effect that different programs have on the CPU in Windows 2000 and XP, press **<Ctrl>-<Alt>-<Delete>** to open the Task Manager. Select the *Performance* tab to see a handy graph of CPU usage (see **FIGURE 2**). In Windows 98 and Me, this information resides in System Moni-

BACK UP YOUR BACKUP

IF YOU STORE CRITICAL backups on CD-ROM discs, try out CDCheck, an error-checking and data-recovery utility that's free for consumers. The program creates error-checking files for a CD, stores them on your hard drive, and then lets you compare these files with those kept on your backup CD to ensure that the disc is still readable. If CDCheck finds evidence of CD damage or corrupted data, it may be able to recover the lost files. Browse to find.pcworld.com/43062 to download the program.

FIGURE 2: MONITOR CPU USAGE via the Performance tab in Windows' Task Manager.

tor: Click *Start•Programs•Accessories•System Tools•System Monitor* to open it.

Disable devices you don't need that may draw a small amount of power when on but not in use. For instance, if you're on a long flight, you probably won't use your modem, your network card, your parallel and serial ports, and possibly your DVD or CD-ROM drive. You can easily disable all of these in Device Manager. To open Device Manager in Windows 98 and Me, right-click *My Computer* and choose *Properties•Device Manager*. In Windows 2000 and XP, right-click *My Computer* and select *Properties•Hardware•Device Manager*. To disable a device, right-click its listing under the appropriate category and choose *Disable* (see **FIGURE 3**).

FIGURE 3: SAVE NOTEBOOK battery life by temporarily disabling devices you don't need.

If you'll be disabling devices regularly, save time by creating a Windows hardware profile. See Steve Bass's "Who Knew Your PC Could Do That?"(find.pcworld.com/43054) for instructions on how to create profiles in all versions of Windows. **Improve your memory:** Adding more memory to your laptop saves power by reducing Windows' reliance on the virtual memory swap file on your hard disk.

Rub it down: Clean your battery's metal contacts every couple of months with a cloth moistened with rubbing alcohol.

Carry a spare: Purchase an extra battery pack, if you can afford it. Expect to pay $85 to $235, but shop around for bargains. Battery-vendor Web sites and EBay are good places to start your search.

If you can splurge a bit, you'll get up to three times your current battery life with the MaxPower 60 Powerpack battery from Lind Electronics (www.lindelectronics.com). The 3-pound MaxPower 60 is only 0.5 inches thick and about the same width and length as a standard laptop.

Charge frequently: Carry a battery charger/AC adapter with you on the road, and plug it in whenever you get the opportunity. If the power adapter that came with your notebook is too bulky, check out the line of universal power adapters offered by Belkin (www.belkin.com) and Targus (www.targus.com). The adapters are thin and light, and the Targus model doubles as a charger for your cell phone.

For road warriors and frequent fliers, Targus and Belkin offer power adapters that plug into 12-volt outlets, such as car lighters. Browse to find.pcworld.com/43056 to see Targus's list of airlines that offer power connections.

In lieu of a 12-volt adapter, you can use a DC-to-AC converter such as Belkin's $30 ACAnywhere to plug an AC power adapter directly into a 12-volt outlet. ACAnywhere can run any AC device at up to 140 watts of power.

Drain it: If you have an old laptop that uses a nickel–metal hydride battery, completely drain and recharge the battery once a month to maximize its capacity to hold a charge. Most new laptops use standard lithium ion batteries that need not be drained to maximize their chargeability.

If you're in the market for a laptop, you'll get the best battery life from systems that are based on Intel's Centrino platform. As with any new technology, however, check the *PC World* review before you buy. Graphics chips, peripheral interconnects, and many other factors can influence notebook battery life. Real-world results may not mirror the vendor's performance claims.

POWER PITFALL

I READ YOUR article "Get the Hard Drive That's Right for You and Your PC" [*Hardware Tips,* June, find.pcworld.com/43060] and was shocked at some of the details you left out. First, you need a power supply that also has a Serial ATA power connector. The SATA power connection is not the same as the standard Molex connection used on a standard IDE drive. An adapter to convert the standard cable to SATA costs only about $2. In addition, you mention that the IDE ribbon cables take up a lot of room. In my PC I use "rounded" IDE cables. They don't use much more room than the SATA cable does.

Dominick Meglio, via the Internet

BOTH ARE VERY good points. Power supplies with SATA-compatible connectors have been in short supply in the past, but they're quickly becoming much easier to find. And as Meglio says, a SATA power adapter is cheap and readily available. If you buy a new power supply with a SATA connector, or a new PC that has a new power supply, find one that supports 12 volts, 5 volts, and 3.3 volts. Many systems support only 12V and 5V, which is fine for today's SATA hard drives but may not support future hard-drive designs.

If you're building a PC or if your current machine has problems with case overheating, rounded IDE cables are definitely worth using. They're available at computer stores and online for less than $10. On the other hand, if your system ain't broke, don't fix it. ∎

SECURITY TIPS

ANDREW BRANDT

Keep Viruses, Worms, and Spyware Off Your PC

IT'S 2004: COMPUTER viruses, worms, Trojan horses, and spyware applications are flooding the world's networks. You're nuts to use a PC without an antivirus tool, but that alone isn't enough. Antivirus programs can't detect a new virus until it is already on the loose. That leaves your system vulnerable for the hours or even days it takes your antivirus vendor to deliver an update. Fortunately, you can help stop the nastiest viruses in their tracks—even before anyone knows about them.

Patch that system, private! It's time to bust out the old drill-sergeant voice, because anyone who doesn't follow this simple instruction is going to have to drop and give me 50 knuckle push-ups. Okay,

FIGURE 1: KEEP WEB PAGES from loading dangerous scripts via these settings in IE.

everyone repeat after me, "Unpatched systems are the devil's spawn."

Enable Automatic Updates: In Windows XP, right-click *My Computer*, choose *Properties•Automatic Updates*, and make sure that 'Keep my computer up to date' is checked. (See this month's *Internet Tips*

on page 166 for more on Automatic Updates.) Once a month (preferably just after Microsoft announces its latest security fixes), visit windowsupdate.microsoft. com, let the site scan your system, and then download anything labeled 'Critical'. Every month, no exceptions—got it?

Turn off scripting behaviors in Internet Explorer: Many worms and viruses spread through Web page scripts (commands in the page that push the worm out to anyone who opens it in IE). Other browsers don't have this problem, but if you can't or simply won't change to Opera, Mozilla, or another browser, you must alter IE's scripting settings to block the threat.

In IE, click *Tools•Internet Options•Security*. Choose the Earth icon under 'Select a Web content zone', and click *Custom Level*. The settings in the dialog have three options: Disable, Enable, and Prompt. Enabling everything is asking for trouble, but being prompted every time a script or ActiveX control wants to run will drive you batty. In any event, disable 'Download unsigned ActiveX controls', 'Initialize and script ActiveX controls not marked as safe', 'Active scripting', and 'Scripting of Java applets' (see **FIGURE 1**). Set 'Java permissions' to *High Safety*.

With scripts disabled, many of your favorite Web sites may not open. Also, your company intranet or Web mail service may require scripting. If so, add the URLs for these sites and services to IE's Trusted Sites list. Open IE and click *Tools•Internet Options•Security*. Select the *Trusted Sites* icon, click *Sites*, and then enter the URLs one at a time. Uncheck *Require server verification (https:) for all sites in this zone*, and click *OK* (see **FIGURE 2**).

Control what starts up with Windows: Many worms place a reference to themselves in a portion of the Windows Registry that defines what programs start up with Windows. The TeaTimer applet that comes bundled with Spybot Search & Destroy 1.3 (find.pcworld.com/42746) and with Win-Patrol (find.pcworld.com/39776) can control what gets added to this list. TeaTimer asks you to verify any program that seeks to be added to that list. Spybot and Win-Patrol are free, so why not use both?

Use a software and a hardware firewall: If you have broadband Internet service—even if you have Zone Labs' free Zone-Alarm or some other software firewall

FIGURE 2: UNCHECK SERVER verification to allow scripting in only the sites you pick.

active on your PC—you can't be too safe. Belkin, D-Link, Linksys, and other vendors sell inexpensive broadband gateways that bounce back worm attacks that otherwise would reach your computer. ■

Andrew Brandt is a senior associate editor for PC World *and the author of the monthly* Privacy Watch *column.*

PROACTIVE MALWARE PREVENTION WITH QWIK-FIX

IN EARLY TESTS, PivX's Qwik-Fix Pro (find.pcworld.com/43092) was successful in preventing malicious scripted Web pages from forcing Internet Explorer to load worms or spyware. The tool provides stopgap protection so that your system doesn't get infected while you're trying to download patches. Qwik-Fix Pro is free for noncommercial use, and businesses should be able to buy the corporate version by the time you read this.

ANSWER LINE

LINCOLN SPECTOR

How Do I Share a Printer on My Small Network?

WHAT'S THE BEST way to share a printer between two or more computers on a home network?

Alex Jennings, Pasadena, California

THE EASIEST and cheapest way is to connect the printer to one PC and allow the other systems on the network to print through that computer. Unfortunately, however, to permit users to print from any other machine on the network, the host computer (the one that has the printer plugged into it) must be powered on.

FIGURE 1: ZONET'S 1-PORT PRINT Server makes it easy to allow two PCs to share a single printer.

A print server solves that problem. But first, I'll describe how to share a printer that's attached to one computer.

Open Control Panel on the host PC: In Windows XP, select *Start•Control Panel•Printers and Other Hardware•View installed printers or fax printers* (if you have Control Panel in Classic view rather than in Category view, click *Start•Control Panel•Printers and Faxes*). In Windows 98, Me, and 2000, choose *Start•Settings•Printers*. In the Printers window, right-click the printer in question and select *Sharing*. Fill in the dialog box and click *OK*.

Now open Control Panel's Printers applet on the other PCs and select *Add a printer* (XP) or *Add Printer* (98, Me, and 2000). Follow the instructions in the Add Printer Wizard, making the appropriate choices for your network printer.

If you get tired of booting two PCs just to print, you may be ready for a print server, which links your printer directly to your network (see **FIGURE 1**). A stand-alone print server costs $40 to $45. If you're in the market for a network router anyway, consider buying one that has a built-in print server. Such models cost about $20 more than otherwise equivalent routers, so you'll save money and have one less AC adapter to deal with.

You can buy either a parallel or a USB print server, but I recommend that you choose a parallel model because USB print servers tend to encounter compatibility problems more frequently. If your printer lacks a parallel port, make sure that the USB print server you buy supports your printer. There should be a list of supported printers on the server manufacturer's Web site.

CUSTOM RIGHT-CLICK MENUS

HOW CAN I ADD an option to the context menu that pops up when I right-click a file?

Jolly Hansen, Phoenix

IF YOU WANT TO add an option for a specific file type, such as .doc or .zip files, open Windows Explorer and select *Tools•Folder Options* (*View•Folder Options* in Windows 98). Click the *File Types* tab. Scroll down the 'Registered file types' list

to the appropriate type. Select it and click the *Advanced* button (*Edit* in Windows 98). In the Edit File Type dialog box, click *New*. In the Action field, enter a name for the option; this will become the text you see and select when you right-click a file. In the 'Application used...' field, enter the path and file name to the program that you might want to use to load the file—or click *Browse* to find and select the program. For folders, use the instructions given above, but for file type, select *File Folder* (the extension is '(NONE)').

To add an option for every file's context menu, put an appropriate shortcut inside your SendTo folder. First, select *Start•Run*. In Windows 2000, type **"c:\documents and settings*yourname*\sendto"** (where *yourname* is the name you use to log on; be sure to include the quotation marks). In Windows 98, Me, or XP, just type **sendto** in the Run dialog box. Then press **<Enter>**. To launch the Create Shortcut wizard, right-click a blank spot inside the SendTo folder and choose *New•Shortcut*. Your added shortcuts will appear as options in the context menu's SendTo submenu. ■

Send your questions to answer@pcworld. com. Answer Line *pays $50 for published items. See* find.pcworld.com/31577 *for more* Answer Line *columns. You'll find Contributing Editor Lincoln Spector's humorous and other writings at* www.thelinkinspector.com.

SORT IE FAVORITES, PART II

LAST JUNE I told you how to sort your Internet Explorer Favorites menu by right-clicking an item and selecting *Sort by Name* (see find.pcworld.com/43090). The problem with this technique is that you must repeat it for each submenu. I have since discovered a way to sort the Favorites menu and its submenus at one go. Select *Start•Run*, type regedit, and press <Enter>. Navigate the left pane to HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Explorer\MenuOrder\Favorites. Once there, delete the Order value in the right pane. Exit and reenter Internet Explorer. Now your Favorites menu and submenus will be alphabetized by name.

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INDEX

Your Take on Windows' Worst Irritations

WINDOWS ANNOYANCES? Readers, you've seen plenty. Back in the June issue (find.pcworld.com/43828), I mentioned several personal pet peeves and urged you to name yours—in the interest of alerting Jim Allchin, the man in charge of the forthcoming "Longhorn" Windows upgrade.

You responded in force. And in this special annoyances issue, I'm reporting back.

One group of gripes fell in a category I call "Why can't Windows do windows?" How come it forgets the window positions and sizes you like for your favorite programs? How come it insists on displaying icons when you've specified the Details view, or arranging lists by name when you've requested sorting by date?

Of course, insecurity is a huge annoyance. Bob Stearns of Miami says his copy of XP resembles "an inner tube with so many patches and hot fixes that the original rubber is barely visible." Many readers squawked about Windows Update's flakiness and its reliance on the ever-insecure Internet Explorer. Dial-up users urged that patches be smaller, and transferrable via disk from PCs with fast connections. Readers also pointed out missing security measures, such as a system-level way to truly destroy data when "deleting" it. Oh yeah, reliability seems to be missing too; the Blue Screen of Death is not dead.

Other issues stemmed from XP's refusal to give you total control over what gets installed. Readers blasted the Registry, the need to edit it, and the lameness of XP's Regedit tool. All this underpinned another common complaint: the inability to easily move programs, not just settings and files, from an old PC to a new one.

More pointed questions: Why doesn't Windows have a better emergency repair tool? Why aren't the system settings all in one place? Why does each Windows upgrade disable still-serviceable peripherals?

Other Win XP beefs? Price (high).

Boy, did you tell us how you *really* feel about Windows XP!

Product activation (obnoxious). Error messages and help (unhelpful).

You also want fewer services enabled by default and faster startup and shutdown. And as Carleton Eastlake of Beverly Hills, California, says, Windows "should tell us when it has actually, honestly, completely finished loading all startup programs."

I also urged you to weigh in on two of my personal gripes: the doggie in XP's search function, and the idea that Longhorn might kill the "Classic" interface that's been around since Windows 95.

Did you ever! Although 16 dog-lovers thought I was being unfair to man's best friend, more than 170 of you urged the pup's demise. Many pushed for major upgrades to the lousy search system as well. And support technician "LanMan" in North Carolina rued being dispatched to help a user who complained that the doggie wouldn't bark.
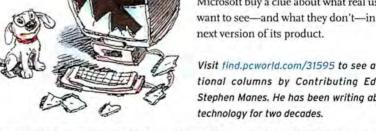
As for Classic View, more than 700 of you demanded its survival—as opposed to 3 who liked the new Windows XP look. Many complained about XP's "Fisher-Price interface" and noted that the first thing they do on any XP machine is switch back to Classic View. I wholeheartedly agree.

As promised, I'm forwarding all this mail to Mr. Allchin. Maybe it will help Microsoft buy a clue about what real users want to see—and what they don't—in the next version of its product. ∎

Visit find.pcworld.com/31595 to see additional columns by Contributing Editor Stephen Manes. He has been writing about technology for two decades.

ILLUSTRATION JOHN CUNEO

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