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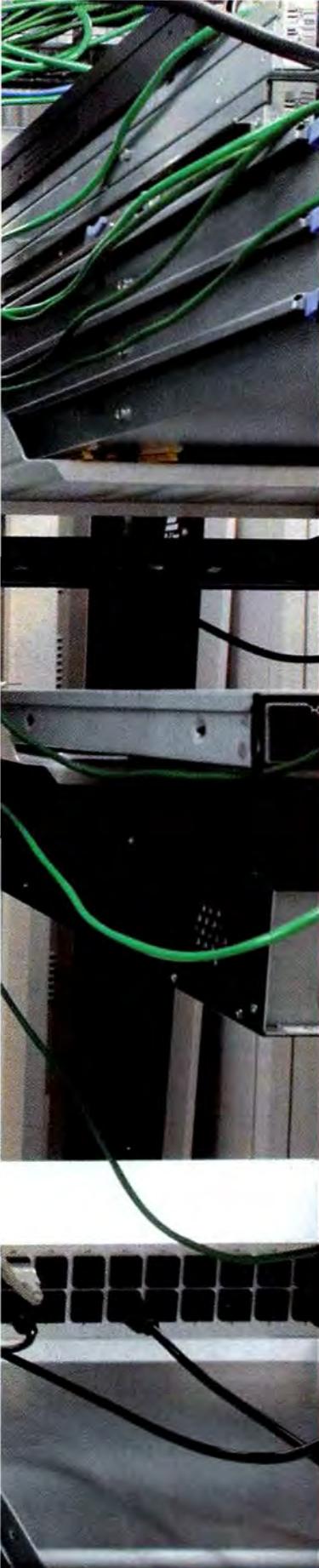
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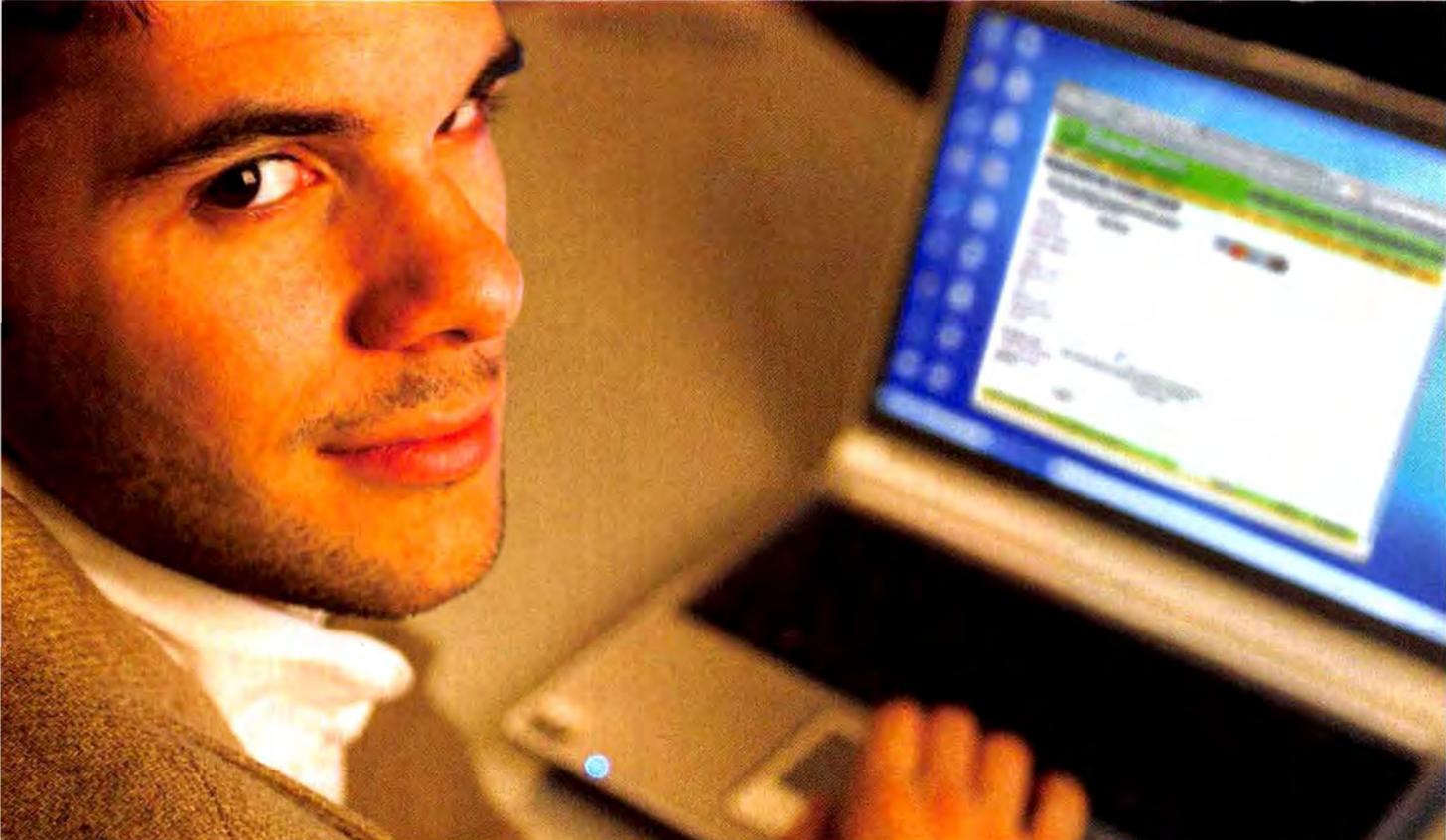
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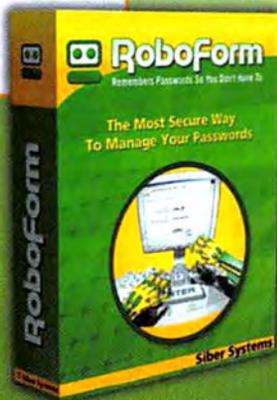
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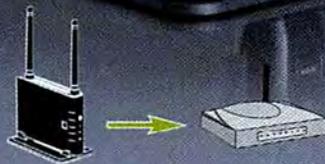
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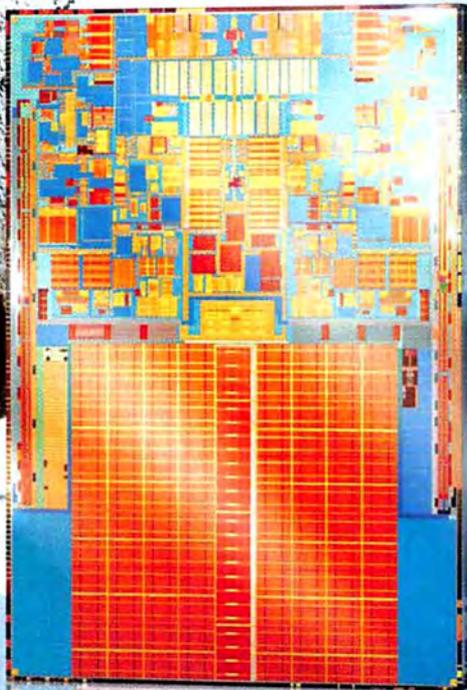


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XP vs. Vista: May the Best Windows Win

"IT'S ONE OF THE most stable operating systems that I have ever dealt with." "It boots up faster." "It works well with many, many applications." "It is simply the most user-friendly operating system to date."

Those are the words of a few of the nearly 3500 technology users who participated in a recent PC World survey. But the product they're raving about isn't Windows Vista or Mac OS X 10.5 or a new version of Linux. Instead, it's a six-year-old throwback that's about to suffer the saddest fate that can befall a technology product: Its creator is pulling it off the market.

The platform in question is Windows XP, which means that the creator is Microsoft. And a whole lot of people are anything but grunted about the company's plans to end all retail and PC OEM sales of XP on June 30, thereby making it pretty certain that the next Windows PC you buy will run Vista. Two-thirds of the folks who took part in our survey said that they were very unhappy about the news; 79 percent said that given a choice, they would opt for XP.

Our survey was inspired by a new community site from our colleagues at InfoWorld called SaveXP.com. To date, almost 100,000 folks have added their

Microsoft thinks your next PC should run Windows Vista. If you'd rather have the freedom to choose, you've got lots of company.

names to the online petition there, urging Microsoft to reconsider its decision to discontinue Windows XP.

Why the outburst of affection for an aging operating system? The quotes I began this column with neatly summarize why many people have no desire to ditch XP. Assuming that you're running an up-to-date copy with Service Pack 2, it's a remarkably mature, predictable product. And implicit in all of that XP love is another sentiment: Plenty of people see no compelling reason to adopt Vista. In fact, some respondents who have used Vista told us about problems they'd had, ranging from sluggish performance to software and hardware incompatibilities. They also said the new Windows is short on knockout features. (For more survey results, see find.pcworld.com/60089.)

It's not just survey takers and petition signers who are less than smitten with Vista. Consider the millions of people who visit PCWorld.com each month. As I write this, around 71 percent of them do so on PCs that run XP, versus just 17 percent who use Vista. Back in late 2002, when it was as new as Vista is

today, XP had been adopted by 33 percent of site visitors—or about twice the percentage who now use Vista.

Like every OS, Vista remains a work in progress. As application and driver updates arrive, the compatibility situation is improving, and the new Vista Service Pack 1 addresses some speed issues (see page 18). But SP1 adds no new features; I have a sneaking suspicion that many users will continue to resist Vista unless Microsoft beefs it up with at least a few additions that make it a tangible advance over XP.

For now, there's an easy fix that the company could make: Listen to those 92,439 SaveXP.com petitioners and keep both Windows XP and Vista on the market for the foreseeable future. Regardless of which version of the OS a particular customer opted for, the world's biggest software company would ring up a sale—and no one could fairly accuse it of forcing Vista on an unenthusiastic marketplace. ●

Contact Editor in Chief Harry McCracken at harry_mccracken@pcworld.com; read his blog at blogs.pcworld.com/techlog.

IN MEMORIAM: ULRIKE DIEHLMANN

YOU PROBABLY DIDN'T know Uli Diehlmann—and unless you're an avid reader of magazine mastheads, even her name is likely unfamiliar. But if you're reading these words, chances are that you're one of the millions of technology users who owes a little debt of gratitude to our longtime Test Center Director, who passed away in January after a long battle with cancer.



A German native, Uli joined the PC World Test Center as a performance analyst shortly after the lab's 1992 founding. She was

part of the team that rolled out ambitious efforts such as World-Bench, our PC speed benchmark. And when Uli was named Test Center Director in 2000, in an era in which our coverage expanded to include everything from cell phones to HDTVs, she ensured that our tests remained clear, useful, and utterly objective.

Those of us who worked with Uli knew we were lucky to have her as a devoted coworker and a warm, witty friend. As long as there's a PCW, we'll honor her memory in a way we know would please her: by continuing her legacy of dedication to lab-based tests that help people find good products and avoid bad ones.

For more on Uli Diehlmann's life and career, read our online tribute at find.pcworld.com/60078.

Toshiba recommends Windows Vista® Home Premium

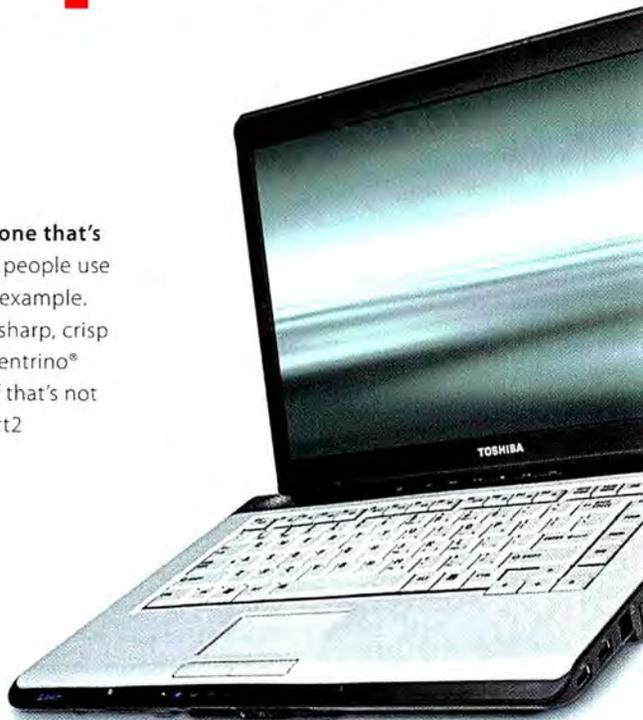


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PCW Forum



When Steve Jobs announced the MacBook Air in January, our forums really heated up. Some people think it's a great niche machine; others say it's woefully underpowered and overpriced. Tell us your opinion of the MacBook Air at find.pcworld.com/60039. See also *Forward*, page 21.

it, and so on. I love new technology, but there is something to be said for the feel of a book in your hand and not looking at a screen all the time. Of course, at about \$100, such a cool new gadget might be what I really want.

*Cindi VanWingerden
Huntersville, North Carolina*

Protesting eBay's Price Hike

The primary problem with eBay's new policies [find.pcworld.com/60043] is the feedback system. This is an abandonment of eBay's community values.

amodernguy, from the PC World forums

The little buyers and sellers who came together in the beginning are being shoved aside and discriminated against in favor of fewer, high-volume sellers who can monopolize their niche.

horsemama, from the PC World forums

MacBook Air Mania

The new MacBook Air commercial had me sold. But Greenpeace's applauding Apple for the Air [find.pcworld.com/60033] puts me over the top. It's about time that Apple went "green."

Applefan, from the PC World forums

The Mac faithful will love [the Air]. The press will ogle it. After using it for a while, anyone who wants to do real work will hate it.

Green, from the PC World forums

If the performance of this particular notebook is less than its earlier counterparts, then, apart from its aesthetics (being thin and lightweight), why pay almost two or three times what you would for something cheaper and faster? The argument that it's only for word processing, surfing the Net, and other "simple" tasks merely reinforces the fact that this machine is overpriced for its intended purpose.

DJTama, from the PC World forums

I find it humorous that people are concerned with what the MacBook Air is missing. I recall the same arguments and concerns when Apple removed the floppy drive from its systems. Nobody

is going to care about the omission of an optical drive. As for the battery, I seem to recall the same complaint about the iPhone... Of course, that hasn't seemed to hurt its sales.

Patspeak, from the PC World forums

As an eager potential client and owner of 15 Macs, I am sorely disappointed in this new Macbook Air. It is way overrated and lacks basic features for a highly mobile business owner.

Leemerchant, from the PC World forums

Amazon's Kindle

Regarding "Amazon Kindles Interest in E-Books" [*Reviews and Rankings*, February]: I would be very surprised if the Kindle becomes successful at its \$399 price. Convenient? Perhaps, but it seems pretty limited. I would much rather spend \$10 (the cost of a *New York Times* bestseller on Kindle) on a real book and not worry about getting the device wet at the beach, dropping

Constantly reminding others of basic security measures may be tiring, but it's necessary.

*datasecman2001,
from the PC World forums*

Future technological innovation depends on two things: (1) Can corporations make a huge profit out of the new technologies? (2) Can politicians benefit from them?

drrex, from the PC World forums

Reliable, and Obsolete

To Stephen Manes: Your "It's Reliable! It's Also Obsolete!" column [*Full Disclosure*, February] was very interesting. A number of months ago, I fired up our ancient Apple IIe. I had forgotten how slick it was: Hit the power button, and in less than 1 second it's ready to go—no hard drive! You load only the programs that you want to load when you want to load them. It may be impractical now, but I love the concept.

Ron Brey, Rockford, Illinois

How to Buy an HDTV

In response to Becky Waring's "Ten Things to Do When You're Ready to Buy an HDTV" [*Consumer Watch*,



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PCW Forum

January]: I own an electronics store, and have been in this industry for 25 years. To tell people to go into a specialty store like mine is great—except that you also suggest asking stores to “match online prices.” We owners pay rent to have the nice settings, and we pay knowledgeable staff so they can be helpful to the customer.

You are doing your readers a disservice by not mentioning that a vast majority of online dealers are selling products that manufacturers won't warranty, because they are not authorized dealers. We are a dying breed, and we are worth paying a little more for.

*Debi Holland, President
Convoy Big Screens*

Viewing Porn at Work

Employees stupid enough to surf for porn on their employer's computers—like those in your story [find.pcworld.com/60034—deserve to be fired.

McBarker, from the PC World forums

Any employer so dumb or inattentive as to allow that much porn to be downloaded over their network deserves to have this happen to them. With all the controls we have these days to forbid this type of behavior, I don't understand how it got to the “egregious” point. I do, however, agree that the employees should be fired as well.

Netman2670, from the PC World forums

U.S. Border Laptop Searches

It's annoying that the Department of Homeland Security would want to take my PC and dissect it [find.pcworld.com/60073]. If they want to analyze the disk, the machine won't be coming back before flying cars are common.

Evildave, from the PC World forums

Wow! Our government is out of control. I will let you take anything else before I let you take my laptop or my digital data. Those are my brain, my sanity. They are the only things more important than my freedom and privacy!

AlanZusman, from the PC World forums

All they are doing is ticking people off. Somebody should tell DHS that the sixties are over. It is no longer necessary to transport hard copies of data over national borders. I guess they have to be seen as doing something, but it's looking as if their power has gone to their heads. They are out of control.

Tunz, from the PC World forums

Netflix Picks Blu-ray Disc Over HD DVD

Just dumb, Netflix [find.pcworld.com/60074]. With more than a million HD DVD players out there and more being sold on a daily basis with the new low prices, there is no doubt that there is an HD DVD customer base! You just don't want to take care of your HD DVD customers and instead are drinking the Blu-ray Kool-Aid.

jrosado5, from the PC World forums

Netflix is a business, and they no longer see it profitable to market HD DVD. It's just business. Sorry, but the format war is over. Everybody can go on and rant about how there is an HD DVD customer base being stranded and such. The fact is, all those HD DVD players don't really matter if the movie studios aren't going to produce discs in that format. Owners of HD DVD players who have a sizable HD DVD collection should consider buying a dual-format player before such devices are discontinued.

jplopez, from the PC World forums

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Forward

Good Looks Ahead: What's Next for HDTV?

BY MELISSA J. PERENSON

FIVE YEARS AGO, just about any flat-panel television could induce oohs and aahs, and high-definition was a rarity. Today, although flat-panel HDTVs are in only 25 percent of American households, they're common enough that the gee-whiz factor is gone. So where do HDTVs go from here?

Improvements in picture sharpness and advances in screen size are likely to be gradual. "It's kind of like computers: If you wait around, there will always be something better around the corner," says DisplaySearch HDTV analyst Paul Gagnon.

But the next step for HDTV isn't about technology per se. It's about the experience of watching, which brings previously peripheral considerations—such as design, ease of use, and integrated audio—to the fore. As a result, you'll not only like what you see on your set, but you'll also have a better time experiencing that content in your home.

A Nod to Style

In this post-iPhone world, where industrial design is king, TV manufacturers are

Thinner, more stylish, and better-connected sets are on the way—eventually. But don't expect huge price cuts anytime soon.



HP'S 42-INCH SL4278N includes an ethernet port on the back that lets you access multimedia on your TV via a home network.

paying particular attention to the look and feel of their products and to integrating software with hardware.

"Everyone is looking for a unique characteristic," notes Gagnon. "You see it in laptops, you see it in cell phones—and now everybody wants a unique statement of design in a TV."

Just as cell phones, digital cameras, and laptops now

come in colored packages, TVs too are moving beyond basic black. Manufacturers are also taking a cue from the sleek details found on smaller products. LG Electronics, for example, recently introduced TV sets with color and style tweaks. The 32-inch LG40 features such accents as a curved pedestal and a red front-drop bezel; the back of the LG60 is red,

too, and you can see a flash of color peeking through the side and front.

An even bigger emphasis this year is on thinness. Hitachi, JVC, and LG have all revealed thin sets, ranging from 1.5 inches to 1.7 inches thick. Crafting such a slim TV is a technological challenge. LG, for instance, achieved its products' 1.7-inch depth by reengineering the circuitry around the LCD module—and reengineering the TV's cabinet—to remove unused space. In the future, you'll see even more slim sets on the market: Sharp's newest manufacturing facility begins mass production next year, and it will be capable of producing ultrathin 60-inch panels.

Despite the slimmer profiles, television manufacturers are stuffing new features into this year's cabinets, improved speakers being chief among them. A slew of companies, including Panasonic, Philips, Samsung, Sharp, and Westinghouse, have added speakers that fire down instead of forward, which audio experts claim achieves more full-bodied sound. And in its latest models, LG has positioned hidden speakers—they're

located behind the cabinet, so that the front bezel looks smooth. JVC has even introduced multiple models that have an integrated "Made for iPod Dock," which lets you play both audio and video from an iPod on your television.

Also taking flight this year: televisions that connect to your home network so you can tap into its content. Last year Hewlett-Packard and Sony were at the fore of this trend, and Pioneer offered some sets that comply with the Digital Living Network Alliance certification (an assurance that they'll be able to interact with other DLNA devices such as PCs, gaming systems, and storage devices that are on your home network). HP is installing in all of its 2008 models a Windows Media Center Extender, which lets you access multimedia on your PC via a home network. Later this year Sony will add a DMEx (Digital Media Extender) option to its sets, allowing them to interact with DLNA-compliant networks.

Internet connectivity comes in for a boost, as well. At the Consumer Electronics Show in January, Sharp introduced models with its Aquos Net service (for receiving customized Web-based content); Panasonic unveiled its VieraCast service (for watching YouTube videos and accessing photos via Google's Picasa photo-sharing site); and Samsung showed TVs that could receive an RSS newsfeed powered by *USA Today*. All are



CONNECTIVITY IS IN the cards. Sharp's new Aquos Net service, for instance, allows users to receive customized Web-based content on their TVs.

expected to be released sometime this year.

As with all new bells and whistles, some of these developments are likely to be here today and gone tomorrow. The challenge for manufacturers is to find the right balance between next-gen features and price in a competitive market.

"For now, they're just testing the waters," observes DisplaySearch's Gagnon. "I think a lot of manufacturers are hesitant to build in features that they're not sure will take off." The downside of such a misstep is obvious: Increasing the prices of televisions to add a new feature that no one uses is a waste of money for both manufacturers and consumers.

LCD and Plasma: Future Tech Now

Resolution remains a big area of competition among high-def-TV manufacturers. In previous years the standard resolution was 720p. This year the scale tips in favor of 1080p, the maximum resolution for HDTV. Among LCDs, which hold a slight edge in brightness over plasma, most 720p sets sold this year will be smaller-

screen models (37 inches and under) selling at bargain prices. Among plasma TVs, known for their high-contrast images on massive screens, you'll have more

1080p choices than ever. By next year, this shift in resolution for plasma should be mostly complete; Pioneer, for one, says it will have eliminated 720p sets from its lineup by 2009. For the foreseeable future, however, LCD models will continue to offer 720p at smaller, entry-level screen sizes (20 to 32 inches), which don't benefit as much from 1080p.

Other technological improvements are headed your way. LCD televisions' 120-Hz technology—which helps LCD panels better

PLUGGED IN KAREN ZUERCHER



MICROSOFT BIDS FOR YAHOO: Is "If you can't beat 'em, spend billions in a proxy fight for their anemic rival" really a winning strategy against Google?

YAHOO!



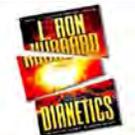
NANO NOW IN PINK: Thank God! Now Paris Hilton and her many tiny dogs can catch up on all those *Sex and the City* episodes before the movie comes out.



CELL PHONES CAUSE INSOMNIA: To combat it, just call a boring person. The failed presidential candidates can do something useful after all!



WEB ATTACK HITS SCIENTOLOGY: Disaster narrowly averted when Tom Cruise lowers himself on cables into hackers' den, turns off botnet.



COLLEGE PIRACY STATS INFLATED: Movie studio execs would rather not use the term "fabricated." They prefer to say "Based on a true story."



SECOND LIFE BANS BANKS: Those without an official charter must go, thus quashing our fantasies of wearing a gray suit and foreclosing on homes.



handle rapid motion, such as in action scenes and in sports—will move down to midrange models this year.

Last year a TV with such technology cost \$500 to \$600 more than one without it, but this year that feature should add only \$200 to \$300 to the price, explains Tim Alessi, LG product development director. By next year, Alessi believes, the additional cost will be minor or nonexistent.

Now that 120-Hz technology is becoming more mainstream, LCD TV makers can focus on other potential breakthroughs, such as adding LED backlights to less-expensive models. Also introduced last year (by Samsung), LED backlights can offer a wider range of colors and higher contrast. Sound pioneer Dolby is among the companies exploring this technology. Currently, LED-backlit displays remain a rarity, limited to one or two premium models per year. DisplaySearch's Gagnon doesn't expect to see them any more often in the next year or two, but he does believe that, over time, their pricing and availability will improve.

Recently, plasma-television manufacturers have provided some glimpses into the future, as well. For instance, at the Consumer Electronics Show in January, Pioneer showcased two intriguing concept technologies: "absolute black" and very thin plasma displays.

"Absolute black" refers to the color of the set's screen before any image appears on it; all television panels emit



LIKE CELL PHONES, TVs are moving beyond basic black, as seen in LG Electronics' LG40 (left) and LG60.

some light, making the base screen more of a dark gray. "If we can't start with a completely black canvas, all of the colors will seem washed out or will look faded," explains Paul Meyhoefer,

A big emphasis this year is on thinness, but crafting a television that measures less than 2 inches thick is a technological challenge.

vice president of Pioneer's marketing and product planning for plasma displays. With the new technology, "you can go into a pitch-black room, and you will only see the image, not the TV or any other light emitting from the TV. Because we can now create the black, we can create a lot more color, and a lot more depth and dimension in color."

Pioneer also showed a prototype plasma technology that produces a display measuring 9mm (or 0.35 inch) thick (sans TV tuner). "It's basically the thickness of the glass," notes Meyhoefer. "Our ultimate goal is to take both technologies and integrate them into an ultrathin design concept."

Panasonic, meanwhile, is working on improving lumi-

nescence efficiency, which should produce brighter plasma panels that consume less power and can better compete with the brightness of LCDs. At CES the company exhibited a prototype of

a slim plasma TV with a depth of just 24.7 millimeters—just shy of an inch.

OLED: Still Too Pricey

After what seemed like years of hype, OLED (Organic Light-Emitting Diode) display technology has finally become a large-screen reality: At CES Sony introduced the first OLED TV aimed at consumers. The 11-inch XEL-1 offers brilliant colors and high-contrast images in a superthin panel (only 3 millimeters thick), but at \$2500 it's less of a mainstream consumer breakthrough than a proof of concept. Sony says it intends to release larger displays next year.

Other manufacturers are keeping an eye on OLED, but only Samsung is speaking publicly about its future

plans. The company showed two prototype OLED displays at CES, one 14 inches and the other 31 inches; however, like other manufacturers, Samsung doesn't expect to bring OLED displays to market until at least 2009, as the models become cheaper to produce.

For many vendors, OLED remains on the periphery. "It's still kind of a novelty," says LG's Alessi. DisplaySearch's Gagnon predicts that the technology probably won't reach its prime for another three or four years.

When to Buy

If you're in the market for a high-definition TV now, none of the developments slated to come this year and later is a reason to hold off. Better design, sound, and resolution will all be welcome improvements, but when they finally arrive they are unlikely to make you regret purchasing a set today. And don't let the distant glimmer of lower prices hold you back, either: According to both IDC and DisplaySearch, HDTV prices won't fall as quickly this year as they have in the past.



When it comes to email solutions for your small business, who's your "go-to" guy?

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- Your Golf Buddy
- Your 3rd Cousin Once Removed
- The Verizon Wireless Network



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Mixed Results With Windows Vista Service Pack 1

MICROSOFT'S NEWLY released Service Pack 1 may correct some of the performance glitches that have annoyed Windows Vista users and discouraged other people from adopting the operating system, but our first round of tests indicate that it isn't a panacea.

Service Pack 1 was released to manufacturing on February 5, and it will be available to users as a download at around the time you read this; Microsoft plans to integrate SP1 into retail Vista discs as well, but couldn't say when that will happen.

Benchmarks: Minor Improvements

Based on our testing so far, the Vista SP1 update won't have a dramatic impact on your daily computing experience. The PC World Test Center ran its WorldBench 6 Beta 2 benchmarks on five systems upgraded to Vista with SP1, and the results

Files copied faster in our initial tests, but other performance was slightly slower with SP1.

were very close to those machines' pre-SP1 scores. The computers, a mix of desktops and laptops, improved by an average of just 2 points—nothing to write home about.

The three desktops saw slight differences in score. The HP Pavilion Slimline s3300z (with a 1.9-GHz Athlon X2 BE-2300 and 2GB of RAM) went from 62 to 63, the Acer VM460-UD2180C (with a 2-GHz Pentium Dual-Core E2180 and 1GB of memory) went from 66 to 68, and the Polywell Poly P3503-3DT (with a 3-GHz Core 2 Extreme QX6850 and 4GB of RAM) went from 111 to 114.

When we dissected the results and examined the ten tasks making up the WorldBench 6 Beta 2 score, we discerned few clear trends. The one definite conclusion

we could draw was that SP1 helped boost some task performance times and slowed others—but the evidence



wasn't consistent across the evaluated systems. In all cases the differences were small, less than 3 percent.

Quick Installation

To conduct several informal tests, I installed Service Pack 1 on the fairly high-end Polywell Poly P3503-3DT.

Vista warned that the process might take an hour or more, but my experience was, pleasantly, far better: The installation process required just 27 minutes, less than half the time necessary when I installed the first beta of SP1 last September. Your experience may vary, depending on your system's configuration: The Dell Inspiron 1420 notebook we tested (with a 2.2-GHz Core 2 Duo T7500 and 2GB of memory) required just 30 minutes to complete the process, but two other, less-powerful systems took far longer. SP1 required three reboots in all on the P3503-3DT.

I also did less-formal testing on the Polywell in some of the performance areas that Vista users have complained about the most: file copying, and startup and shutdown times.

I copied 1.9GB of files (562 JPEG images) from a 2GB Kingston SD Card to the PC. Pre-SP1, that operation took an average of 384 seconds. Post-SP1, the average time for the same task sank to just 348 seconds—a 9 percent improvement, and a difference that you're likely to notice. In contrast, the startup and shutdown times showed little change after we installed SP1.

Published reports of Vista's sluggishness have dissuaded many XP users from upgrading so far. We've seen no indication that SP1 will make the OS markedly faster.

—Melissa J. Perenson

Service Pack 1 Does Little to Speed Up Vista



FIXING SOME OF Vista's performance problems is a main goal of SP1. But running WorldBench 6 Beta 2 on five PCs with SP1 produced only minor speed improvements.

TESTED SYSTEM	Specifications	WorldBench 6 Beta 2	
		Pre-SP1	Post-SP1
LAPTOP			
Dell Inspiron 1420	2.2-GHz Core 2 Duo T7500, 2GB RAM	83	85
HP Pavilion dv9500t	2.2-GHz Core 2 Duo T7500, 2GB RAM	73	75
DESKTOP			
Acer VM460-UD2180C	2-GHz Pentium Dual-Core E2180, 1GB RAM	66	68
HP Pavilion Slimline s3300z	1.9-GHz Athlon X2 BE-2300, 2GB RAM	62	63
Polywell Poly P3503-3DT	3-GHz Core 2 Extreme QX6850, 4GB RAM	111	114

CHART NOTES: Tests conducted by the PC World Test Center. For details on how we test, go to lind.pcworld.com/60103. All rights reserved.



THE HP HDX received a slight speed gain with Penryn.

Penryn Chips Accelerate Laptops

IN OUR FIRST tests, laptops with Intel's new Core 2 Duo mobile processors saw modest speed increases but impressive battery life boosts.

Toshiba's \$3200 Qosmio G45-AV690 performed far better than the company's previous top-of-the-line Qosmio, the G45-AV680, earning a WorldBench 6 Beta 2 score of 94 versus the AV680's mark of 74 (the AV690 has 1GB more RAM than the AV680, accounting for some of the improvement). The \$3240 HP HDX posted a WorldBench 6 Beta 2 score of 86, a point better than a pricier predecessor.

Penryn's energy-efficient design also lifted battery life: The Toshiba's time rose by 12 percent (from 2 hours, 35 minutes to 2 hours, 54 minutes), and the HP's grew by 78 percent (1 hour, 27 minutes to 2 hours, 35 minutes).

The Penryn chips' new SSE4 instruction set will speed up multimedia and data-intensive applications, too, but currently few applications take advantage of it.

—Narasu Rebbapragada

GEEKTECH TOM MAINELLI



Dell's Unfortunate DisplayPort Folly

DELL IS ON a mission to prove that it's a technology leader by ensuring that DisplayPort—the DVI replacement it's pushing hard for the industry to adopt—appears on your next notebook, PC, and monitor. There's just one problem with that plan: We don't need DisplayPort.

The standard currently doesn't offer any real cost or performance benefits over the well-established HDMI interface, and its introduction will likely confuse and frustrate buyers. Worse, eventually Dell plans to launch DisplayPort-only monitors that will

lack backward compatibility with every single PC shipped to date. That's not leadership.

The DisplayPort Dilemma

In addition to writing *GeekTech*, I'm a research analyst for IDC covering monitors and projectors, so I've watched DisplayPort's

evolution closely. Dell, HP, Samsung, and others first began discussing the standard in 2003, and back in those days a royalty-free, next-generation interface to replace the aging VGA and DVI interfaces made plenty of sense. It certainly sounded more appealing than using HDMI, the new digital interface appearing on HDTVs that commanded royalty fees (companies that implement HDMI today pay 4 cents per device plus a \$10,000-per-year fee).

If DisplayPort had launched then, we'd probably be using it merrily on our PCs today. Instead, the standard took years to mature (as standards often do), and HDMI acceptance took off with the HDTV boom. Today, HDMI shows up on a great many PCs and monitors from just about every major vendor, too—including Dell.

Despite HDMI's ascension to de facto digital interface standard, the DisplayPort wheels were already in motion. Years later, Dell rolled out the first-ever shipping DisplayPort monitor: the 30-inch UltraSharp 3008WFP. Interestingly, the \$1999 LCD also includes an HDMI port (see find.pcworld.com/59709 for our review).

Even Dell recognizes that HDMI is too well established to omit, which is why the company plans to continue offering HDMI on its consumer gear. For business products, however, Dell believes DisplayPort makes sense.

I couldn't agree less. Why on earth should my work monitor, laptop, or desktop have a different digital interface than my products at home do? Every day I take my work notebook home, where I often connect it to my consumer desktop monitor. Plus, small-business buyers

mix and match consumer and corporate hardware all the time.

DisplayPort backers like to point out that future implementations of the interface could offer compatibility with HDMI, but such support would be optional, and potentially costly for both the vendor and the consumer. Besides, what's the point?

The PC giant is championing an interface we don't need and shouldn't have to pay for.



Other arguments in favor of DisplayPort also fall apart upon closer examination. For example, there's no guarantee that the standard will remain royalty-free. Its capability to daisy-chain together a number of monitors seems cool, but you can already do that today with DisplayLink technology and USB. And features such as USB hubs and Webcams powered through the DisplayPort interface sound good, but they don't exist yet. Finally, Dell says that DisplayPort will allow it to build "direct-drive monitors"—models that contain fewer internal electronics and cost less than today's monitors. Unfortunately, they won't work with the millions of laptops and desktops that exist today.

DisplayPort was a good idea that missed its window of opportunity. By forcing the issue, Dell and other DisplayPort backers will only bewilder consumers. If you're in the market for a new computer or monitor, be sure to check the connectors on the back. How irritated would you be to find that the best connection on your new high-end monitor won't work with the best connection on your high-end notebook?

MacBook Air's Battery Life Disappoints

EARLY REVIEWS clearly indicated that the MacBook Air isn't Apple's speediest laptop. But how fast is it when running Windows?

The PC World Test Center used Apple's Boot Camp utility, which enables a Mac system to run Windows, and found the ultraportable's Windows speed mediocre. Its WorldBench 6 Beta 2 score was 57, just below the average score of 59 turned in by the field of 17 ultraportable notebooks we've tested recently. The Air's performance is more impressive, however, when you consider

it against that of the 9 ultraportables we've evaluated whose minimum weight is 4 pounds or less (its most likely competitors in the marketplace): For that group, the average score was just 50.

The Air's battery tests were truly disappointing, though. The Air managed to last for just 2 hours, 31 minutes on a single charge (or for 2 hours, 53 minutes without Boot Camp running)—quite dismal compared with the other laptops we've tested in the 4-pounds-and-under category. The average battery life score among those mod-

THE MACBOOK AIR isn't slim just in terms of its profile. It's slim on battery life, too, managing just 2 hours, 31 minutes, while its competitors averaged 4 hours, 37 minutes.



els was 4 hours, 37 minutes.

Making the Air's battery life results even more worrisome is the fact that you can't swap in a spare battery

when the machine runs out of juice: The battery is inaccessible to you unless you're an Apple repair technician.

—Melissa J. Perenson

BETA WATCH

EDWARD N. ALBRO



Circos: Descriptive Searching

When you're looking for a hotel or restaurant, knowing only where it is or how much it costs may not be enough. Are your kids welcome? Is it relaxing or romantic? Circos is a search engine that captures criteria that most engines don't. You can choose from descriptions, such as "fun" or "spacious," as well as from concrete characteristics, such as "flat-screen TV" or "valet" for hotels. Circos searches user reviews from such sites as TripAdvisor to find spots that meet your criteria—but it can't always distinguish context. Results for one recommended vegetarian restaurant in New York included this review: "Vegetarians, beware!" circos.com

Sosius: Team Workspaces Without a Server

Have you ever used Microsoft's SharePoint, which lets you create shared workspaces for long-distance project collaboration? Neither have I. Among the top reasons most people don't: It's expensive and it requires a server. The free Sosius, which hosts your workspaces, addresses both objections. You can invite coworkers to join your team and share calendars, divvy up tasks, collaborate on documents, hold discussions, and more. I found some of Sosius's customization tools clunky, but the service could be a boon to smaller companies with remotely situated workers. sosius.com

Blist: Databases With Pretty Faces

You can certainly find online database-creation services that are more powerful or more sophisticated than Blist (one is Zoho DB &

A SEARCH ENGINE for hotels and restaurants, Circos uses detailed criteria to narrow your choices. The results are interesting but uneven.

Reports), but you'd be hard-pressed to find one that's more attractive to look at and work in. Unfortunately, though Blist's Flash interface is filled with attractive icons and glowing buttons, this free Web app feels particularly beta-ish. When I tried it, lots of the buttons were grayed out, apparently because the features weren't functional yet. Though setting up a simple, flat database was fairly easy, neither running filters nor creating charts was clear to me. And the help section is nearly nonexistent so far. blist.com

High-Def Camcorders Go Small and Light

OVER THE YEARS, camcorders have been of only modest interest to most consumers, due to the devices' bulk and weight. Such resistance could fade now. The use of flash memory allows new camcorders to be smaller and lighter, and these days they can take still pictures that rival the shots of an average digital camera in quality. Judging from the slew of models introduced at the Consumer Electronics



SANYO'S XACTI HD1000 model weighs a mere 9.5 ounces.

Show in January, camcorder manufacturers are clearly hoping that you'll choose a camcorder as your next—and only—camera.

Light and Fast

If you've ever attempted to hold a camcorder up for any length of time, you know these little gadgets can be pretty dense. The latest models, however, are surprisingly light, because flash-memory cards have enabled the major camcorder companies to reduce the size of their products to unheard-of dimensions.

Samsung's SC-HMX20C,

Using flash memory lets companies produce models smaller than a soda can. Some shoot 10-megapixel still images and HD video, too.

for example, records both video and stills to 8GB of built-in flash memory, instead of to a hard drive or a DVD. As a result, the camcorder is smaller than a soda can and weighs only 10.9 ounces. It will even accept removable SDHC/MMC+ cards if you want extra storage. Pricing is expected to be between \$1000 and \$1100, and the camcorder should be available in May.

Flash memory, specifically SD Card memory, allowed Panasonic to slim its \$800 HDC-SD9 down to a mere 9.7 ounces. The HDC-SD9's heavier and bulkier (and more expensive, at \$1100) relative, the HDC-HS9, is a hybrid model that can record either to SD (or SDHC) media or to its built-in 60GB hard disk.

Sanyo's Xacti HD1000 weighs just 9.5 ounces and has a total volume of only 16.6 cubic inches, which the company says makes it the world's smallest and lightest digital camcorder capable of Full HD recording (1920 horizontal and 1080 vertical pixels).

How does Sanyo do it? If you've been following along, you already know: with an 8GB SDHC memory card.

The use of flash memory also means that some camcorders will be faster to operate. Samsung's SC-HMX20C, for example, will

start up a lot faster than cameras that use other media—in under 3 seconds.

Stills and More

In addition to making movies, camcorders nowadays can take still photos at impressive resolutions.

Sony will release a pair of compact high-definition camcorders around the time you read this: the HDR-SR12 (\$1400), which includes a 120GB hard drive, and the HDR-SR11 (\$1200), which contains a 60GB hard drive. Both can take 10-megapixel photos—more than enough resolution for you to use either camcorder as your still camera. And, of course, both models can record video in high definition at 1920 by 1080.

Samsung's SC-HMX20C, meanwhile, has the ability to take 8-megapixel stills.



SONY'S HDR-SR12 TAKES 10-megapixel still photos.

Canon, too, has taken the flash-memory route, using what the company calls Dual Flash Memory in its new top consumer cam-

recorder, the \$1099 Vixia HF10. Dual Flash Memory allows you to record to the camcorder's internal flash drive even if you don't happen to have a spare SDHC memory card. This particular



CANON'S VIXIA HF10 includes 16GB of internal flash.

model has 16GB of internal flash, the largest capacity we've seen recently. A second, lower-end version, the HF100, features an SDHC memory-card slot only and costs \$899. Both have a newly designed Canon 12X HD video lens and a Canon 3.3-megapixel Full HD CMOS image sensor, and should be available in April.

Your One and Only

Camcorders may once have seemed useful only to people with young children (or cute pets). But considering these smaller, lighter models' ability to take outstanding still photos, owning only a camcorder may make sense. As flash memory gains capacity and becomes ubiquitous, prices will no doubt drop—and camcorders will shrink even more. With so many features in your camcorder, you may opt to leave your still camera at home.

—Ramon G. McLeod

Sony's New SLRs Offer Live Preview of Shots

DIGITAL SINGLE-LENS reflex (SLR) cameras are, by design, more advanced than their point-and-shoot counterparts. Point-and-shoots, however, continue to excel at making it easy to compose an image on the LCD screen, while early digital SLRs forced you to look through the viewfinder to preview your shot. Sony's latest digital SLRs will eliminate that difference.

The Alpha DSLR-A350 (14.2 megapixels) and the Alpha DSLR-A300 (10.2 megapixels) both feature a new design that integrates two imaging sensors—one dedicated to previewing the image, the other dedicated to capturing the image.

Although Sony is not the first company to employ two sensors to generate a live preview, it is the first to allow full control of the auto-focus system, even during rapid-fire burst-mode shooting, without interrupting the live view, as competing cameras must.

Perfecting Previews

Other digital SLRs have had the ability to preview an image on the LCD screen, but early implementations by Canon, Nikon, and Olympus didn't replicate the seamless point-and-shoot experience as well as Sony's cameras appear to do. The Sony A300 costs \$800 with an 18mm-to-70mm lens. The A350 is priced at \$800 for the body only, and costs \$900 for the body plus an 18mm-to-70mm lens.

—Melissa J. Perenson

The Sony Alpha DSLR-A350 takes 14.2-megapixel images.



A switch on the top of the camera makes it easy to toggle between shooting with the optical viewfinder and shooting with the LCD's live view.

The A350 has two sensors inside, one dedicated to showing a live preview of images. This approach allows the camera's auto-focus system to function without interruption.



The SLR has an articulating 2.7-inch LCD; the display's ability to tilt and extend makes composing images easy from almost any angle.



you could if you wanted to

Is it possible to think outside the box when you're working in one? Absolutely. Here our **Fit System® Units** are creatively configured so you can work in exactly the way that fits your style. After all, it's the little things that make a workspace work.



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Fit System Units



Elevate™ Wrap, Electric Lift Table

Contest Aims for Better Search of Audio, Video

CAN COMPETITION yield a better search engine? Singapore's Agency for Science, Technology and Research (ASTAR) hopes so: It is offering a \$100,000 prize to the winner of a competition to develop new multimedia search technologies.

Registration for the Star Challenge 2008 closed in February; the contest consists of three knockout rounds and a qualifying race for the finals, which will be held in Singapore.

ASTAR hopes to spur development of new technologies for multimedia search, allowing users to look for specific words in audio or video files that aren't tagged. Teams are expected to develop search algorithms able to seek out words, objects, and events in audio and video files.

Ahead of the knockout rounds, ASTAR will provide competitors with development data and tools. In the qualifying race to choose five team finalists, competitors will have to solve four challenges using the search technology that they develop. Teams will be judged on the time taken to complete all four challenges.

The finals will be held on October 20. The five finalists will race to complete four new challenges, with the fastest team taking the prize.

—*Summer Lemon*

GADGET FREAK DAN TYNAN



Coming From Asia: The Next Cool Cell Phones

THE UNITED STATES leads the world in operating systems, Web 2.0 startups, and drunken teenage startlets. When it comes to cell phones, however, we might as well be Albania. With the exception of the iPhone, a truly game-changing (yet flawed) piece of technology, all the cool handsets appear first in Europe and Asia.

The main reason why we lag: Because people in Europe and Asia are more dependent on their cell phones than on their PCs, high-speed mobile broadband service has developed much faster. Buying a handset overseas is a lot like buying a

computer—you can mix and match models and service providers. Here we're still mostly locked in to one carrier per device.

The good news is, that's changing. Verizon Wireless, for instance, now supports any handsets that work on its network. But if you want to see the future of cell phones, look to the east.

Mobiles in Motion

Need some proof? Take these three examples.

In Japan you can point certain Sony Ericsson or DoCoMo cell phones at a building, and they will display information about what's inside it, such as directions to a third-floor office or a menu for the rooftop restaurant. This trick is accomplished via the phone's GPS chip, its electronic compass, and Mapion Local Search software powered by San Francisco-based GeoVector. Handsets incorporating GeoVector technology will start to appear stateside by year's end, says CEO John Ellenby.

Also big in Japan: mobile phones that have motion sensors built in. Last year NTT DoCoMo launched cell phones that let you play games or fast-forward through MP3s simply by waving your hand. In the United States, Verizon

has shipped handsets with games powered by Gesturetek, a similar technology that relies on the phone's camera to detect motion.

In China some cell phones, buses, and cars will be able to receive live HDTV broadcasts of

the 2008 Beijing Olympics this summer. Unlike streaming services such as MobiTV or Verizon's VCast, China's mobile TV will transmit signals directly to a UHF/VHF antenna built into the phones, thus bypassing the cellular network and allowing for 50 times the bandwidth. Mobile TV is also taking off in Japan, Korea, and Europe.

Handset makers and carriers are still hammering out a broadcast

standard for U.S. mobile TV. But we should begin to see devices employing early versions of it sometime in 2009, says Ben Runyan, VP of marketing for Legend Silicon, which makes the chips that power mobile TV in China.

Interesting Times

Nothing moves faster these days than the cell phone market. As I write this, prototype phones based on Google's Android mobile platform have begun to appear, though Apple's second-generation iPhone is still vaporous. And the FCC's bidding war for the old analog-TV spectrum could open up a third network beyond cellular and Wi-Fi/WiMax, an event that could turn the wireless world upside down.

"Sooner or later the U.S. will become more like the international market, where phones can be swapped between different providers and the applications are more open," predicts John Barrett, director of research for Parks Associates. "We are inching toward the day when handsets will be more like PCs and less like traditional phones."

Amen to that. Because I'm tired of living in Albania, even with all the drunken startlets. ●

GPS, electronic compasses, and new software will soon let our phones show us around town.



Take Charge of Your Car's Diagnostics

With CarMD, catching hidden engine problems with your automobile is now as easy as plugging in a USB cable

Every car, light truck, minivan and SUV on the road in the United States since 1996 is equipped with government-mandated programs installed in a vehicle's computer system to detect malfunctions, set a diagnostic trouble code (DTC) and turn on the "Check Engine" light if there is a problem.

Mechanics may charge up to several hundred dollars just to connect to your auto's second-generation on-board diagnostics program (OBD2) and find out your problem is as simple as a loose gas cap! But consumers can bypass that step and obtain diagnostic results using the handheld CarMD®.

Ever wonder if your mechanic is really being straight with you? Or bought a used car wishing you had more information about its inner workings? With the easy-to-use CarMD handheld device, included PC software and Internet access, you can obtain an instant diagnosis right from home.

TLC FOR YOUR CAR

CarMD.com provides an extensive online database giving you easy-to-understand trouble-code definitions, potential problems and their solutions, estimated repair costs and more. You can print a comprehensive report and bring it into your mechanic so you really are in the driver's seat when it comes to servicing your auto.

"Mechanics hate this tool!" says Dave A. from Merrimack, N.H. "Every time I had a 'Check Engine' light, CarMD diagnosed the problem ... they think they know better what is wrong with a vehicle because they are mechanics and I am not, but I walk in with my printed page of results and have the correct diagnosis. I love it!"

Are you one of the estimated 10 percent of drivers operating now with a lit "Check Engine" light? Take the fear out of discovering what's really wrong. It could be a simple fix. More important, it's never a good idea to drive for extended periods of time with that warning light on the dash. It can signify a problem as minor as



a loose gas cap or as severe as a catalytic converter failure. Either way, it is likely causing your car to emit too many emissions, harming the environment and causing you to spend more money at the gas pump.

Using the CarMD handheld device, any driver can plug into his or her auto's standardized data port (usually found right under the steering column) and obtain an instant display that all systems are go, there's a possible problem, or something's definitely wrong. If CarMD's light is yellow or red, you can connect it to your PC via USB cable to learn what the problem is.

Even if the problem is one that requires service, CarMD will arm you with accurate information about what it should cost to fix the problem in your region.

CarMD is made and distributed by a leading manufacturer of sophisticated and more expensive scanning equipment used by nearly a million do-it-yourselfers and professional mechanics from across North America. CarMD uses similar diagnostic technology, but costs just \$89.99 and displays information that can be read and understood by anyone—no training necessary. You can use CarMD to quickly check an unlimited number of vehicles and run monthly reports on up to three household vehicles to provide your family and friends with peace of mind. Plus, CarMD includes lifetime vehicle coverage and free software updates, so if you buy another vehicle, you can register that as well.

This fast, simple diagnostic tool gives you complete, downloadable information about your car's onboard systems.

—PC World, July 2006

TAKE CONTROL OF YOUR VEHICLE:

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- Know what the "Check Engine" light really means
- Avoid buying a used car "lemon"
- Know in advance what repairs cost
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U.S. Patents #6,687,584, #6,941,203 and #6,947,816. Other patents pending.

Dell recommends Windows Vista® Home Premium.



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Consumer Watch

Top Tips for Hassle-Free Tech Merchandise Returns

Retailers often play by different rules when it comes to taking back purchases of electronics.

BY ERIN BIBA

MAYBE IT'S AN unwanted gift, or a gadget that doesn't perform as advertised. Whatever the reason, almost everyone eventually runs into a tech product they want to return.

But retailers consistently maintain returns policies for electronics that are different from those for, say, sweaters. "We're talking [about] some higher-end items that retailers want to move quickly," explains Better Business Bureau spokesperson Steve Cox. To avoid headaches and high blood pressure at the customer-service counter, here are a few suggestions and guidelines.

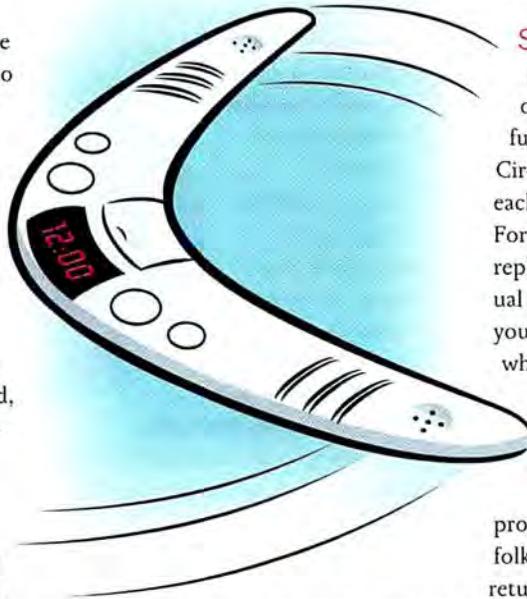
Must it go back? Consider why you are returning an item. If you're thinking of doing so because it's not working the way you believe it should, perhaps professional services such as Best Buy's Geek Squad or Circuit City's Firedog can get your gizmo working to your satisfaction.

You may not even have to pay for a house call: Geek Squad, for example, provides online video tutorials for do-it-yourselfers that demonstrate how to set up an assortment of shiny new toys.

Act fast! If you really have no need for an item—maybe it's a duplicate of one you already have—don't dawdle. Stores generally give you less time, and make you jump through more hoops, for returns of electronics than for other items.

Circuit City gives you 14 days for returns. Costco, once famous for allowing no-questions, full-refund returns on anything with no time limit, now takes back electronics only up to three months after the date of purchase—still a generous return window compared with those of its competitors.

Don't open anything: Among several common conditions for a full refund, the first, and most important, is that the box be sealed. If it isn't, the retailer will need to make sure the gadget is in full working order—which means that accepting your return will cost the company time and money. Typically the store passes those costs on to you, often in the form of restocking fees. Best Buy and Circuit City both charge a 15 percent restocking fee on all opened electronics. Amazon.com charges a 15 percent restocking fee on opened laptops and desktops.



Some Things to Do

Bring back everything: If you *have* opened the box, be certain that it's full before heading out to the store. Circuit City will deduct the cost of each missing item from your refund. For exchanges, the retailer will simply replace what you have brought (a manual for a manual, a cable for a cable), so you're on your own for dealing with whatever pieces you've left behind.

Save your receipt: Yes, this one is a big "Duh." But as the BBB's Cox observes, remembering to keep that slip of paper is always a problem: "It's astounding how many folks don't do that." However, if you're returning a gift, or you accidentally misplaced the receipt, you may not be completely out of luck.

If the device you are returning is a gift, Amazon.com, for example, will issue a gift certificate rather than a refund if you can help a customer service representative properly identify the original sender. (Amazon promises not to tattle on you for the return.) And if you bought the product for yourself, Best Buy, according to spokesperson Jeff Dudash, may be able to look up the transaction using your credit card number, and thereby facilitate a return.

Check for returns policies: Some retailers treat online returns the same as in-store returns; others don't. Many retailers >>

ILLUSTRATION: MARK MATCHO

PCWORLD.COM

Want to return a tech product bought at a major retailer's Web site? Learn about its returns policy first. Go to find.pcworld.com/59977 for links to the policies of Amazon, Costco, Wal-Mart, and others.



SKEPTICAL SHOPPER YARDENA ARAR

require that you obtain a return authorization (many merchants call this a return merchandise authorization or RMA) by filling out a Web form before you can mail back a product purchased online. Many stores also require you to pay return shipping and insurance, though for some merchants with brick-and-mortar operations, you can bypass those charges by hand-delivering the product, if that's feasible.

Don't be a regular returner: A company called The Return Exchange helps most retailers track shoppers' return habits in order to reduce fraud—but even if you're an honest person who happens to return products frequently, retailers may simply refuse to accept your return or permit an exchange. If you get such a refusal, you can file a protest at the The Return Exchange's Web site (find.pcworld.com/59871).

What if the product is busted? The store that sold a defective item to you should take it back; most retailers will exchange it for a working unit. Best Buy's Dudash says this is usually easier than exercising a manufacturer's warranty.

Contact the manufacturer: If you've used the item extensively or waited several months to take it back, it's time to check your manufacturer's warranty.

Don't fret if you've misplaced your warranty card: Many manufacturers make their product warranties available online for download in PDF form.

Can't return it? Sell it: Selling open-box items is a big business on eBay; some of its sellers even publish guides on how to buy open-box products. Also consider putting the unwanted gadget up for sale on Amazon or Craigslist.

Have a complaint? If you think a retailer acted irresponsibly—or criminally—you can file a report online with the Better Business Bureau (welcome.bbb.org) or the Federal Trade Commission (ftc.gov).

Also consider writing our *On Your Side* columnist, Amber Bouman (e-mail onyourside@pcworld.com). Amber can't troubleshoot every problem that comes in the mail, but she can often make vendors pay attention.

For True High-Def Movies, You Need Discs

THE HIGH-DEF FORMAT wars are over, and Blu-ray Disc has won—or so some pundits say. But others insist that movie streaming and download services are making discs irrelevant. Should you invest in a pricey Blu-ray player that could soon be obsolete?

The answer depends on your HDTV. If, like me, you have a 1080p display, a Blu-ray player won't become dated very fast.

You can, however, already get lower-def high-def movies without investing in new hardware. My Comcast On Demand cable service includes a small selection of free and for-pay HD films.

You can't beat the service's convenience: Click on a title, and in a matter of seconds it starts streaming. Pricing isn't bad, either—new On Demand titles run about \$3 to \$6, and, as mentioned, a couple dozen HD titles are usually available for free too.

Not Enough HD, Not HD Enough

I'd like a wider selection, though. More important, I paid good money for a 1080p set, and Comcast's HD comes in 1080i, one of the two formats used to broadcast HDTV (720p being the other). The quality is decent, especially with 5.1 surround-sound audio (something that Comcast supports if the content provider supplies it), but I know my set can do better.

With a Blu-ray Disc player, it does. Movies on Blu-ray do come in 1080p, and the films just plain look better.

Now, I'm not that interested in buying discs: The boxed collection of *Sex and the City* my husband gave me is mostly still boxed, because I don't watch that many movies or TV shows repeatedly.

But I rent DVDs from Netflix—and Netflix won't charge you a dime extra to send

Services for downloading or streaming movies sound great—but not if you're looking for 1080p HDTV content.

Blu-ray versions. Just make sure your account settings reflect your preference—otherwise Netflix won't even show you the high-def options. (As we went to press, Netflix announced that it would phase out HD DVD and carry Blu-ray exclusively.)

And what about downloads and streaming? For all the hoopla about Apple TV and its rivals, I don't see anyone offering substantial amounts of 1080p content anytime soon.

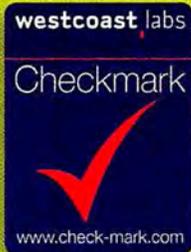
Apple TV can't even output 1080p. Netflix and LG are working on a streaming service and set-top box for HDTV, but it will not debut until late this year (and may not support 1080p). Vudu, a streaming HD service we reviewed last fall (find.pcworld.com/59966), does have a smattering of 1080p content, but it requires a fat pipe—at least 4 megabits per second, the company says. My DSL is a lot slower, and no fast fiber is in sight in my neighborhood.

VideoGiants, the video arm of MusicGiants (which sells high-bit-rate music downloads), says it will eventually deliver 1080p content, either preloaded on external USB 2.0 hard drives or downloadable to hard-drive-equipped devices that support its DRM technology. But right now, its movies are DVD-quality, as are those offered by Amazon's Unbox service.

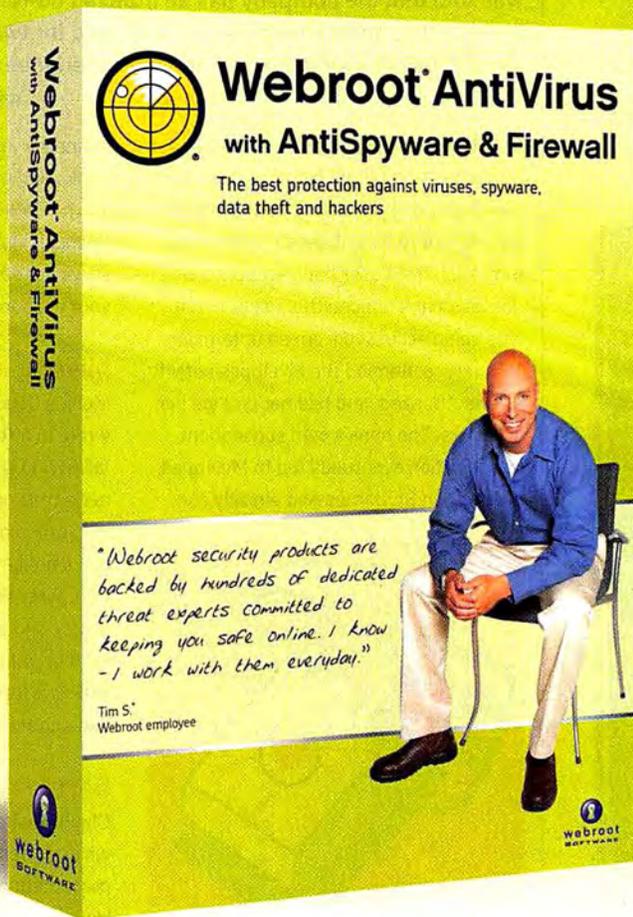
In short, bandwidth and other technology constraints still stand between me and a download or streaming service that can meet my high-def demands.

I'm looking forward to the day I can ditch my discs, but for now, purchasing a Blu-ray Disc player and renting via Netflix seems the way to go if you want access to a large library of 1080p movies.





November 2, 2006
Spy Sweeper 5.2 with Antivirus



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PCW Resource

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Consumer Watch

ON YOUR SIDE

AMBER BOUMAN



I PURCHASED MVELOPES' Web-based personal finance service as a result of a review in your magazine. Shortly after my 30-day free trial ended, my bank told me that my accounts had been accessed by someone from India and that I would have to close them all and open new ones. During the transition, I had no way to see which of my automated electronic bills were paid and which weren't, resulting in numerous overdraft charges. No one at Mvelopes helped, so I cancelled that account. But when I asked for a refund of the \$189 I'd prepaid for two years' service, I was told that the company has an ironclad no-refund policy. I can't imagine why they think they deserve to be paid for two years when I left only several days beyond the trial and my experience was so bad.

Carol St. James, Sarasota, Florida

OYS Responds: Mvelopes determined that St. James's problems began last summer, when the company switched the servers (and IP addresses) it uses to gather information from user bank accounts. St. James's bank noticed that her account was being accessed from an unfamiliar IP address, flagged the Mvelopes activity as unauthorized, and had her change her accounts. The bank's own subsequent investigation eventually led to Mvelopes, but by then St. James had already can-

online services that communicate with banks and other financial institutions. If you run into such an issue, make sure your financial institutions are fully aware of all services that you've authorized to access your account information online.

Missing in Action

Monica Osborne of Falls Church, Virginia, wrote in after her X2Gen MW19R monitor failed and she received no responses to her e-mail messages, phone calls, or faxes. Sure enough, the X2gen.com Web site has a notice saying the parent company, Computer World Solution, is in bankruptcy and is no longer providing support for its products. The site has a link to a PDF of a form that creditors can fill out and submit to the bankruptcy court.



Battery Replacement Snafu

Chiao Huang of Marlton, New Jersey, wrote to seek our help obtaining a replacement battery for his overheating Hewlett-Packard laptop. HP refused to take back his battery because its barcode sticker, which would have identified it as a qualifying model, was missing; Huang said this was because overheating had caused the sticker to peel off.

HP says that it asks for the stickers because not all batteries for a specific model were defective. As a result of our inquiry, the company sent Huang a replacement. But we recommend keeping records of all tech product serial numbers and stickers—even if you must store a peeled-off sticker in an envelope.

called her Mvelopes service, and neither Mvelopes nor her bank ever told her the account had not, in fact, been hacked.

As a result of our query, St. James got a full refund and a call from Steve Smith, the CEO of Finicity, the company behind Mvelopes. "We know that we missed the chance to deliver an optimal customer experience," Smith said in a statement. "We've since implemented a number of changes to improve our level of service."

The incident illustrates a type of problem that can (but rarely does) arise with

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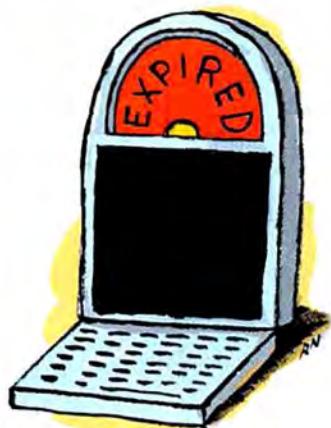
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Consumer Watch



ISP Tries Charging by the Gigabyte

IS ALL-YOU-CAN-EAT Internet access on its way out? Time Warner Cable is looking into ditching the ISP's current unlimited-access fee structure in favor of charging customers based on their bandwidth consumption.

The company has said it will begin testing usage-based broadband Internet offerings in Beaumont, Texas, later this year, by offering new customers packages with monthly data download caps of 5, 10, 20, or 40 gigabytes. No plan for unlimited access will be available, and pricing for the packages has not yet been set. Current customers in the area pay \$55 per month for unlimited broadband service, or \$45 if they also subscribe to Time Warner cable TV.

A Time Warner spokesperson says tiered pricing would allow the company to improve service to the vast majority of customers—those who are light to moderate bandwidth consumers. Right now, he says, 5 percent of Time Warner's customers are responsible for 50 percent of its bandwidth traffic.

The revised pricing plan would affect only new customers. With an estimated 18 percent of the market (including America Online), Time Warner is the second-largest ISP in the country.

—Tom Spring ●

ILLUSTRATION: ROBERT NEUBECKER



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AWARDS

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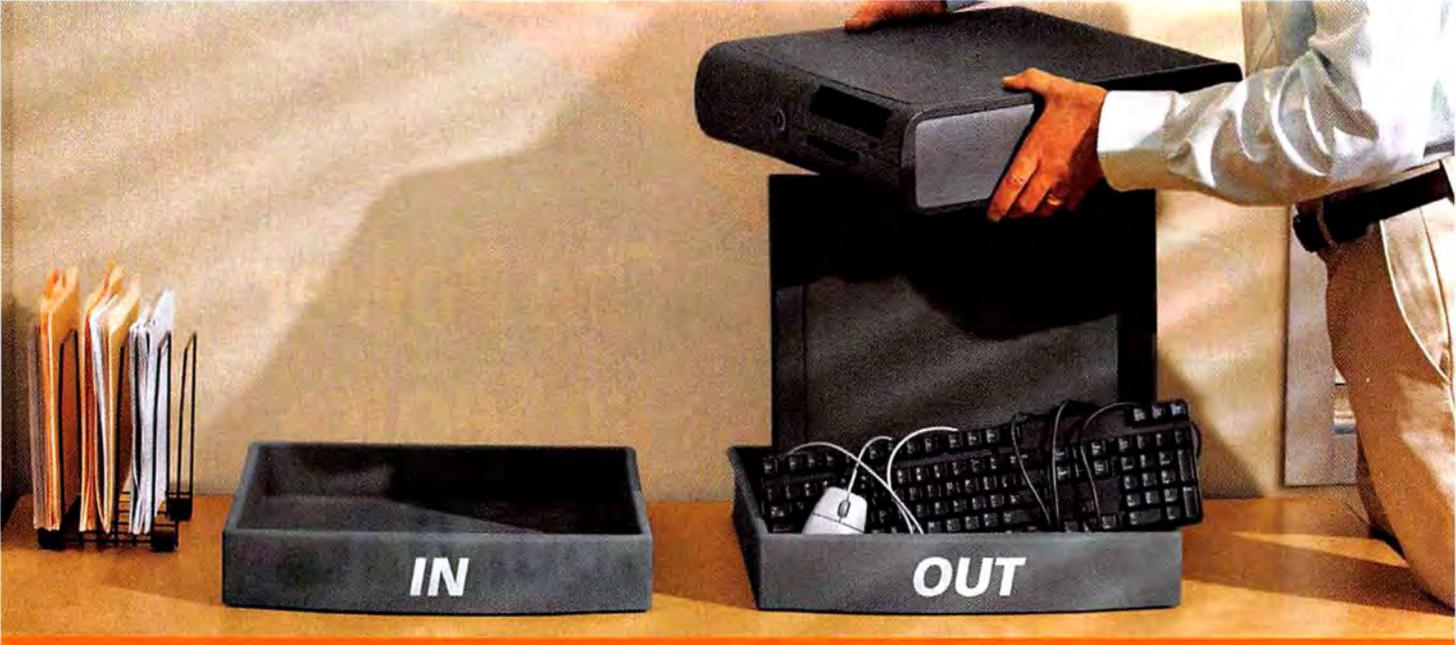
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Business Center

Simpler Project-Managing Apps Get Job Done

BY RICHARD MOROCHOVE

THOUGH MICROSOFT Project is a capable project management program, not everyone needs its power. If you want help managing a business project but using Project feels like swinging a sledgehammer to swat a fly, try a less ponderous alternative.

Web-based project management services are fairly easy to set up. You don't have to install software on your PC; and since all project information is stored online, any team member with Internet access, a Web browser, and an e-mail account can participate, even remotely.

Most Web-based project management services allow you to establish milestones (by assigning tasks to one or more team members and specifying a completion date) so you can track progress against major deadlines. Participants receive progress alerts and details via e-mail, or by logging in to the Web-based management account.

Project management services offer

Less full-featured (and complex) than Microsoft Project, Celoxis, Clarizen, and SpotOn may be a better fit for small businesses.

varying amounts of server space for storing project-related data and files. Project reporting capabilities range from simple-text reports to full-featured graphical Gantt charts.

Celoxis

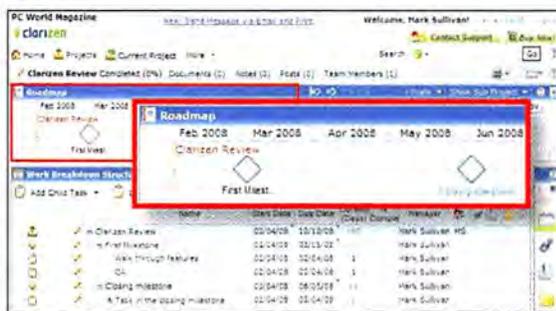
Celoxis (www.celoxis.com) supports an assortment of reporting capabilities, including Gantt charts (which depict project progress) and export of data to an Excel spreadsheet in order to generate custom reports. You can allow only basic access.

The service isn't too difficult to master. It even provides a basic template to help you manage your first project.

Celoxis also tracks time and expenses associated with the project, a useful feature for internal accounting or for

billing a client. You can allow clients or other outsiders to log in and check on project progress, too.

Celoxis is available both as a hosted service and as packaged software that you can install on a server inside your network. The hosted version provides 20MB of storage per user and costs \$15 per month per user. A 30-day free-trial edition is available as well.



CLARIZEN ORGANIZES PROJECTS as a system of milestones plotted on a dated timeline called a "roadmap".

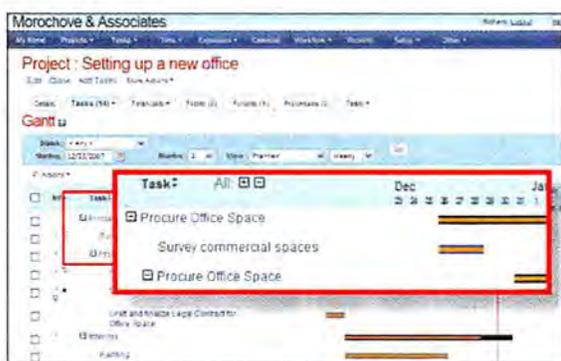
Clarizen

Clarizen (www.clarizen.com) lacks a start-up template for users new to project management, but it offers a lot to tempt experienced project managers.

You can create a new project from scratch, import an existing Microsoft Project file, or use a Project or Clarizen template that your organization created previously. You can't export a Clarizen project back to Project, however.

With Clarizen you can divide project milestones into submilestones and tasks into subtasks, and you can have important alerts repeatedly e-mailed daily. Team members can add notes or discuss the project; send e-mail messages regarding the project as a whole, a milestone, or a task to the entire team or to one or more individuals; and find project information online.

Reporting features are excellent, too, allowing you to gauge the percentage completion of key project tasks, for >>



THE CELOXIS HOME page displays your projects, your progress in each, and the tasks for which you are responsible.

example. Clarizen costs \$50 per month per user for an unlimited number of projects. Prepaid 6- or 12-month subscriptions qualify for discounts.

SpotOn

SpotOn (www.spotonpm.com) uses a dashboard to give an overview of your projects and status. A calendar view highlights days containing milestones.

You can view your responsibilities in 'My ToDos'. The 'Messages' screen displays project-related notes; the service e-mails any message marked 'critical' to all team members. A 'People' screen lets you keep tabs on your team members.

When adding team members, you decide the level of access to grant them. You can allow view-only basic access or give permission to create to-dos, add milestones, or enjoy unlimited account-management privileges.

You won't find highly detailed reporting tools or fancy Gantt charts in SpotOn; this entry-level project manager is suitable for smaller teams and for less-detailed, short-term projects.

In the beta service I tested, a free plan supported one project, with to-dos and milestones. Paid plans, which include storage space and don't limit the number of users, start at \$10 a month for ten or fewer active projects up to \$145 a month for an unlimited number. All paid accounts offer a 30-day free trial.



Celoxis | Celoxis Technologies

Capable, midpriced project manager helps track expenses, too. Price: \$15 per month per user

www.celoxis.com



Clarizen | Clarizen

Flexible, heavyweight service targets experienced project managers. Price: \$50 per month per user

www.clarizen.com

SpotOn | Otis Technologies

Beta version, not rated

Easy-to-use service appropriate for neophytes.

Price: Free to \$145 per month

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Choosing a Host for Your E-Commerce Site

IF YOU PLAN to sell products and/or services online, choosing a host for your e-commerce site is an extremely important decision.

What factors should you consider? Cost, capacity, and bandwidth, of course—but those numbers don't tell the whole story. When one of my clients noticed that his Web site was going down two or three evenings a week, I discovered that the server hosting it was stored in the closet of a local IT services firm. If a glitch developed during the evening or on the weekend, no one could resolve it until the next business day.

To avoid such problems, look for a Web hosting service that offers 24/7 monitoring by on-site technicians in a major data center. "Uptime"—usually defined as the percentage of time during a given period that a site is accessible on the Internet—is crucial. A good hosting service should deliver an uptime of 99.8 percent or better; that's less than 90 minutes of downtime (including network outages and scheduled maintenance) per month.

A good Web host should be willing to provide recent uptime statistics. Also, you should independently monitor your Web site's uptime. Basic State (www.basicstate.com) offers a free service that checks the availability of your Web site every 15 minutes and alerts you when it's down.

If you sell more than a couple of products and services, you'll want a site with a database, like MySQL, where you can store the details. Your host should support a programming language (such as PHP) to run shopping-cart software, too.

An administrative control panel will help you track site visitors and manage your domain's e-mail accounts, too. Many control panels also help you obtain and

Appropriate disk space and traffic limits are just the start. Here's what else to look for in your Web hosting package.

install open-source Web apps—say, a forum or chat room—but I prefer to get apps from their source Web sites. That way I know I'm working with the most recent version of the app, and I have access to all available support resources.



SSL and IP Address

To reassure customers about the safety of their data, consider obtaining a Secure Sockets Layer (SSL) certificate to support data encryption and to authenticate your

business identity. You may purchase an SSL certificate from your host or from VeriSign. One caveat: You can get an SSL certificate only for a site that has a dedicated IP address, and most consumer ISPs assign addresses dynamically—that's one reason not to run a Web-based business from your home. Expect to pay a bit extra for a fixed IP address.

If you need a larger site, Virtual Private Servers (VPSs) dedicate a range of memory, storage capacity, and data transmission for it. Typically a VPS server contains far fewer sites than a shared host. If your site keeps growing, you may want to host it on a dedicated server, either managed (your host handles software installations and updates, monitors performance, and the like) or unmanaged (you handle those services, and probably pay a bit less).

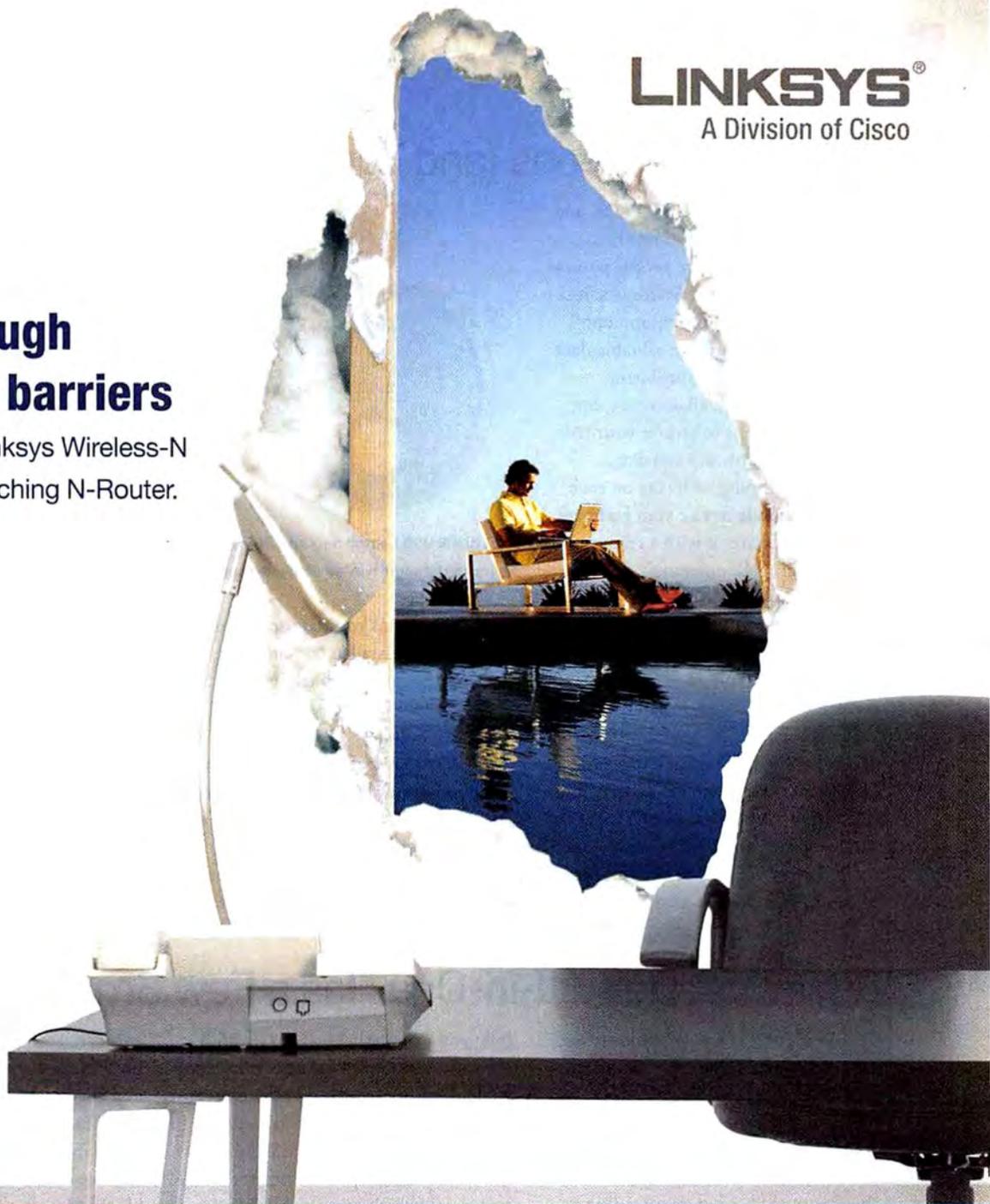
Beware of services that charge unusually low fees: They may be hosting too many sites or skimping on support.

Monthly fees for a good shared-hosting service should start at about \$10; managed dedicated servers start at several hundred dollars; and a VPS account should cost somewhere in between.

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Keep Your Laptops (and Your Data) Out of Harm's Way

LAPTOPS, CELL PHONES, PDAs, and USB flash drives have become business necessities. But as more people work at home or at the nearest Starbucks, loss or theft of this valuable equipment—and the often-even-more-valuable data on it—is an increasing problem.

You can't prevent all disasters, but you can take steps to reduce your risk of losing key hardware and data.

Start by slapping an ID tag on each laptop or mobile device your business owns, and register it with a recovery service such as BoomerangIt, YouGetIt-Back.com, or zReturn. Such services report recovery rates of 75 percent and higher on tagged items (inclusion of an 800 number and offers of rewards probably encourage honest finders).

The normal sequence of events is that you order the tags online and then register them (along with a description of the device you stuck each one to) at the service's Web site. Usually you pay a small per-item fee in the neighborhood of \$5 to \$10, with quantity discounts.



BELKIN'S USB Laptop Security Alarm works in much the same way as a bicycle cable lock.

If a thief steals your laptop or smart phone, a preinstalled tracking and recovery program can help you get it back. Various packages—among them Absolute Software's Computrace-Complete (\$50 per year), Brigadoon's PC PhoneHome (\$30 lifetime), Inspice's Inspice Trace (\$30 per year), XTool's Laptop Tracker (\$40 per year for the Small Business Edition), and zTrace Technologies' zTrace Gold (\$50 per

year)—have software that communicates periodically with a central server maintained by the service if the stolen laptop or device happens to be connected to the Internet. When this occurs, the service uses the connection's IP address or GPS receiver (if available) to track the item, and then calls law enforcement authorities to recover it.

Some tracking products can also wipe out critical data if a laptop is stolen, or can take a photo of the thief if the machine has a built-in camera. Frequent travelers may want to consider getting a laptop alarm. For example, the Belkin USB Laptop Security Alarm (\$55), a lockable cable that you loop around something fixed (like a bicycle cable lock), sounds an alarm if someone cuts it. The Doberman Laptop Defender Portable USB Computer Alarm (\$30) incorporates a motion sensor that triggers a loud alarm if the device attached to it is moved. When you want to move your laptop, you disable the alarm.

—Becky Waring

Low-Cost Dell All-in-One Has a Few Small-Biz Chops

THE DELL 948 All-in-One color inkjet multifunction printer offers reasonable performance for a low price, and it includes a couple of features that higher-volume users should appreciate.

One of the main attractions is a 25-sheet automatic document feeder to



DELL'S 948 ALL-IN-ONE has an automatic document feeder and automatic duplexing.

help you manage bigger jobs. In addition, the 948 All-in-One can scan a two-sided document (with manual intervention) and print a duplex copy, saving you money on paper costs. We also liked the simplicity of the printer's control panel, which consists of just a few buttons and a scrolling two-line LCD screen with plain-English menu items.

The 948 All-in-One has only a USB connection (Dell sells an 802.11b/g adapter for \$70 and a Bluetooth adapter for \$30), but it offers the media slots needed for photo printing. Though the 100-sheet input tray is small, the 50-sheet, foldout output tray is sturdy.

The 948 All-in-One's performance is not stellar, but not bad either. In our tests, text pages exited at a decent 7.6 pages per minute, but graphics pages crawled at 1.7 ppm. On plain paper,

letters looked nicely black but slightly fuzzy, as did graphics, which were also grainy and oversaturated. Using Dell's photo paper helped considerably—we noted milder oversaturation and reasonable detail. Ink costs vary: Printing blocks of plain text is a bit steep relative to other printers, but printing full pages with small amounts of cyan, magenta, yellow, and black is cheap.

We've tested faster and flashier multifunction inkjets, but the special features of Dell's 948 All-in-One make it more useful than others in its price range.

—Melissa Riofrio



948 All-in-One MFP | Dell

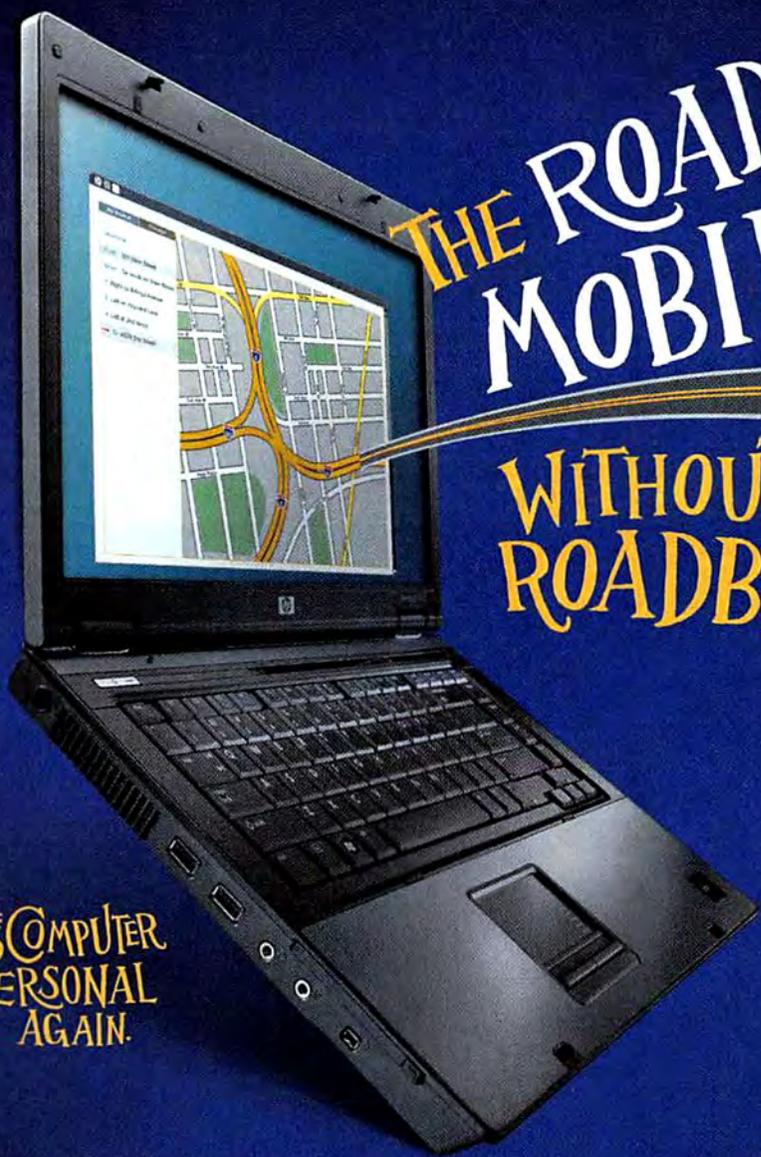
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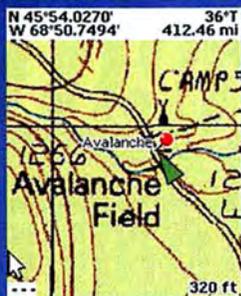




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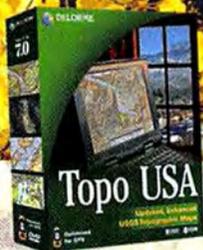


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Security Alert

Services Are Tapping People Power to Spot Malware

BY ERIK LARKIN

PEOPLE-DRIVEN SECURITY, an approach that pools the judgments of individual participants to identify new threats, is gathering momentum, with uses popping up in everything from antimalware and spam blocking to site filtering.

OpenDNS's Domain Tagging, introduced in February, is the latest example of this kind of strength in numbers. The free Web-filtering service allows subscribers to block sites in their choice of categories. But instead of one company deciding whether a site is malicious, pornographic, or otherwise unsavory, anyone who volunteers can help do the filtering.

Illustrating the trend's extent, Google created a page last fall where anyone can submit a site that they believe to be malicious (find.pcworld.com/59927). Once Google verifies a submission, it adds the tainted site to a shared blacklist. Other free and paid services for tracking attacks, identifying malware, and blocking spam are also tapping such people power.

Us Versus Them

The movement is achieving critical mass just in time, potentially overcoming one problem with such free exchange of information: At sites such as VirusTotal (where people can scan files believed to be malicious and share new finds), wrongdoers can use the information too (find.pcworld.com/59929).

"The good guys need to out-share the bad guys to help counter them," says Johannes Ullrich, chief research officer at the Internet Storm Center (ISC). The center's free D-Shield service analyzes data from people's firewalls to track breach attempts. With a thousand firewalls being tracked, the center can then identify an at-risk machine and alert its owner.

Companies are turning to the wisdom of crowds to fight increasingly sophisticated phishing, spam, and nefarious sites.



OpenDNS's PhishTank (find.pcworld.com/59930), launched in 2006, identifies phishing sites based on user submissions and community analysis. As a result, flagged sites are blocked for people who use OpenDNS for domain-name lookups. The Domain Tagging service, which expands on the idea behind PhishTank, permits any person who signs up to submit a site to a category, such as social networking. Other users then vote on that submission, and if enough people okay it, the site joins the domain-tagging lists. To help prevent incorrect categorizations or attempts by crooks to game the system, votes from trusted users have more weight than do those from people whose submissions have been voted down.

"Using a community costs less, is more thorough, and is more in real time," says David Ulevitch, chief executive of OpenDNS.

User Involvement Is Key

Submitting a suspicious site to Google allows any Web surfer to act as an Internet watchdog, but doing so is a somewhat altruistic act, since you don't see an immediate benefit. Mozilla's upcoming Firefox 3 browser (find.pcworld.com/59931), however, will use the Google blacklist to block known malicious sites.

McAfee employs VirusTotal's shared information. The company receives more than 200,000 samples per month from the site, says Dave Marcus, security research and communications manager for McAfee Avert labs. He says that antivirus companies share with one another the thousands of samples they receive directly from users, too.

Marcus notes that the increase in user involvement is coming at a crucial juncture, as targeted threats are on the rise: "User submissions are more important than ever," he says.

When you submit a virus sample, the antivirus engines >>

No honor among thieves: A Moroccan group is offering free phishing kits to amateur scammers—but the kit sends the valuable data it collects to the Moroccan masterminds. See find.pcworld.com/59975.



BUGS & FIXES STUART J. JOHNSTON

and labs analyze it to decide whether it is malicious. But with spam, your eyes are often the best analytical tool available.

Though automatic filters in e-mail clients and servers can stop some junk mail, spammers typically test their trash to make sure it can bypass automatic



BY ALLOWING PEOPLE to tag Web domains, as well as to vote on submissions, OpenDNS can categorize and filter the sites.

filters before they send it out. To combat that tactic, several successful tools, such as those typically used by Web-based mail providers and companies such as Cloudmark, harness the collective power of millions of human eyes.

"Spam will always get through," says Jamie de Guerre, chief technology officer of Cloudmark. "So it's a matter of how quickly can antispam respond."

Cloudmark's system lets people click a "This is spam" button when they get an obnoxious e-mail. When anyone does so, that person's judgment joins those of other users, based on a fingerprinting system that can track a message even if a few words or image pixels change.

As in OpenDNS's filtering system, each Cloudmark user has his or her own reputation. If the rest of the community agrees with your assessments, you gain a high reputation. If other users often disagree with your verdicts (suggesting that you might be a spammer trying to mess with the ratings), your reputation declines.

Together, people-powered tools and sites work to build genuine security that benefits the entire online community. "They are a very strong part of Internet security," de Guerre says.

Rogue Packets Stalk Windows Vista, XP

JUST IN TIME for spring, Microsoft has been busy tending to a new swarm of

bugs, including a critical hole in Windows Vista and XP that could expose you to an early-season bite without your doing anything other than being online.

In an attack, a cracker could broadcast rogue TCP/IP packets to a range of addresses on the Internet, possibly including your PC's. Sounds all too common, right? These rogue packets, however, are designed to trick their way past Windows' security and hijack your PC, making your machine part of a botnet for sending out spam—or worse, a self-copying worm.

So far, no attacks have occurred. But proof-of-concept code is floating around, so don't put off applying the patch. If you've enabled automatic updates, Microsoft will push the patch to you. Otherwise, you can grab it at find.pcworld.com/59937 and install it yourself.

End Excel Zero-Day Attacks

Microsoft is scrambling to plug a hole in Excel that's already under a zero-day attack (the name means the exploit was out before a patch was). Though Microsoft characterizes the attack as "limited," the problem is serious.

The vulnerability is in Excel 2003 Service Pack 2 for Windows (and earlier), and in Excel 2004 for Mac. Feeling smug because you don't have Excel? Don't be. Even Excel Viewer 2003 is at risk. You're fine if you use Excel 2007 for Windows or Excel 2008 for Mac, or if you've installed SP3 on Excel 2003 for Windows.

The attacks can hit you whether you open a poisoned e-mail attachment or click on a tainted Excel file on a Web site.

The lesson: Always question file attachments, especially if they seem

Plus: Firefox rushes plug-in patch; how to lock down your digital picture frame.

unusual somehow. "Were you expecting it? Maybe pick up the phone and call that person and ask if they sent it," says Alfred Huger, vice president of engineering for Symantec Security Response.

Firefox Plug-Ins Pose Risk

Mozilla plugged a hole that could enable Firefox to leak information like a sieve, owing to a flaw in "flat packed" browser add-ons. Such add-ons—and there are a lot of them at risk—are the kind that are not stored as 'jar' files. The bug allows a malicious program to hack into directories on your computer, looking for commonly named files that may contain information such as browser cookies holding user names and passwords.

If you have Firefox's automatic updates on, you will be prompted to update. Otherwise, head to getfirefox.com to download Firefox version 2.0.0.12.

When Picture Frames Attack

Digital picture frames were hot gift items this past Christmas. Unfortunately, some frames sold by Best Buy were infected with a Trojan horse. The infected units are all 10.4-inch versions, model number NS-DPF10A under Best Buy's Insignia store brand. If you don't have antivirus software and you've already plugged the frame into your PC, the malware could have spread. See find.pcworld.com/59940 for more details and a link to assistance.



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'Hacker Safe' Seal Under Attack Following Site Breach

MORE THAN 80,000 Web sites display a small logo proclaiming them "Hacker Safe." But the company behind this security seal, ScanAlert, found itself on the defensive recently after technology retailer Geeks.com, which carries the seal, warned some customers that their personal and credit card data may have been compromised by hackers.

ScanAlert's seal is the most widely used, and can be found on dozens of marquee-brand sites, such as Sony's. Its popularity attracted McAfee, which bought ScanAlert last year.

A ScanAlert spokesperson says that "preliminary evidence" suggests the Geeks.com breach, reported to an

undisclosed number of customers in January, likely occurred during one of several periods last year when ScanAlert had withdrawn its certification from Geeks.com after discovering vulnerabilities on the Web site. Nevertheless, the incident has rekindled a debate about the value of such seals. Web site managers say that ScanAlert's automated-scanning service can sniff out some security flaws and that the logo is a valuable marketing tool. Detractors say that it can give companies and customers a false sense of security.

"[The] seals are completely ludicrous," says David Kennedy of SecureState. Upon a request for testing from the owners of ten Hacker Safe sites, his company was able to break into and easily access financial and customer data from nine of the ten sites.

McAfee's Tim Dowling acknowledges that "Hacker Safe is not perfect," but says that the service does help users defend their sites. See the full story at find.pcworld.com/59965 for more on the issue, and to weigh in on the debate.

—Jaikumar Vijayan



PRIVACY WATCH ERIK LARKIN



Does Your Security Suite Also Protect Your Privacy?



PRIVACY CONTROL. Personal-information protection. Identity control. All are great-sounding names for features you may have seen in your PC's security suite. But what do they actually do?

To find out, I dug into the privacy features of the top suites from *PC World's* latest security roundup

(find.pcworld.com/59327): Symantec Norton Internet Security 2008's Privacy Control (part of its free Norton Add-on Pack), Kaspersky Internet Security 7.0's Privacy Control, McAfee Internet Security Suite's Personal Information Protection, and BitDefender Internet Security Suite 2008's Identity Control.

With Symantec, McAfee, and BitDefender, you must define the information that you want to protect, such as Social Security and credit card numbers. Symantec and McAfee never prompt you to do so, but BitDefender alerts you until you either comply or tell it to stop. With Kaspersky, you don't give any instructions, since it automatically blocks malware that attempts to access your computer's Windows Protected Storage area, including sensitive Web-form information such as credit card numbers.

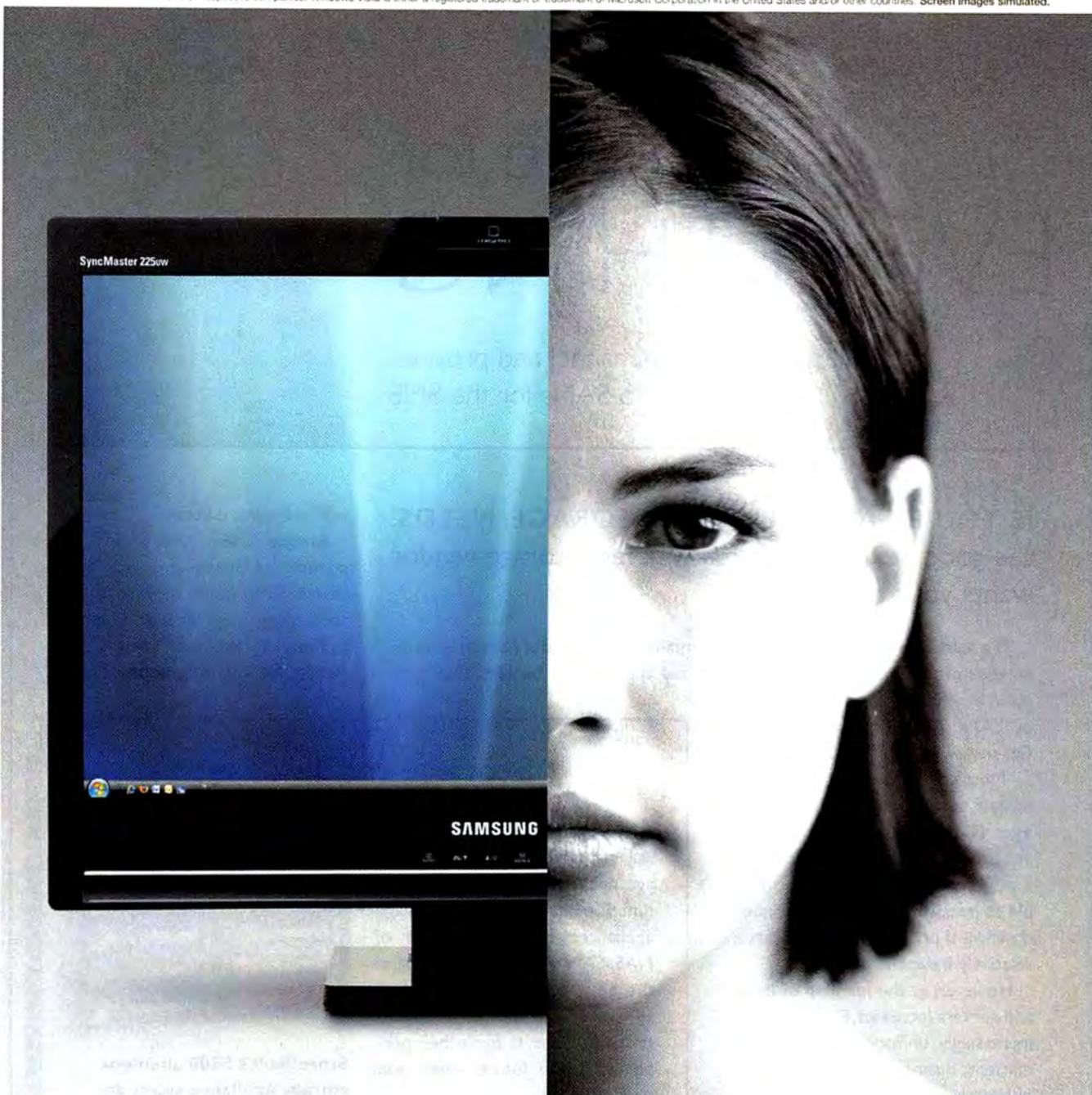
If the Symantec, McAfee, or BitDefender suite notices that your PC is about to send the information you registered over the Internet, the program blocks the transmission or prompts you to allow or disallow it. Symantec checks Web, e-mail, and IM connections,

The major suites promise to safeguard your private data—but their protections vary.

BitDefender scans Web and e-mail traffic, and McAfee handles just Web data. All three are limited to scanning nonencrypted connections, so they won't see anything you send to secure sites, but such <https://> sites are mostly already protected. And since many Internet service providers accept e-mail only via an encrypted connection, the privacy apps can't scan those messages either. Generally, though, they can scan Web-based e-mail such as Google's Gmail, because most providers require you to use a secure connection to log in but switch to a nonsecure connection once you are in.

Symantec and McAfee prompt you to allow sending personal data, and substitute asterisks for the data when you choose to block sending it. BitDefender blocks outright any e-mail or Web pages in which you've entered personal data without giving you any option to make it do otherwise, which can be annoying.

If you have Symantec's package or McAfee's suite, take the few minutes required to define your sensitive information. I can't think of a site that would ask for such details and not be encrypted, and setting up the privacy protections will allow you to receive warnings. BitDefender's feature, however, may irritate more than it protects because it doesn't allow sending protected data even if you trust the situation. Kaspersky's feature is both more and less limited, since its malware-focused approach doesn't require any extra setup but protects only a subset of your information. ●



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IF YOU'RE AN SMB WITH STORAGE NEEDS, the good news is that virtually every storage vendor wants your business.

The bad news is that the large number of options and features can seem bewildering: Do you need NAS or SAN? iSCSI or Fibre Channel? On-site or off-site backup?

Most computer users are accustomed to **direct-attached storage (DAS)** in which storage is attached on a one-to-one basis with a workstation or server. DAS is simple to install and, with the continued downward price/performance curve, relatively inexpensive.

However, as the number of users and servers increases, DAS becomes increasingly unmanageable and less efficient. Businesses large and small ultimately are compelled to migrate to network-based storage that produces significant economies of scale and opens up new opportunities to leverage backup, virtualization, off-site archiving and more.

How SAN and NAS Differ
Storage area network (SAN) and **network-attached storage (NAS)** sound much like peas in a pod, and to some degree they are, in that they allow for consolidation of storage while providing access to

many endpoints. But how they do so and the primary benefits they pro-

vide are quite different.

Among SMBs, "the largest proportion of spending is still going toward DAS but is moving to SAN technology," says Pauline Courtau, a New York-based analyst with Access Markets International (AMI)

Storage made easy

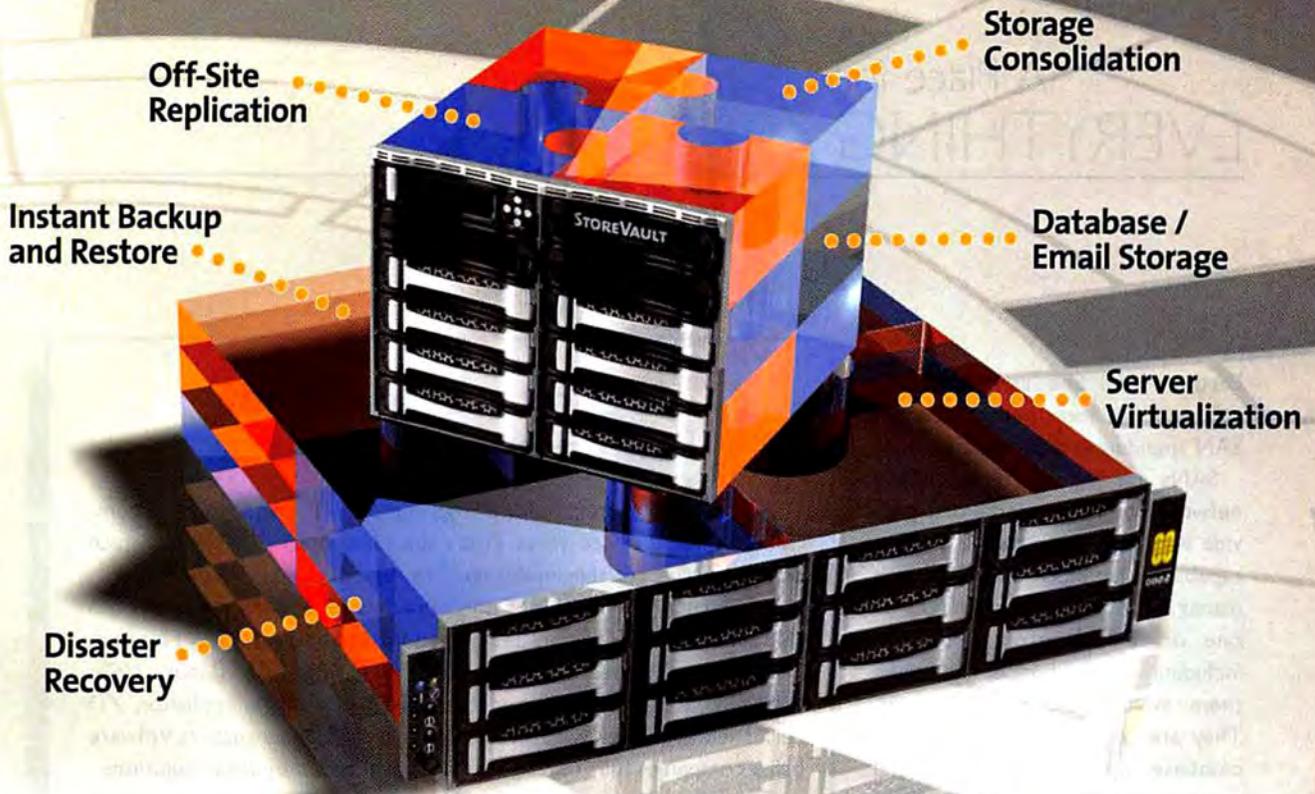
StoreVault wants to take the fear factor out of SMB storage decisions. StoreVault devices function as all-in-one storage appliances that are capable of NAS, SAN and DAS right out of the box. You can buy StoreVault to solve one set of problems today, but use it for other purposes in the future when your needs change.

The StoreVault S300 is a scalable, all-in-one networked storage appliance that is customized for SMBs and ideal for remote or branch office installations. Starting at under \$3,000 for a 1TB solution, it delivers proven data center technology, including advanced security, scalability, data protection and simplified data management, at a price point that is unmatched.

As a division of enterprise storage vendor Network Appliance, StoreVault combines the knowledge of enterprise storage needs and strategies with the ease of use and lack of complexity that SMBs require. Robust for growing organizations, StoreVault appliances are simple enough to be implemented and managed by the IT generalist who is responsible for all IT decisions, from storage to telephones.



StoreVault's S300 all-in-one storage appliance starts at under \$3,000.



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Partners Inc. She says NAS has achieved significant penetration but SAN spending is growing faster.

SANs are high-speed specialized networks or subnetworks that provide very high-performance storage capabilities for block data. SANs can manage and pool the resources of one or multiple storage devices, including disk and tape, and make them available to many servers. They are very well suited to large database applications. Additional storage can be added easily, without disrupting applications.

Many smaller organizations in the past were leery of SANs because they were managed primarily over Fibre Channel topologies. However, the advent of iSCSI interfaces simplified things and lowered costs by making it possible to manage block data across TCP/IP and Ethernet, without requiring Fibre Channel.

NAS systems are storage appliances optimized for file sharing and are attached via Ethernet cable to a local area network with an assigned IP address. A NAS appliance can replace multiple file servers, making management easier and reducing costs. They can be managed from anywhere on the LAN and typically support both Sun Network File System (NFS) and Common Internet File System (CIFS) to enable file sharing among Unix- and Windows-based workstations.

SMBs worried about choosing one technology over the other, or having to build both NAS and SAN capabilities, now have the option of acquiring all-in-one or so-called multilingual appliances that can be used

A good storage fit for companies of all sizes

What's good storage for a large company is good for a small company, and vice versa. That's the philosophy of Celeros, which delivers a truly scalable, multilingual storage device with EzSANFile.

EzSANFile XD Series not only supports iSCSI SAN natively, it can also support Fibre Channel SAN functionality and a variety of Network File Services such as Microsoft CIFS (SMB), NFS (Linux, Unix, MacOSX), AppleTalk, FTP and SecureFTP in a single appliance. XD Series' compatibility with virtualization technologies such as VMware helps companies fully realize cost savings afforded by these solutions.

Combining the simplicity of a NAS system with the performance of SAN, the easy-to-manage EzSANFile appliance lowers the total cost of ownership (TCO). Available with capacities ranging from 1TB to 48TB, the system can function as a consolidated primary storage system for small enterprises, or as a powerful backup and archiving unit for large enterprises. An intuitive Web-based interface manages SAS, SATA, SAN, NAS and backup technologies in one single system, offering unprecedented ease of administration.



as either SAN or NAS, or as both simultaneously.

Protecting All That Data

As companies become more reliant on huge storehouses of data, whether database or files, it's ever more important to have backup procedures in place so the data can be restored in the event of a primary storage failure.

Disk-to-disk backup or file system mirroring are viable options that should be considered in combination with tape backup, as the expanding volumes of data are overrunning the capabilities of tape. Bear in mind that some companies

may be required to keep tape archives in a safe, off-site location. Online backup, archiving and replication are increasingly accepted options, according to market research firm IDC.

Noting that storage needs are growing more diverse, IDC says vendors are changing the way they design, deliver and deploy storage solutions in an effort to provide "role-based storage solutions" to fit specific needs. Many of these will be geared to SMBs. In a recent report, IDC states: "The SMB market continues to be on the agenda of most, if not all, top disk storage system vendors."



Bringing SANity to Storage Costs



"Celeros is the one to watch..."

InfoWorld

Celeros EzSANFiler delivers full featured enterprise storage to SMB:

- Start as small as 1TB and scale up to 100s
- Sets up in minutes and Simple to manage
- Brings all your storage needs to one appliance (SAN, NAS, Backup, Archive, and more)
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Celeros Corporation

www.celeros.com

Contact info: sales@celeros.com

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Robert Archer *CE Pro magazine*

Engineered for high-performance AV systems by APC power experts, APC AV Power Solutions will:

- Protect your equipment and presets from harmful power fluctuations
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Reviews & Rankings



The Really Big Picture: 50- and 52-Inch HDTVs

PCW Test Center

REDUCED production costs, higher sales volume, and a bunch of new models have lowered prices on many big HDTVs.

The PC World Test Center evaluated eight 50- and 52-inch HDTVs and found that one of the least expensive sets in the group, the Vizio GV52LF, performs nearly as well as much higher-priced sets like the top-performing Sony Bravia KDL-52XBR4. The Vizio's solid performance and low price (nearly 40 per-

The latest big HDTVs deliver stellar performance, gobs of the newest inputs, and unique picture adjustment features for great prices.

cent less than the Sony's) vaulted it into second place on our chart. In the top spot, the Samsung FP-T5084 did not perform quite as well as the Vizio, but it comes with a better array of features and doesn't cost much more.

Three models we tested—the Pioneer Kuro PDP-5010FD, the Samsung LN-T5281F, and the Sharp

LC-52D92U—fell just short of making the chart. For reviews of these models and expanded reviews of the TVs ranked in our chart, visit find.pcworld.com/59979.

Samsung FP-T5084

The Samsung FP-T5084 offers pleasing colors and sharp picture detail in a sleekly designed cabinet.

Moreover, this 50-inch plasma HDTV has an extremely affordable price (\$2400), which helped it capture the Best Buy in our chart of 50- and 52-inch HDTV sets.

Colors in high-definition scenes were luxuriously rich. An HD scene of *The George Lopez Show* revealed bright, natural colors and realistic skin tones. We judged the set's standard-def quality to be slightly above average.

The FP-T5084 offers a slew of adjustments, including



56 GATEWAY ONE
GZ7220



67 WACOM CINTIQ
12WX



73 RAZER MAKO 2.1
Desktop Speakers



78 LINUX-BASED Everex
and Mirus PCs

RGB gain and offset controls in the White Balance part of the on-screen display menu. The television also has Samsung's DNIe (Digital Natural Image engine), which is supposed to reduce noise, enhance color, and improve motion processing to make pictures look sharper.

The screen could use a better antireflective treatment, as reflections were distracting during some dark scenes. The speakers, located on either side of the TV, are far from the best. In *Phantom of the Opera*, audio sounded brassy yet muddled.

It's not the most advanced or full-featured HDTV, but Samsung's FP-T5084 scored very well overall because it's inexpensive, well designed, and a solid performer.

Vizio GV52LF

The Vizio GV52LF HDTV, a 52-inch LCD model, earned impressive scores on many of our PC World Test Center TV tests. The set carries an affordable price (\$2200).

High-def and standard-def video looked sharp and natural on the GV52LF, and no other TV in the group earned an overall score of Very Good for screen brightness. In a

PC WORLD TOP 5 50- AND 52-INCH HDTVs

MODEL	PCW Rating	Performance	Features
1 BEST BUY Samsung FP-T5084 \$2400 find.pcworld.com/59769	82 VERY GOOD	<ul style="list-style-type: none"> • HDTV: Good • SDTV: Good • DVD: Good • Overall design: Very Good 	<ul style="list-style-type: none"> • 1920-by-1080-pixel screen • Two ATSC/NTSC tuners • Inputs: three HDMI, two component • Not CableCard-ready
BOTTOM LINE: This set scores with a combination of good performance, reasonable price, and competitive features.			
2 Vizio GV52LF \$2200 find.pcworld.com/59770	81 VERY GOOD	<ul style="list-style-type: none"> • HDTV: Very Good • SDTV: Very Good • DVD: Good • Overall design: Very Good 	<ul style="list-style-type: none"> • 1920-by-1080-pixel screen • One ATSC/NTSC tuner • Inputs: four HDMI, two component • Not CableCard-ready
BOTTOM LINE: Pleasing images and a rock-bottom price make the Vizio GV52LF an outstanding HDTV value.			
3 LG Electronics 50PY3DF \$2500 find.pcworld.com/59775	77 GOOD	<ul style="list-style-type: none"> • HDTV: Good • SDTV: Good • DVD: Good • Overall design: Very Good 	<ul style="list-style-type: none"> • 1920-by-1080-pixel screen • One ATSC/NTSC tuner • Inputs: three HDMI, two component • Not CableCard-ready
BOTTOM LINE: Though not as good a performer as others in its size category, this TV is well-designed and enticingly priced.			
4 Sony Bravia KDL-52XBR4 \$3500 find.pcworld.com/59774	76 GOOD	<ul style="list-style-type: none"> • HDTV: Very Good • SDTV: Good • DVD: Very Good • Overall design: Very Good 	<ul style="list-style-type: none"> • 1920-by-1080-pixel screen • One ATSC/NTSC tuner • Inputs: three HDMI, two component • Not CableCard-ready
BOTTOM LINE: Sony's premium TV earns a stellar score for high-definition performance and wins additional points for design.			
5 Mitsubishi LT-52244 \$3500 find.pcworld.com/59772	75 GOOD	<ul style="list-style-type: none"> • HDTV: Fair • SDTV: Fair • DVD: Fair • Overall design: Very Good 	<ul style="list-style-type: none"> • 1920-by-1080-pixel screen • Two ATSC/NTSC tuners • Inputs: four HDMI, three component • CableCard-ready
BOTTOM LINE: This beautifully designed HDTV set has a CableCard slot but is undercut by subpar performance.			

CHART NOTES: Prices and ratings are as of 02/07/08.

segment of *The George Lopez Show*, it showed true-to-life skin tones and few digital artifacts in the background.

The GV52LF's four HDMI ports let high-def aficionados connect several devices. A glossy black bezel borders the set, which sits atop a silver stand and silver built-in speakers that have plenty of volume but sounded flat.

Though the blue on-screen display menu looks less sophisticated than most competing models, it offers clear, easy-to-navigate picture options. The Color Temperature menu provides controls for red, green, and blue output. You must activate picture-in-picture or picture-by-picture by going through the menu.

The Vizio GV52LF delivers

competitive performance, attractive options, and a killer price. Budget-conscious HDTV shoppers should give this set serious attention.

LG Electronics 50PY3DF

LG's 50PY3DF is inexpensive and well-designed. This 50-inch plasma HDTV turned in performance marks near >>

Reviews & Rankings

the average in our tests, with an overall score of Good.

Color quality on standard- and high-definition scenes was strong; brightness and contrast results were okay. Skin tones in a *George Lopez Show* segment and in a talk show seemed fairly realistic, though jurors noticed some distracting pixelation. A standard-definition presentation of a San Francisco Giants baseball game produced balanced, nicely saturated oranges and greens.

Among the many connections that the LG 50PY3DF offers are three HDMI inputs. A USB port on left side of the 50PY3DF lets you attach a flash-card reader or a thumb drive and display photos.

The TV swivels after you loosen a tiny bolt in the back of the unit. The model's display settings buttons are invisible until you lightly press a touch-sensitive pad on the set's lower right-hand side, beneath the bezel.

A fairly well-organized on-screen display menu lets you adjust the TV's many settings, which include red, green, and blue controls. Presets for Dynamic, Stan-

dard, and Mild adjust contrast and brightness. The built-in speakers installed on the sides of the TV produced rich audio in scenes from *Phantom of the Opera*.

Despite its middle-of-the-road performance, the LG 50PY3DF has many strengths and features, including good speakers, a two-year warranty, and a reasonable price.

Sony Bravia KDL-52XBR4

Sony's Bravia KDL-52XBR4 HDTV has a distinctive and attractive cabinet design to match its impressive performance. This 52-inch LCD set posted the highest overall image-quality score in its size category, and its price (\$3500) is average among the sets in our test group.

In *PC World's* lab testing, the set delivered unrivaled brightness and contrast quality, including easily discernible detail in dark areas of a segment from *Lord of the Rings: Return of the King*.

Its black bezel is surrounded by a glass frame with a metal border for a unique and pleasing "floating glass" effect. (Replacement bezels



HIDDEN BUTTONS are an unusual feature of the LG 50PY3DF.

are available, as well.) The on-screen display menu looks just like the ones on the PlayStation 3 and the PlayStation Portable. You use smoothly sliding animated icons to navigate myriad options for adjusting the TV's display settings.

Built-in speakers on the TV provided rich, full sound. Playing a Blu-ray version of *Phantom of the Opera*, we heard a good range of audio, from background noises to the main singers' voices.

Videophiles will appreciate the Bravia KDL-52XBR4's natural-looking colors and fine reproduction of image detail. But less-exacting viewers will probably be just as happy with one of the lower-priced models on our chart.

Mitsubishi LT-52244

Mitsubishi's LT-52244 consistently received performance scores of Fair—the lowest among the eight 50- and 52-inch HDTVs we tested for this article.

Oversaturated colors were this 52-inch LCD TV's chief fault. In our tests of both high- and standard-definition shows, jurors noted images marred by garish tones and some background pixelation.

The TV has a setting called DeepField Imager, which adjusts contrast and brightness dynamically as it analyzes images for dark and light areas. However, I found the setting resulted in too bright an image; I preferred using the TV's presets.

The speakers didn't provide the range and fullness of sound turned in by other TVs. Background audio and orchestral music for *Phantom of the Opera* sounded shrill. The built-in USB port works well for displaying photos, but loaded pictures slowly.

The TV's base swivels 30 degrees to the left or right, for increased flexibility in positioning the TV panel. The included CableCard slot allows you to avoid using an obtrusive cable box.

The Mitsubishi LT-52244's performance is lackluster. You can find lower-priced alternatives that perform better, such as the Samsung FP-T5084 and Vizio's GV52LF.

—Roy Santos



OPTIONAL BEZELS for Sony's KDL-52XBR4 cost \$350 each.

MORE ONLINE

You can read in-depth reviews for all the high-definition TVs we test at our HDTV Info Center (find.pcworld.com/60085).



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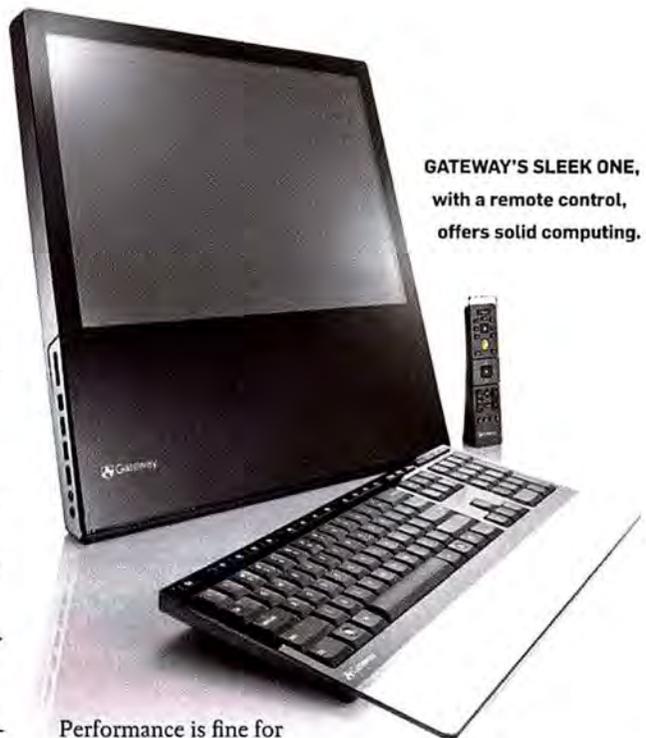
Gateway's Stylish, Pricey All-in-One

THE ONE HAS arrived. No, I'm not talking about Keanu Reeves and the Matrix, but Gateway's One GZ7220, whose display and PC components are integrated into a single, slim unit. Think of an iMac in glossy black with a slightly smaller, 19-inch, 1440-by-900 screen, and you're on the right track.

The One has neat design flourishes that rival those of

the iMac. The black mouse and keyboard are wireless. Several ports—one gigabit ethernet, four USB, and one S/PDIF audio—are on the external power supply, so under most circumstances you have just one cable running to the main unit. On the main unit are three USB ports, a slot-loading DVD burner, and a memory reader.

Even external speakers have been eliminated. The One has built-in NXT Sound-Vu planar technology, which vibrates the front panel to produce decent sound. Our \$1800 test machine also includes an external USB TV/FM tuner, enabling it to pull double duty as a TV, though it lacks an HD tuner.



GATEWAY'S SLEEK ONE, with a remote control, offers solid computing.

Performance is fine for workday chores. With a 2-GHz Core 2 Duo T7250 CPU, 3GB of DDR2 memory, and a 500GB hard drive, the One earned a solid but modest score of 87 on WorldBench 6 Beta 2 tests.

Like the iMac, the One is

priced between a value PC, which it overwhelmingly outperforms, and a power PC, which it certainly doesn't. But you're paying for style, and the One has a lot of it.

—Jon L. Jacobi

76
GOOD

One GZ7220 | Gateway

Nicely styled all-in-one PC is not cheap. List: \$1800

find.pcworld.com/59972

Software Helps LaCie's Basic Home Server Shine

HOME SERVERS are becoming more popular with families who want to share their music, videos, and photos inside and outside the home. I looked at LaCie's 500GB Ethernet Disk Mini—Home

Edition server, and was impressed. It's not as powerful as Hewlett-Packard's \$700 MediaSmart Home Server, but at \$210, it offers the core benefits of a server without busting your budget.

The LaCie device connects to your router via ethernet. Setting it up took about 40 minutes, mainly because the installation app didn't automatically configure my router's UPnP settings, so I had to tweak them manually.

The included HipServ app (which you install on any computer that you want to use to access the server)

turns the server into an adept storage device that provides media server functions such as streaming video.

HipServ has basic backup features. It can back up and restore files, and it allows you to schedule folder backups. It doesn't have any system recovery features, though.

Streaming audio and video both inside and outside my home network worked well. When used inside a network, the LaCie unit supports iTunes, which allows you to create playlists.

You can designate any folder as private; in addition, you can grant users permission to view only the contents of a folder you've

given them access to, or you can give them rights to add and delete information.

The LaCie server is easy to manage and use. If you're interested in more-complete PC system backups and advanced remote access features, however, you'll have to dig deeper into your pockets for HP's product.

—Tom Spring



LACIE'S HOME SERVER is about the size of a hardcover book.

82
VERY GOOD

Ethernet Disk Mini—Home Edition | LaCie

Basic home server is easy to manage and use. List: \$210
find.pcworld.com/60029

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Acer recommends Windows Vista® Ultimate.

AMD

Turion™ 64 X2
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March/April 2008

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Acer® Aspire® 5520



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- 5-in-1 card reader
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AMD Athlon™ 64 X2 dual-core Processors for Notebooks TK-55
Genuine Windows Vista® Home Premium
(LX.AJ70X.027)



Acer X263Wbi

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- 1920 x 1200 native resolution
- 3000:1 dynamic contrast ratio
- 170°/160° horizontal/vertical viewing angles
- VGA, HDMI (HDCP) signal connectors
- 350 cd/m² brightness
- 5ms gray-to-gray response time
- Internal power adapter

\$579

(ET.GX3WP.001)



Acer AL2416WBSD

- 24" wide-screen TFT LCD
- 1920 x 1200 native resolution
- 1000:1 contrast ratio
- 160° horizontal viewing angle
- 160° vertical viewing angle
- VGA, DVI (HDCP) signal connectors
- 400 cd/m² brightness
- 5ms response time
- Internal power adapter

\$399

(ET.F16WP.B02)

Acer recommends Windows Vista® Home Premium.



Acer® Aspire® 7520

- AMD Turion™ 64 X2 Dual-Core Mobile Technology
- Genuine Windows Vista® Home Premium
- 2GB DDR2 667 SDRAM
- 250GB¹ hard drive
- Integrated Super-Multi drive (DVD+R, DVD-R, DVD-RAM)
- 5-in-1 card reader
- 17.0" WXGA+ (1440 x 900) TFT display, Acer® CrystalBrite Technology
- NVIDIA® GeForce® 8400M graphics
- 802.11b/g WLAN, Bluetooth®, gigabit LAN, V.92 modem, integrated webcam
- One-year limited warranty²



Acer Aspire 7520-5823

\$949

AMD Turion™ 64 X2 Dual-Core Mobile Technology TL-58
Genuine Windows Vista® Home Premium
(LX.AN30X.090)



Acer SignalUp

This technology strategically positions two PIFA antennas on the notebook's top panel to generate an omni-directional signal sphere for superior wireless reception.



Acer GridVista

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Acer CrystalEye

Enjoy all the potential of video conferencing with the integrated Acer CrystalEye, simple to use and compatible with internet-based video and voice communication services.



Acer Bio-Protection

Gain an extra layer of security while eliminating the need to remember passwords and PINs with the Acer Bio-Protection fingerprint reader.

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Acer® LCDs



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- 22" wide-screen TFT LCD
- 1680 x 1050 native resolution
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- 170° horizontal viewing angle
- 160° vertical viewing angle
- VGA, DVI (HDCP) signal connectors
- 300 cd/m² brightness
- 5ms response time
- Internal power adapter

\$239
(ET.2216B.0D0)



Acer AL2016WBbd

- 20" wide-screen TFT LCD
- 1680 x 1050 native resolution
- 800:1 contrast ratio
- 160° horizontal viewing angle
- 160° vertical viewing angle
- VGA, DVI signal connectors
- 300 cd/m² brightness
- 5ms response time
- Internal power adapter

\$219
(ET.D16WP.B04)



Acer AL1917 Cbmd

- 19" TFT LCD
- 1280 x 1024 native resolution
- 700:1 contrast ratio
- 150° horizontal viewing angle
- 135° vertical viewing angle
- Two 1.0W integrated speakers
- VGA, DVI signal connectors
- 300 cd/m² brightness
- 5ms response time
- Internal power adapter

\$229
(ET.1917B.0DC)



Acer AL1917W Abd

- 19" wide-screen TFT LCD
- 1440 x 900 native resolution
- 700:1 contrast ratio
- 150° horizontal viewing angle
- 135° vertical viewing angle
- Two 1.0W integrated speakers
- VGA, DVI signal connectors
- 300 cd/m² brightness
- 5ms response time
- Internal power adapter

\$199
(ET.C17WPA.04)



Acer AL1916 Cb

- 19" TFT LCD
- 1280 x 1024 native resolution
- 700:1 contrast ratio
- 150° horizontal viewing angle
- 135° vertical viewing angle
- VGA signal connector
- 300 cd/m² brightness
- 5ms response time
- Internal power adapter

\$219
(ET.1916B.00C)



Acer AL1916W Ab

- 19" wide-screen TFT LCD
- 1440 x 900 native resolution
- 700:1 contrast ratio
- 150° horizontal viewing angle
- 135° vertical viewing angle
- VGA signal connector
- 300 cd/m² brightness
- 5ms response time
- Internal power adapter

\$195
(ET.1916B.W08)

Acer AL1717 Fbd

- 17" TFT LCD
- 1280 x 1024 native resolution
- 800:1 contrast ratio
- 160° horizontal viewing angle
- 160° vertical viewing angle
- Two 1.0W integrated speakers
- VGA, DVI signal connectors
- 300 cd/m² brightness
- 5ms response time
- Internal power adapter

\$189
(ET.B17RP.F04)



Acer X173Wb

- 17" wide-screen TFT LCD
- 1440 x 900 native resolution
- 1000:1 contrast ratio
- 140° horizontal viewing angle
- 130° vertical viewing angle
- VGA signal connector
- 250 cd/m² brightness
- 8ms response time
- Internal power adapter

\$159
(ET.BX3WP.002)



Acer recommends Windows Vista® Home Premium.



Acer® Aspire® 7520



- AMD Turion™ 64 X2 Dual-Core Mobile Technology
- Genuine Windows Vista® Home Premium
- 2GB DDR2 667 SDRAM
- 160GB¹ hard drive
- Integrated Super-Multi drive (DVD+R, DVD-R, DVD-RAM)
- 5-in-1 card reader
- 17.0" WXGA+ (1440 x 900) TFT display, Acer® CrystalBrite Technology
- NVIDIA® GeForce® 7000M graphics
- 802.11b/g WLAN, Bluetooth®, 10/100 LAN, V.92 modem, integrated webcam
- One-year limited warranty²



Acer Aspire 7520-5115

\$899

AMD Turion™ 64 X2 Dual-Core Mobile Technology TL-52
Genuine Windows Vista® Home Premium
(LX.AN30X.010)



Acer QuickCharge

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Acer DASP

Disk Anti-Shock Protection is a technology that safeguards the hard disk against knocks and provides an unmatched level of protection.



Acer CrystalBrite

A technology that delivers enhanced video performance for brilliant images, making it ideal for sophisticated applications such as HDTV and digital games.

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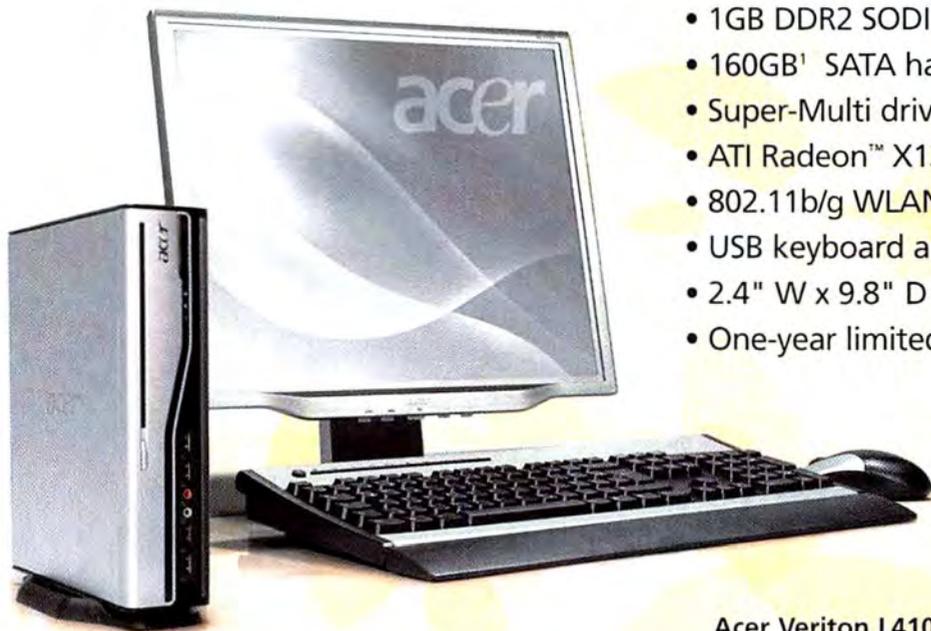


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- One-year limited warranty²

Acer Veriton L410

\$499

AMD Athlon™ 64 X2 dual-core processor 4200+
Genuine Windows Vista® Business
Microsoft® Office Ready (60-day trial)³ and
CD with Genuine Windows® XP Professional⁴
(VL410-UD4201C) or
Genuine Windows® XP Professional
(VL410-UD4201P)

empowering technology

Acer AL1716 Fb

- 17" TFT LCD
- 1280 x 1024 native resolution
- 800:1 contrast ratio
- 160° horizontal viewing angle
- 160° vertical viewing angle
- VGA signal connector
- 300 cd/m² brightness
- 5ms response time
- Internal power adapter

\$185

(ET.B16RPF02)



Acer AL1516 Ab

- 15" TFT LCD
- 1024 x 768 native resolution
- 600:1 contrast ratio
- 130° horizontal viewing angle
- 100° vertical viewing angle
- VGA signal connector
- 250 cd/m² brightness
- 12ms response time
- Internal power adapter

\$169

(ET.15168.000)





Acer® Veriton® M410

- AMD Phenom™ processor
- Genuine Windows® XP Professional
- DVD-Dual drive (DVD+/-RW)
- ATI Radeon™ X1200 graphics solution
- Gigabit LAN
- Keyboard and mouse
- One-year limited warranty²

Acer Veriton M410

\$799

AMD Phenom™ 9600 quad-core processor
Genuine Windows® XP Professional
(VM410-UF9600P)
3GB DDR2 SDRAM and 320GB¹ SATA hard drive

Acer Veriton M410

\$699

AMD Phenom™ 9500 quad-core processor
Genuine Windows® XP Professional
(VM410-UF9500P)
2GB DDR2 SDRAM and 250GB¹ SATA hard drive

Acer Empowering Technology



Acer eLock Management

Acer eLock Management locks and unlocks storage media with password protection for additional security.



Acer ePerformance Management

Acer ePerformance Management optimizes performance to make the most of your computer's power.



Acer eRecovery Management

Acer eRecovery Management is an easy-to-use utility to create backups or restore from your archives.



Acer eSettings Management

Acer eSettings Management provides easy access to boot options, security or general system information.



Acer eDataSecurity Management

Conveniently integrated into the Windows® environment, Acer eDataSecurity Management provides one-click encryption and decryption of your files.



Display sold separately.

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

acer

Acer recommends Windows Vista® Business.



Acer® TravelMate® 5520

- AMD Turion™ 64 X2 Dual-Core Mobile Technology
- Genuine Windows Vista® Business
- 1GB DDR2 667 SDRAM
- 120GB¹ hard drive
- Integrated Super-Multi drive (DVD+R, DVD-R, DVD-RAM)
- 5-in-1 card reader
- 15.4" WXGA (1280 x 800) TFT display
- Integrated ATI Radeon™ Xpress 1250 graphics
- 802.11b/g WLAN, gigabit LAN, V.92 modem
- Fingerprint reader
- One-year limited warranty²



Acer TravelMate 5520-5678

\$699

AMD Turion™ 64 X2 Dual-Core Mobile Technology TL-58
 Genuine Windows Vista® Business
 Microsoft® Office Ready (60-day trial)³ and
 CD with Genuine Windows® XP Professional⁴
 (LX.TKU0Z.003)

empowering technology

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

Protect Your Investment with an Acer Notebook Service Upgrade

Quality is built into every notebook Acer makes, and each comes with a one-year standard limited warranty.⁵ It includes hardware technical support via toll-free phone plus a concurrent International Traveler's Warranty for travel outside the U.S. and Canada. Extra protection is available with one of these upgrades:

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

\$99

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 Excludes extension of International Traveler's Warranty.

It's a tough world out there, and accidents do happen—sticky spills, dangerous drops, nasty knocks—which is why you should consider the Total Protection Upgrade. It runs concurrently with the limited warranty² and limited warranty extension and covers the cost of a replacement unit if your covered notebook cannot be repaired.

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

\$199

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

¹ When referring to storage capacity, GB stands for one billion bytes and MB stands for one million bytes. Some utilities may indicate varying storage capacities. Total user-accessible capacity may vary depending on operating environments.

² For a free copy of the standard limited warranty end-users should see a reseller where Acer products are sold or write to Acer America Corporation, Warranty Department, P.O. Box 6137, Temple, TX 76503.

³ The 60-day trial of Microsoft® Office Ready is available with Genuine Windows Vista® Business only, not with Genuine Windows® XP Professional.

⁴ Genuine Windows® XP Professional can be installed in place of, not in addition to, Genuine Windows Vista® Business.

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800-571-2237 - acer.com/us



ViewSonic's Pretty, Pricy LED-Backlit Monitor

VIEWSONIC'S 22-inch wide-screen VLED221wm is the world's first sub-\$1000 LCD monitor with LED backlight technology, which delivers an evenly bright screen and a wide color gamut. Though it looks great, at \$799 it's still too expensive for most people.

PCW Test Center

77
GOOD

VLED221WM | ViewSonic

Huge premium for this monitor's LED backlight isn't worth it. List: \$799
find.pcworld.com/59925

The VLED221wm offers a 12,000:1 dynamic contrast ratio (which allows the display of impressive blacks), provides great color reproduction, has a 1680 by 1050 native resolution, and boasts a response time of 5ms.

The VLED221wm is cleanly designed, with a thin, glossy, deep-black bezel that proved to be smudge and fingerprint resistant. The bezel also unobtrusively holds the built-in stereo speakers, whose sound is satisfactory for low background music. Though the display tilts, it does not swivel or pivot.

In our image-quality tests,

the VLED221wm's performance overall was very good, but it failed to outdo several cheaper, non-LED-backlit competitors. While viewing a scene from *Star Wars: Episode II—Attack of the Clones*, I noticed that the colors seemed inaccurate, but a quick tinkering with the color-temperature settings fixed the problem. Afterward the on-screen colors appeared bright and clear, not oversaturated. Red lasers shot from starfighters looked brilliant and intense.

This monitor is best suited for a movie buff who has money to burn, or for a



VIEWSONIC'S VLED221wm smudges little but costs a lot.

multimedia/graphics designer. For most everyone else, \$799 would be better spent on a larger LCD monitor or even a dual-monitor setup.

—Greg Adler

Free Video Editor: Stripped Down but Still Capable

PINNACLE STUDIO IS far from my favorite video editing application, but Pinnacle's VideoSpin, a new, free editor based on Studio, does a pretty darn good job. Though it doesn't match the sophistication of paid-for

applications, it does let you perform basic edits and output movies for use online.

VideoSpin has some strict limitations. The application works only with files on your hard drive. You can't edit audio, except for levels.

Since the app has no video effects, you can't brighten dark movies. Unless you purchase add-ons, you can export files only to AVI, Flash, Real, or MPEG-1 format; you can't exchange files with Studio, either. The interface size is fixed, so you can't view it full-screen, and you must put up with advertisements rotating in the top-middle of the interface.

The application provides a surprising number of video transitions, and though it has merely a handful of title templates, you can customize them to your heart's content. It has several cheesy sound effects, and you can import audio files for use as a soundtrack. When you're done, you can use VideoSpin to upload your movies

directly to YouTube or to Yahoo Video easily. Alternatively you can output files in DivX, MPEG-2, or MPEG-4 format to your hard drive, albeit only for 15 days; after that you can purchase the set of codecs for \$15 or pay \$5 each for individual codecs.

I'd still advise most people to buy a full-service video editor, but VideoSpin is a good option if all you want to do is dress up clips before uploading them to YouTube.

—Alan Stafford



THIS FREE VIDEO editor comes with a price: It displays ads for other Pinnacle products—and for products sold on Amazon.com.

87
VERY GOOD

VideoSpin | Pinnacle Systems

Useful for a free video editor, but you'll have to look at ads. Free
find.pcworld.com/59987

HP's Dedicated GPS Device Leverages the Web

THOUGH HP has been creating GPS-enabled iPaq handhelds for a few years now, its latest device is the first to attempt serious competition with Garmin, TomTom, and other dedicated GPS products made with automotive adventures in mind. But while the iPaq 310 Travel Companion is a creditable effort, several glitches make its rather steep price—it lists for \$450—difficult to justify.

The 310 Travel Companion provides turn-by-turn directions and points-of-interest lookup on a slim (0.7-inch-thick) device with a handsome, crisp 800-by-480-pixel 4.3-inch LCD touch screen that you can perch on the included windshield/dashboard mount (you also get a car charger to keep the device juiced up). The unit also

has a media player and supports Bluetooth for use as a hands-free cellular kit.

The 310's text-to-speech technology allows the voice directions to name streets, which can be a major plus in unfamiliar areas. The device's speakers didn't seem powerful enough, however: Even with the product's volume turned all the way up, I had difficulty hearing the directions sometimes. Currently HP is not offering an FM transmitter to direct the 310 Travel Companion's audio through car speakers.

What distinguishes the 310 from competing models is its integration with HP's recently launched iPaq Navi-



HP'S DEVICE sports a slim, handsome design, and a crisp, clear 4.3-inch LCD.

gate travel-planning Web site and Content Manager desktop software. For example, you can sync Outlook contacts to the device and then choose a contact's address as a destination; you can also plan trips on the site and then sync them to the device and/or share them with friends.

But you must register with the site to do any of that, and people who don't care about trip planning might not appreciate having to register just to sync contacts. Also, neither the site nor the Content Manager software is intuitive. I tried to plan a summer road trip from San Francisco to Tampa, but was stymied by the site's arbitrary six-day limit; I couldn't see how to determine what stops I might wish to add, either. The site wanted me to search for points of interest at specific places, assuming I knew in advance where on the route I'd like to stop. Content outside North America was very limited.

For now, you can't use the Content Manager application to download additional maps or transfer multimedia content to the device—you have to buy additional maps preloaded on SD Cards. (HP

says that it plans to start selling supplemental maps through its Web site soon.)

The 310 iPaq Travel Companion is based on Microsoft's Windows CE software, and it suffers from that platform's inability to shut down applications that aren't in active use. At one point I got an 'Out of Memory' error message, which went away only when I reset the device—and when I rebooted, I discovered that the unit had lost the North American female voice I'd set it to use. Furthermore, I found the plethora of icons around the main screen bewildering; what each of them does wasn't clear.

The 310 iPaq Travel Companion is good-looking hardware that handles navigation basics fine. But until the extras work better, it's not worth the high price.

—Yardena Arar

ASK OUR EXPERTS



An Outdoor Tablet PC

CAN YOU RECOMMEND an affordable tablet PC that has an exceptional screen for outdoor viewing?

Jim Ciernia, San Luis Obispo, California

Senior Editor Narasu Rebbapragada responds: Look for tablets whose screens have options for extra brightness (measured in nits) and/or an antiglare coating; screens with these options generally cost a bit more than standard screens. Companies use different naming conventions for their premium-screen technologies—Fujitsu's term is Color-Enhanced Crystal View, HP's is BrightView, and Sony's is Xbrite. A couple of recommendations: HP's Pavilion tx2000 tablet with a BrightView wide-screen display starts at \$1300. Fujitsu's Stylistic ST5100 Tablet PC comes with a reflective, front-lit display that's optimized for outdoor, daylight viewing, but it starts at a pricey \$2649.

E-mail your questions to askourexperts@pcworld.com, or post them online at forums.pcworld.com.



iPaq 310 Travel Companion Hewlett-Packard

Poor software design and usability undermine high-quality hardware. List: \$450
find.pcworld.com/60056

Drawing Tablet's Built-In LCD Is the Draw

PRICED JUST BELOW a thousand dollars, Wacom's Cintiq 12WX is the newest, smallest, and cheapest Cintiq drawing tablet to date. As with previous Cintiq models, you can draw directly on its built-in LCD screen with a digitizer pen; the company's drawing pens are finely tuned to the features of major graphics programs. The 12WX looks and works great, but you pay a hefty premium for a screen that isn't particularly roomy—

especially in comparison with other, more affordable drawing tablets.

The \$999 12WX is light (4.4 pounds), with a 12.1-inch display area that has a native resolution of 1280 by 800. However, though the 12WX is more compact than its larger cousins, I was taken aback by the amount of desk space I had to clear for it. The display is encased in a 16-by-10-inch frame, and I also had to make room for the video control converter unit, a modem-size device that bridges your computer's DVI or VGA input and the 12WX. (On larger Cintiq models, the converter is built directly into the dis-



THE TILTING SURFACE looks good and is comfortable to use.

play.) Add the USB cord that connects the converter to your PC, and you have quite a bit of clutter.

The 12WX supports the same intuitive and interactive pressure-and-tilt sensi-

tivity as other Wacom tablets do. Wacom works with software publishers to add support for new features in such programs as Adobe Photoshop and Illustrator and CorelDraw.

Wacom sees the 12WX as an affordable upgrade for designers who want to move up from its Intuos tablets. The display is remarkably crisp, and the color profiling of the Cintiq 12WX seemed more accurate than that of an Intuos tablet.

Is the 12WX worth twice the price of a comparable-size Intuos tablet? Only if you value the built-in LCD.

—David Karlins

76
GOOD

Cintiq 12WX | Wacom

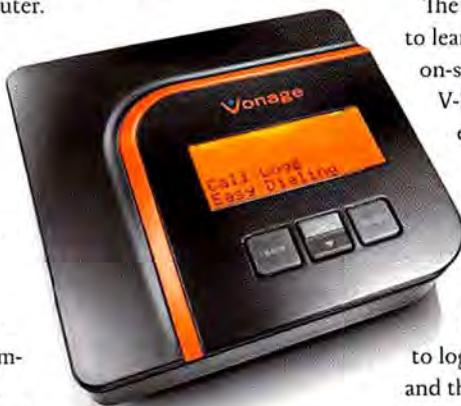
Built-in LCD still makes this tablet pricey. List: \$999
find.pcworld.com/60041

Vonage's Flashy V-Portal Offers Easier VoIP Setup

IF YOU'RE AN Internet (VoIP) phone user, you might not pay much attention to the adapter that links your home phone to the cable/DSL modem or router. Vonage aims to change that situation with its new V-Portal, a flashy adapter with a built-in LCD screen that helps with installation, troubleshooting, and diagnostic issues.

Available to new Vonage customers for a \$10 fee and to existing customers for \$80, the V-Portal performs a few unexpected tricks. Its 2.5-inch monochrome LCD offers fixes for common glitches—though

not always appropriate ones. In my tests, for instance, the V-Portal detected an "incorrect network setting" during setup. The LCD suggested



WITH ITS SPORTY orange stripe, the V-Portal at least attempts to be fashion-forward.

that I unplug the power connector and plug it in again; unfortunately, this didn't correct the problem, and I had to call Vonage for help.

The LCD's interface is easy to learn, and navigating the on-screen menus is simple.

V-Portal works with Caller ID, and it displays the phone number and sometimes the name of the person calling. The call timer is convenient for people who need to log conversation times, and the voice-mail indicator shows when messages are waiting. The V-Portal has two phone ports, one for the main line and a second

for a fax or second voice line. The unit is also a single-port router, so you can connect a computer or another networkable device to it.

If you plan to sign up with Vonage, the V-Portal adapter, for a mere ten bucks, is a worthy upgrade that delivers some additional information about your VoIP service.

—Jeff Bertolucci

75
GOOD

V-Portal | Vonage

Good-looking device offers plenty of helpful features. List: \$80 (\$10 for new Vonage customers)
find.pcworld.com/60086

New Color Laser MFP Dips Just Below \$500

PCW Test Center

ALL THE COLOR laser multifunction printer market needs to become as hot as that of color inkjet multifunctions is for a decent machine to hit the magic \$500 price point. A few underpowered models have hovered in that range, but now they have some real competition: the \$499 Lexmark X500n, which achieved a peppy speed of 25.4 pages per minute in our tests, and the \$549 Oki Printing Solutions C3530n, which managed a competent 20.3 ppm. Not surprisingly, however, these MFPs still sacrifice some features and performance. The X500n lacks duplexing, even as an

option. The C3530n feels less sturdy than other Oki products we've tested, and its graphics quality is disappointing. Both models will cost you more in the long run because of their expensive consumables. For example, a 5000-page black cartridge for the X500n costs almost \$135, and 3000-page color cartridges cost nearly \$120 apiece. Add those costs up, and you've nearly matched the price of the MFP itself.

You'll find the real sweet spot a few hundred dollars higher: Of the five new mod-



TRADE-OFF: LEXMARK'S X500N costs just \$499 but uses pricey toner.

els on our chart, Brother's MFC-9440CN earns the top position for its good balance of speed and features. Although some aspects of the design are awkward, it's the best bet for a small office. A growing office should look at Dell's Multifunction Color Laser Printer 3115cn, the runner-up; it costs more than the Brother, but it's also a lot speedier and more expandable. Right behind it is Xerox's Phaser 6180MFP, which is better designed and faster at printing text than the Dell it closely resembles but is slower with graphics.

Konica Minolta's Magi-color 2590MF didn't make the chart, but it's notable for the extremely compact design of its core printer engine (although adding the scanner unit and other parts expands its total footprint to a more typical size). Its interior is so crowded that you can access only one toner cartridge at a time, using an automated rotation process. Though the 2590MF offers a PictBridge port for easy printing of photos from digital cameras with a compatible connector, its photo quality was subpar.

In fact, none of the color-laser MFPs we reviewed this month achieved natural-looking photo prints. They struggled with color accuracy and often produced overall grainy-looking prints. For the best graphics printing, you'll still want an inkjet.

—Melissa Riofrio

PC WORLD TOP 5 COLOR LASER MFPs

MODEL	PCW Rating	Performance	Features and specifications
1 BEST BUY Brother MFC-9440CN \$899 find.pcworld.com/59859	81 VERY GOOD	<ul style="list-style-type: none"> Text quality: Superior Graphics quality: Fair Tested speed (ppm): 20.8 text/4.8 graphics 	<ul style="list-style-type: none"> 21 ppm text 21 ppm graphics 2400-by-600-dpi maximum true color resolution
BOTTOM LINE: This efficient unit, though only marginal for photos, is a solid choice for adding some color to work documents.			
2 Dell Multifunction Color Laser Printer 3115cn \$899 find.pcworld.com/59860	80 VERY GOOD	<ul style="list-style-type: none"> Text quality: Superior Graphics quality: Fair Tested speed (ppm): 24.2 text/5.4 graphics 	<ul style="list-style-type: none"> 31 ppm text 17 ppm graphics 600-by-600-dpi maximum true color resolution
BOTTOM LINE: Speed and expandability are this model's strengths, making up for its subpar photos and design quirks.			
3 Xerox Phaser 6180MFP \$999 find.pcworld.com/59861	76 GOOD	<ul style="list-style-type: none"> Text quality: Superior Graphics quality: Good Tested speed (ppm): 28.3 text/1.7 graphics 	<ul style="list-style-type: none"> 31 ppm text 20 ppm graphics 600-by-600-dpi maximum true color resolution
BOTTOM LINE: This high-end unit offers good performance and features, but it's not for the budget-conscious.			
4 Lexmark X500n \$499 find.pcworld.com/59862	76 GOOD	<ul style="list-style-type: none"> Text quality: Superior Graphics quality: Fair Tested speed (ppm): 25.4 text/3.1 graphics 	<ul style="list-style-type: none"> 31 ppm text 8 ppm graphics 1200-by-600-dpi maximum true color resolution
BOTTOM LINE: Cheap to purchase but costly to resupply, this MFP would fit best in a lower-volume small office.			
5 Oki Printing Solutions C3530n \$549 find.pcworld.com/59863	73 GOOD	<ul style="list-style-type: none"> Text quality: Very Good Graphics quality: Fair Tested speed (ppm): 20.3 text/4.5 graphics 	<ul style="list-style-type: none"> 20 ppm text 16 ppm graphics 1200-by-1200-dpi maximum true color resolution
BOTTOM LINE: A low-volume office might tolerate this unit's pricey toner, but the design could be a lot better.			

CHART NOTES: Prices and ratings are as of 2/7/08. Speeds are in pages per minute (ppm); resolutions are in dots per inch (dpi).

MORE ONLINE For reviews of each of the color laser MFPs in this chart and details on how we test them, go to find.pcworld.com/60049.

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Convert piles of photos into shared digital memories.

IRIScan™ 2
for Windows & Macintosh



Jango Internet Radio Adds Fun Social Features

IF YOU'RE TIRED of tuning in to the same old music, try shaking things up a bit with Jango. Similar to sites such as Pandora and Last.fm, Jango streams custom Internet radio stations focused on your favorite artists. But it goes way beyond playing DJ; the beta version I tested integrates a social aspect that makes discovering new music fun, by matching you with like-minded listeners.

When you enter the name of an artist, the site creates a radio station centered on that artist. (Unlike Pandora, it won't let you enter a song title.) Jango also adds other tunes it thinks you'll enjoy based on a number of criteria. For instance, the service takes into account what other users who like the same artist are also listening to, and it looks at stylistically analogous acts from similar genres and time periods. Though the service played some pleasing mixes, it did attempt to skew my Queen

station toward Iron Maiden and Ozzy Osbourne, which are too metal for my taste.

Jango saves an unlimited number of stations to your profile, and it offers several ways to customize them. You can add artists (Jango provides suggestions, or you can plug in your own); ban certain musicians; and choose whether you want to play popular songs, more obscure music, or something that's in between the two.

Limited Selection

Customizing stations certainly helped me shape the song selections more to my liking, though with only 15,000 artists and 200,000 songs in rotation, the service has limits. For instance, at review time, just ten Queen songs were in the system. (According to Jango, the service has access to much more music than is listed, but analyzing it and adding it to the listener database takes time. Jango



THE JANGO PLAYER displays additional songs by the currently playing artist, as well as other users who share your musical taste.

also says it is constantly adding tunes to the rotation.) Jango follows restrictions defined by the Digital Millennium Copyright Act—and pays royalties to labels and artists—so the site is perfectly legal. It makes money when you click on links to buy music through its partners (such as the iTunes Store and Amazon.com) as well as through advertising.

Jango's real prowess lies in its social networking features, which, when you create a Jango profile, help you hook up with people who have the same good (or bad) taste as you. The Jango player displays additional songs by the currently playing artist, as well as users who are listening to the same performer or similar artists. Clicking on a song takes you to the station playing it; selecting a user takes you to a profile page, where you can check out that person's stations and other information (birth date, location, and favorite books and movies, for example) that they have chosen to share. The

site also lets you keep track of what your Jango Friends are rocking out to, and attempts to connect you with Like-Minds—users with similar musical inclinations as yours. One polite touch: Jango offers to send a thank-you when you tune out of someone's station.

For the most part, music streaming was smooth, with a few rare stutters; on one occasion, Jango indicated that a song was playing even though there was no audio. Jango says that it is working on repairing a number of issues.

Still, Jango is solid. If you dig the whole social networking scene—and want to see how it can expand your musical universe—Jango is worth a spin.

—Cathy Lu

TECH TREND

Vista's Most Popular Version

WHEN YOU BUY your next PC, which version of Windows Vista should you choose? Vista Home Basic lacks the spiffy Aero environment but costs the least; Vista Ultimate has everything Microsoft offers in an operating system, but costs an arm and a leg. And the variations in between are hard to tell apart. (For a quick look at the versions, go to find.pcworld.com/60027.) One edition, however, has emerged as the favorite among PC buyers.

According to Al Gillen of IDC Research, during 2007 approximately 75 percent of consumer PCs shipped with Vista Home Premium, while most of the rest shipped with Vista Home Basic. Vista Ultimate accounts for only a couple of percentage points.

On the business side, Windows XP still rules, but Windows Vista Business accounted for around 90 percent of the business PCs shipping with a Vista version.

—Greg Adler



Jango (Beta)

Jango takes music discovery to the next level. Free www.jango.com

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Versatile Voyager Lacks iPhone's Fine Touch

THE FEATURE-PACKED LG

PCW Test Center

Voyager from Verizon Wireless performs many tasks well. The reasonably compact touch-screen phone makes voice calls of excellent quality and flips open to reveal a first-rate keyboard for typing

74
GOOD

LG Voyager | Verizon Wireless
Feature-filled handset does most things well. List: \$349 (with two-year contract)
find.pcworld.com/60031

e-mail and instant messages.

Its 2-megapixel camera captures superior digital stills, and its stereo speakers do a pretty good job playing MP3s. Its built-in GPS receiver and VZ Navigation service (an extra-cost option) were easy to set up and worked fine, making the Voyager truly useful for, well, voyages. Web browsing over Verizon's EvDO network was zippy.

When closed, the Voyager looks like an iPhone, with a face dominated by a beautiful 2.8-inch display—but the Voyager falls short in



INSIDE THE
Voyager sits a first-rate QWERTY keyboard.

the touch-screen department. Its VibeTouch haptics technology provides good tactile feedback (a little vibration) when you press a screen button, but fingertip scrolling is disappointing, lacking the effortlessly smooth experience of the iPhone's implementation.

The Voyager's battery life—4 hours, 38 minutes in our lab tests—was poor

compared with other units we've tested. But the handset delivers a lot of style (not to mention 3G, but no Wi-Fi, connectivity) for \$349 with a two-year contract.

If you're not insistent on an iPhone-caliber touch screen—or if you prefer Verizon Wireless to AT&T—the Voyager is a good alternative to Apple's little gem.

—Yardena Arar

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Razer's Sharp PC Speakers

FIVE SPEAKERS AROUND your PC borders on overkill. But cut down that number, and sound quality can suffer. Razer's \$400 Mako 2.1 Advanced Desktop Audio System solves that dilemma. It provides top-notch audio and does a good job of simulating surround sound.

The two satellite speakers and subwoofer fool you into thinking that you have more speakers than you do. That's because the Mako's downward-firing speakers bounce sound off your desk surface to create incredibly spacious sound quality.

Listening to gunfire in the game *Crysis* had me ducking for cover. And despite the Mako's gaming heritage, these speakers are great for movies and music too. Watching *The Fast and the Furious*, I felt cars scream past my ears to a near-Doppler effect. It's amazing, really, the quality of sound that rumbles from



IN RAZER'S SPEAKERS, high fashion meets high-tech audio.

these miniature monsters.

A few drawbacks stand out, though. The slightly twitchy control pod, which connects to the subwoofer, can adjust only bass levels and volume. And I'd like to see more connectivity options on the back of the subwoofer. It has a standard 3.5mm jack for your PC and

one set of RCA inputs for your olde-tyme devices, but an optical audio input for connecting your present-day DVD player could have made these speakers really sing.

At \$400, the Mako is as expensive as most good 5.1 kits (such as Logitech's Z-5500), but it requires less space and sounds almost as good. For fashion-forward audiophiles, it's well worth the money.

—Darren Gladstone

82
VERY GOOD

Mako 2.1 Advanced Desktop Audio System | Razer

This pricey system sounds as good as some 5.1 speaker kits.

List: \$400

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Logitech's New Remote: In Perfect Harmony

UNLIKE MANY UNIVERSAL remote controls, Logitech's latest offering, the \$250 Harmony One, requires little brainpower—once you're past the setup process.

The Harmony One, like the Harmony 880 that it replaces, fits comfortably in the

hand. Its bright, 2.2-inch touch screen is easy to use, as are the push buttons below. Their distinct sizes, shapes, and placement make the remote easy to use by feel alone (it is also backlit).

The touch screen shows icons and commands for common activities; touching 'Listen to Music' can turn on your stereo, for example. And once you've started an activity, such as 'Watch TV', you can touch further selections or employ the push-button controls. It all works together intuitively.

While using the Harmony

One was a joy, setting it up was not as much fun. You plug the remote into your PC's USB port and connect to Logitech's online database of more than 225,000 devices. The database had information for my Sony HDTV, a Sony DVD changer, an Apple TV, and even an old Sony VCR, but I had to set up two satellite TiVo DVRs manually because they had different channel arrangements.

The remote has a Help button to aid in fixing setup issues, but I still had to contact Logitech's tech support (available via e-mail or toll-free phone). I should have done that right off the bat; the reps can interactively solve the thorniest problems.



THE HANDSOME HARMONY One fits comfortably in the hand.

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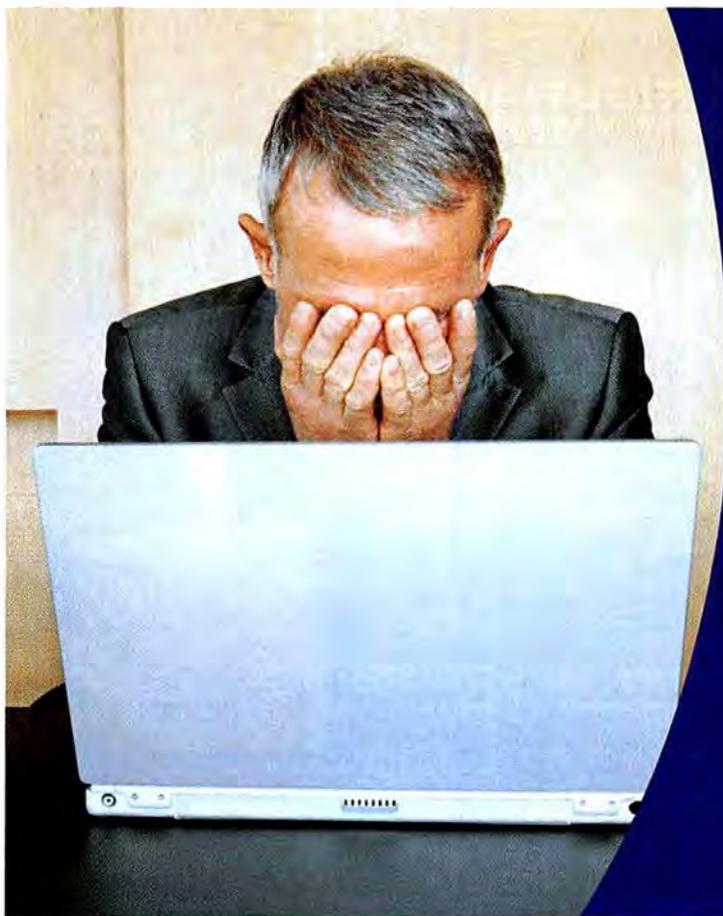
—Becky Waring

92
SUPERIOR

Harmony One Advanced Universal Remote | Logitech

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eCircuit: Dog in Wolf's Attire

ECIRKIT BILLS ITSELF as a social networking site for "artists, speed- and thrill-seekers, non-conformists, [and] extremophiles of every variety." It's extreme all right—extremely lame.

eCircuit is designed around a "Webtop"—a single page that lets you access photos, videos, blogs, RSS feeds, bookmarks, instant messag-

ing, contacts, and even a minibrowser. Its Social Penetrator applet (complete with a power-drill icon) drills into your eBay, Facebook, Flickr, and YouTube accounts and pulls your pictures, videos, and other shared information into your eCircuit profile.

It's easy to set up and use, but the result looks like AOL circa 1989—a series of cluttered, overlapping windows and crude widgets.

eCircuit has the usual social networking stuff—you can connect with other users and leave comments on their photos and videos. But this network doesn't



ECIRKIT'S OVERLAPPING WINDOWS harken back to the bad old days of America Online—or even Windows 3.0—and can slow your browser.

appear to be well populated.

The site does have some innovative features. Its ads, which are more like corporate logos than banner ads, fade subtly into the background, and you can choose which ones to see. Every user receives 1GB of free storage, so you can access

files remotely or share them.

Yet the most remarkable thing about eCircuit is its cockiness. "In the ecosystem of life, there are sheep, and there are wolves. Which one are you?" the home page asks. Unfortunately, this site is just an ordinary mutt.

—Dan Tynan

65
FAIR

eCircuit

One-stop social networking site has attitude but little else. Free
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\$200 Linux Desktop Systems Are No Bargain

ON SEARS.COM AND Wal-Mart.com—sites that sell cheap Linux-based PCs—potential buyers post questions like, “Which version of Windows does this have?” and “Can I run Windows applications on this?” While either the Mirus SITLC420 or the Everex gPC TC2502 might be an option for technically savvy people who want to dabble in Linux, these machines are very poor choices for the folks the two stores usually cater to.

That’s because, despite the rock-bottom prices, neither PC qualifies as a bargain. They use lowest-of-the-low-end components—you’re essentially paying fair prices for inferior products.

But more important, while the gPC has a slightly easier-to-use version of Linux than the Mirus does, I found both Linuxes to be extremely cumbersome (and I’ve experimented with Linux distributions before). If you aren’t a die-hard Linux fan, these PCs aren’t for you.

PC Special in Aisle 5

The Mirus SITLC420 we evaluated comes with a 1.6-GHz Intel Celeron 420 processor, 1GB of RAM, an 80GB hard drive, a CD-RW drive, and the FreeSpire

Linux operating system, which is based on a version of Ubuntu Linux. It costs \$300 at Sears.com (online only); a \$100 rebate is available through Mirus, though Mirus says to allow three to four months for the check.

microphone and headphone ports; the Mirus has several media card slots too, hidden behind a small spring-loaded panel. Both have integrated 10/100 ethernet, and the Mirus has a 56-kbps modem.

Both rely on integrated

The Sleep key still worked, but when I pressed the Wake Up key, the PC asked for a password, even though I hadn’t set one up yet. Eventually I had to reboot.

Because these PCs run Linux, not Windows, we couldn’t run our World-Bench 6 Beta 2 test suite on them. The Mirus system appeared reasonably quick running apps like the Think-Free office suite, but the gPC seemed a bit lethargic.

Only If You Love Linux

I connected each PC to a 19-inch wide-screen monitor; the gPC recognized it immediately, and automatically configured it to the proper, 1440-by-900 resolution. The FreeSpire OS on the Mirus system, however, set the monitor at 1024-by-768 resolution; by unchecking ‘show recommended settings only’ and acknowledging an ominous warning message about display damage, I was able to choose 1440-by-1050 resolution—but this caused a distorted image. I reverted to the former, albeit nonnative, resolution for my tests.

One of FreeSpire’s claims to fame is its integration with CNR.com, an online repository of free and paid Linux software; the site’s main benefit is that you merely have to click a button to install something, rather than having to hassle with typing command-line code. But the first day I used the PC, I couldn’t get CNR to install any apps at all. The second day, I was



BOTH THE MIRUS system (left) and the Everex gPC (right) come in white-box minitower cases of the most basic design.

The \$199 Everex gPC TC2502 is sold by retailers such as Wal-Mart; it’s available online and at brick-and-mortar stores. The Everex isn’t as well equipped as the Mirus; it has a 1.5-GHz Via C7-D processor, 512MB of RAM, an 80GB hard drive, and a CD-RW/DVD-ROM drive. It runs a version of Linux called the gOS, which is based on Ubuntu, as well.

Both PCs have two front-mounted USB ports, and

graphics and VGA monitor connections (though the gPC ships with a DVI cable, for some reason). Neither PC includes a bundled monitor, of course. And both systems come with very similar, very bad speakers.

The keyboard and mouse that accompany the gPC are marginal, but the Mirus system’s are so bad I felt like stabbing them with a screwdriver after a while. The Mirus’s keyboard keys are so mushy that you must hammer on them, and the spacebar is oddly tilted—to make it work properly, I had to reach forward with my thumb before pressing it.

Letter keys on the Mirus keyboard stopped responding at one point, so I started pressing keys at random.

66
FAIR

gPC TC2502 | Everex

Friendly for a Linux PC, but still rough around the edges, with crude hardware. Street: \$199
find.pcworld.com/60064

59
POOR

SITLC420 | Mirus

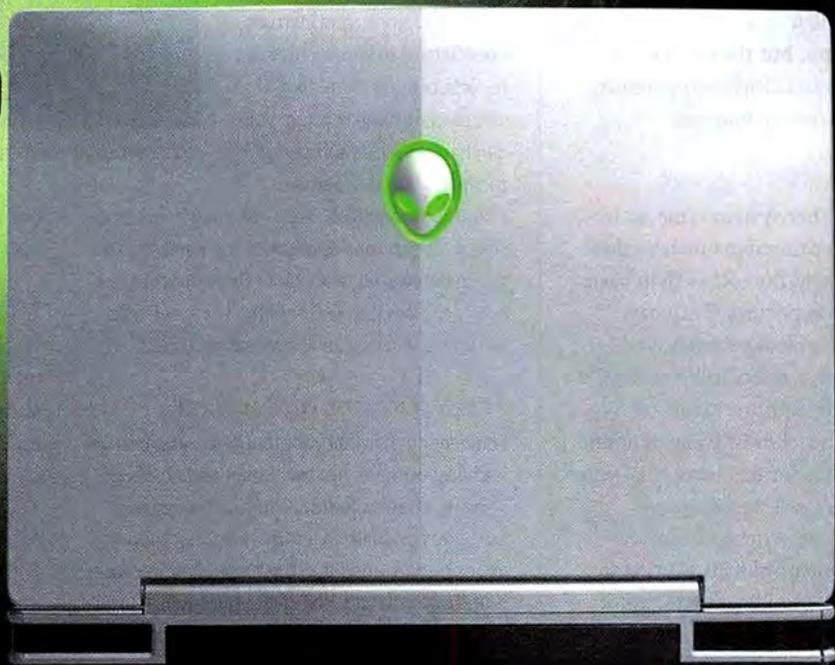
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able to get some to install, but others—including ones that would have allowed me to use HP printers around our office—would not download or install. FreeSpire comes preloaded with an instant messaging client and Samba (a program for sharing files with Windows PCs).

The gOS, in comparison, is much friendlier than FreeSpire, despite their common origins. The most obvious difference is a Mac OS–like toolbar at the bottom of the gOS screen; the icons even grow as you mouse over them, as on the Mac. Icons linking to Google’s Web applications, including Google Docs, GoogleTalk, and Blogger, dominate the toolbar and the applications menu, but the OS has no ties to Google—apparently, it’s just an homage.

Limited Support

Neither system came with any printed manuals or documentation other than basic setup posters. Both have one-year warranties, and Everex offers toll-free, 24/7 tech support; Mirus offers only the most basic of online forms for tech support—you can’t call the company.

True, a huge Linux community online is waiting to help even beginners, but if all you know is Windows-like clicking and dragging, all the assistance in the world won’t make slogging through command-line entries seem easy. If your budget’s tight, I’d recommend waiting for a deal on a PC that costs a bit more—and that runs Windows.

—Alan Stafford

Fixes for News, Work, Music Overloads

EVEN GOOD THINGS can get unmanageable at times. Let’s look at software to cherry-pick the news, organize your projects, and unearth forgotten gems from your music collection.

The News You Need

We’re all awash in news. Reduce that flood to a trickle of just the topics that interest you with FeedDemon, a longtime, popular RSS reader that’s now available for free.

FeedDemon’s dual-pane, tabbed interface lets you easily navigate RSS feeds and read news items. The well-chosen default selection of feeds ranges from fluffy entertainment gossip to serious news.

You can also save items in Clippings folders and instruct FeedDemon to keep an eye out for articles you might like. If you prefer offline reading, you can have FeedDemon prefetch the feeds for later perusal.

With so many RSS feeds, it’s easy to oversubscribe, so you may appreciate the Panic Button, which deletes all news older than a number of hours or days that you specify. Think of it as a life preserver. Free, find.pcworld.com/59969.

The Mountains of the Mind

You need to marshal your thoughts—but Roman-numeral outlines are too linear, and so-called mind maps are too flat. With 3D Topicscape Lite, you can build three-dimensional maps of your projects and fill in the necessary information. Then you can “fly” over your mental landscape, zooming in and out, changing the angles, until you home in on what you need.

3D Topicscape depicts topics as 3D cones. The parent topic dominates the area like a mountain, with child topics as hills around it and their children around them. You drag and drop files, links, and archived Web pages into any topic, compiling a list that organizes your resources without moving files around.

Making sense of messy connections is 3D Topicscape’s forte. If a topic is related to oth-

ers, you can associate it with more cones. Forget what’s associated with what? Click any instance of the topic in question, and a glowing white dot appears over its associations.

After watching the short demos, you’ll need only a few minutes of using the program to get comfortable—and then addicted. 3D Topicscape Lite is a powerful way to store, explore,



3D TOPICSCAPE LITE builds 3D mind maps with your associations.

and retrieve all kinds of information. Free trial, \$50 to keep, find.pcworld.com/59970.

Mine Your Musical Gems

A good playlist is a work of art. But any hard drive full of music is bound to harbor neglected jewels. Mufin MusicFinder Base analyzes your collection and creates playlists based on musical criteria, not on tags or obvious associations. The bigger your collection, the more cohesive-sounding—and eclectic-looking—the playlists.

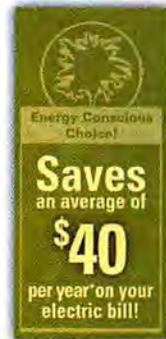
To use MusicFinder, just import your collection, select the track or tracks that suit your mood, and let the program find similar songs. You can save the playlists for later or play them right there in MusicFinder.

The program is ideal for locating great tracks hidden on uneven albums, such as movie sound tracks. For one memorable playlist I created, MusicFinder pulled tracks from albums classified as heavy metal, jazz piano, and samba. I could never have dreamed up the result on my own. Free, registration required after one week, find.pcworld.com/59971. ●

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What's in your computer? Photos, music, personal files, financial data, broadband access, videos, and more. Your computer has never been more important, and yet it has never been at higher risk for damaging power surges and other disturbances.

So like most people, you need to protect your assets. But like most people, you'd also like to protect the environment. With our new energy conscious products, you can do both. Energy efficient by design, our new smart products protect the power going in your computer, at a cost that is quickly offset by big energy savings. How? Not only do the new Back-UPS ES® and SurgeArrest™ use power very wisely, they also boast a master/control outlets feature, which automatically powers down idle devices to conserve energy.

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

- Heather Clancy
ZDNet.com

In fact, while protecting your power supply, we're up to 5 times more energy efficient than any other solution. By saving you \$40 a year in energy costs, our Back-UPS ES pays for itself in 2 short years. Even the packaging has been carefully selected and manufactured to maximize use of recycled materials and minimize waste.

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*Average savings are based on comparable competitive models, and are comprised of two energy saving features: An ultra efficient electrical design, and the master/controlled outlet feature.



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Zalman's "Trimon" Series 2D/3D Convertible monitor not only has clear 2D image quality, it also allows the users to experience Stereoscopic 3D in Video Games and Movies, as well as broad professional field of Medical Imaging and CAD Designs. With high contrast ratio and easy 2D/3D conversion, and wide viewing angle, you will be able to experience a new level of entertainment.



ZM-M190



ZM-M220W

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Gaming Mouse FG1000

Fast response, smooth action, 5 programmable buttons and upto 2000dpi scan resolution make this FPS Gun an ultimate gaming mouse. With our unique ergonomic design allows long term gaming possible without strain to the wrist and enjoy your favorite FPS game more with added realism.



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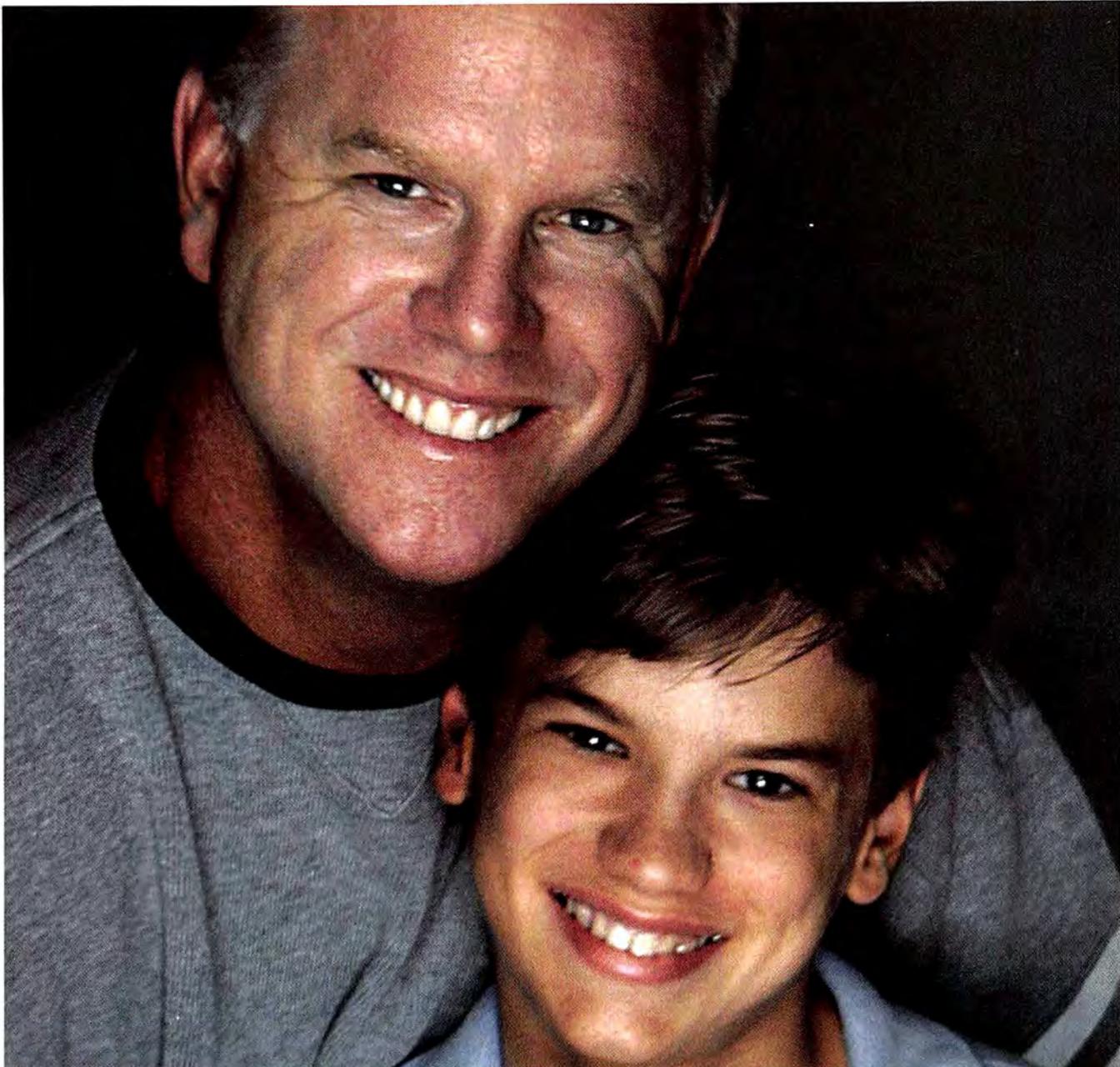
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Learn more about Shuttle KPC at us.shuttle.com/pcworld0804

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Please join Samsung, Sears and Boomer to help the children.

Samsung's Four Seasons of Hope, Sears and Boomer Esiason have teamed up to make a difference in the community. The funds we raise help to find a cure for cystic fibrosis. The Boomer Esiason Foundation has raised over \$60 million and is advancing the cause through partnerships with companies like Samsung and Sears. We're proud to support this deserving cause. To find out how you can help, contact the Boomer Esiason Foundation at 646-292-7930. Samsung's Four Seasons of Hope. A little hope can make a big difference. www.fourseasonsofhope.com





Break glass in case of an emergency.

You never know when your Wi-Fi or broadband connection might be compromised. Just in case, it's good to have a USRobotics 56K USB Modem on hand. This small, easy to use controller-based modem integrates powerful communications processing functions into the modem itself, for assured performance without sapping your computer's processing power.

The USRobotics 56K USB Modem delivers the performance and reliability USR is known for, in a compact design.

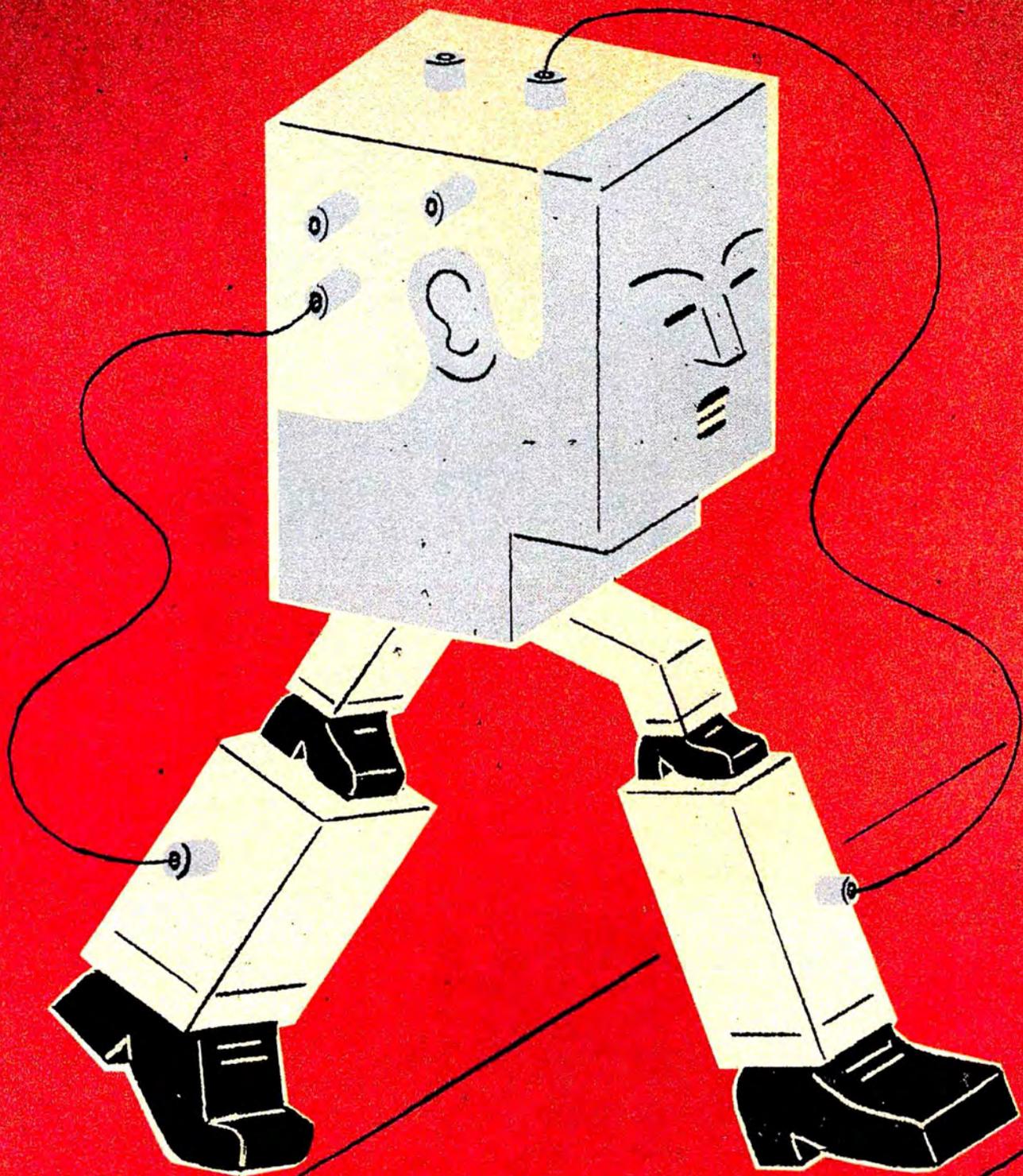
- USB convenience and ease of use, with simple Plug and Play installation
- Hot-swappable (installs and uninstalls automatically)
- Bus-powered so it doesn't require an external power supply
- Excellent compatibility, works with Windows, Linux, and Macs
- USRobotics Modem on Hold application lets you screen incoming calls and take calls without dropping your connection — so there's no need for a second phone line
- Send and receive faxes through your computer, supports group faxing and timed faxing
- Quick Connect reduces the time it takes to establish your dial-up Internet connection and V.92 lets you send email up to 50% faster

Broadly compatible across major operating systems including Linux, Windows, and Macintosh, the USR 5637 USB Modem is perfect for:

- Home users with no broadband access and/or those who desire the additional security of dial-up Internet
- Business travelers with laptops and no internal modem for office access (when broadband isn't available)
- Laptop and desktop users that desire "back-up" access the Internet in case of broadband failure
- Home and business users that need fax capability to and from their computers

www.usr.com/PCW/56k

USRobotics®

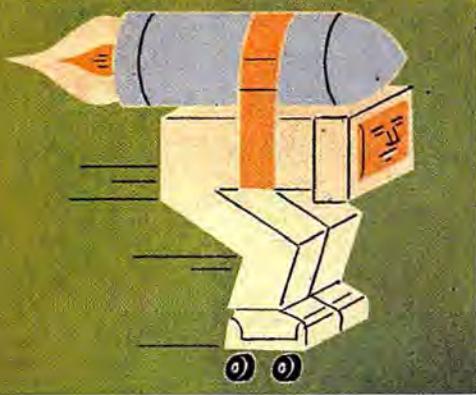


Same Software, New Power

Give your **browser, office apps,** and **multimedia programs** new life with these **50+ add-ons,** tips, and tweaks.

BY CHRISTOPHER NULL | ILLUSTRATIONS BY DAVID PLUNKERT

STUCK WITH A BORING BROWSER? Wish that Word could handle more tasks? Feel hemmed in by Photoshop? You don't have to toss (or upgrade) your existing software to get new features and tools. Sometimes a plug-in, an add-on, or even a simple tweak can enable your computer to do tricks you never even thought of before. We rounded up more than 50 of our favorite tools and tips for unlocking extra value from popular browsers, productivity applications, and multimedia tools. >>



Browser Boosters

Web browsers—especially Firefox—are built with plug-ins in mind. Thousands of these code snippets are available, but here we present some of the most useful add-ons, plus a few tips that don't require any extra code.

Nuke Web ads: Though decried by many Webmasters for cutting into a lucrative revenue stream, Adblock Plus is practically a mandatory addition to Firefox, due to an increasingly onerous glut of Web advertising. (IE users can try Ad Muncher free for 30 days and then pay \$30; find.pcworld.com/59876.) Put simply, Adblock Plus blocks ads—not just pop-ups, but regular banners, towers, rich-media stuff, and Google's ubiquitous advertisements. Adblock Plus doesn't stop everything, but it nabs enough that you'll notice the difference immediately. find.pcworld.com/59875

Many PCs, one set of bookmarks: If you use numerous computers, you have undoubtedly had to deal with separate browsers on each of those PCs, each with its own set of bookmarks that must be managed separately—unless you have a bookmark synchronizer, that is. Foxmarks is one of a number of tools that can sync Firefox bookmarks among multiple machines. Just install Foxmarks as an add-on to the Firefox installation on each system, and never worry about manual syncing again. As a bonus, you can access your bookmarks on the Foxmarks Web site, too. find.pcworld.com/60003

Put an FTP app into Firefox: Even the most casual Web developer needs an FTP application, but many of these are cumbersome and unintuitive—and they

require installing yet another full-blown program. FireFTP turns Firefox into an impromptu and speedy two-way FTP application. Once installed, FireFTP appears in the Tools menu. Click it and a new FTP tab opens up, offering a simple two-pane system that lets you easily copy files between your desktop and your remote site. find.pcworld.com/59873

Get a handle on downloaded files: If you are a download junkie who always has something in the queue to leech off the Web, you need a download manager to help handle everything. FlashGet is a free and extremely popular download manager that can help you organize and queue up HTTP, FTP, BitTorrent, and other types of downloads, working in the background and letting you pause and resume downloads. It can even tell your computer to shut itself down when the downloading is done. Works on any browser. find.pcworld.com/60004

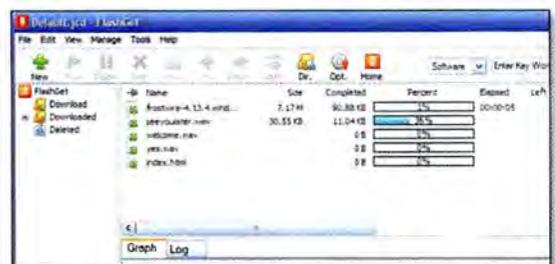
Restore embedded passwords to IE URLs: Several years ago, Microsoft disallowed Internet Explorer to use an embedded password as part of a URL (of the format <https://username:password@server.com>) when a user goes to a protected Web site; instead the person must type in the password manually at the pop-up log-in screen. (This restriction was a response to phishers' employing phony password fields to deceive unsuspecting users.) Restoring IE's original ability takes a Registry tweak. Run Regedit

and browse to the following Registry key: `HKEY_LOCAL_MACHINE\Software\Microsoft\Internet Explorer\Main\FeatureControl\FEATURE_HTTP_USERNAME_PASSWORD_DISABLE`

Here, create two new DWORD values: `ieexplore.exe` and `explorer.exe`. Leave the default DWORD value for each of these at '0'. Restart IE.

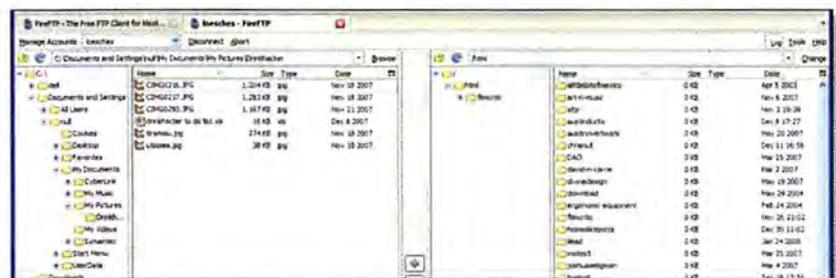
Grab a hard copy of any Web page: Did you ever print a hard copy of a Web page only to have it come out garbled, missing images, and otherwise nigh unreadable? One reason that may happen is because the newfangled Web 2.0 standards

FLASHGET TRACKS all your downloads, regardless of the specific application.



don't play well with 0.1-era printers. Solution: Grab a screen shot of a Web page, and select *Print*. But how do you do that, when a single page has enough content to fill up three display screens? Simple: Install Screengrab for Firefox, which lets you save a full page, the visible portion of a page, or just the tidbit you'd like to keep. IE Screenshot performs similar tricks for the Microsoft browser. Save images as digital files or print them out. find.pcworld.com/59878, find.pcworld.com/59879

Copy any Web video: Various Web services let you punch in the URL of a YouTube flick or other Web video and



FIREFTP TRANSFORMS FIREFOX into a full-blown, speedy, two-way FTP application.

receive a copy you can save to your hard drive. But they're often slow and buggy, and you never know if they'll work on less popular video-sharing sites. Orbit Rich Media Downloader adds a context-sensitive set of new menu items to your right mouse button in your Web browser. Now when you see a vid on Dailymotion or hear a song on MySpace that you like, just click to save it to your PC. find.pcworld.com/59874

Save protected media files: Some Web sites cruelly disable the right-click button on images and other media, preventing you from easily downloading them. Orbit (see above) is one work-around, but it's overkill if all you want to do is to save an image occasionally. Good news: Firefox has a quick, built-in way to save protected media files without the hassle. Visit the Web page you want, right-click anywhere on the page



FIREFOX LETS YOU save protected media by right-clicking to view Page Info's Media tab.

(not in the image), and select *View Page Info*. Click the *Media* tab to see a list of all images on the page; scroll through the list (a preview will appear at the bottom of the window), and click *Save As* when you find the one you want.

One click to something new: Collected quotes of Albert Einstein? Winners of the "I Look Like My Dog" contest? Pictures of real-life sea monsters? All of these Web pages can be yours at the touch of a button if you install StumbleUpon, a plug-in and toolbar available for both Firefox and Internet Explorer. StumbleUpon, like social news sites

such as Digg, takes user submissions to point other users to cool stuff on the Web. Click the thumbs up button if you like what you see, or thumbs down if you don't. Over time, StumbleUpon refines its suggestions for you, making it (eventually) the perfect time-waster, and one that's always at your fingertips. find.pcworld.com/60005

Easy access to deals and discounts: Smart shoppers perform a quick search for a coupon code before buying anything online, but forgetting to do so is easy. RegisteredCoupons.com's toolbar for Internet Explorer simplifies bargain hunting by putting the information right where you're most likely to see it: A utilitarian drop-down box lets you select the retail outlet where you're shopping. Click the store in question, and current coupon codes and promotions instantly arrive in their own window. find.pcworld.com/59877

Relocate the Firefox sidebar: Want to move the sidebar to the right side of your screen? Edit your userChrome.css file or create a new one in your profile/chrome folder. Find it in C:\Documents and Settings\username\Application Data\Mozilla\Firefox\Profiles\yyyyyyyy.default\chrome, where xxxxxx is your username, and yyyyyyyy is a random set of eight characters. (If you don't see the Application Data file in your user folder, go to the Tools menu, click *Folder Options* and then the *View* tab, and select *Show Hidden Files and Folders*.) Rename the example file there *userChrome.css*, and then add the following code to the bottom of the file:

```
/* Place the sidebar on the right edge of the window */
```

```
hbox#browser { direction: rtl; }
```

```
hbox#browser > vbox { direction: ltr; }
```

Keep track of AdSense earnings: If you use AdSense on your Web site or blog, you can use the AdSense Notifier Firefox plug-in to keep track of your daily earnings within the browser, in real time. Just check the bottom right corner for total ad impressions, CPM, and your total daily earnings as they accrue. find.pcworld.com/59880 >>

Five Essential Browser Add-Ons

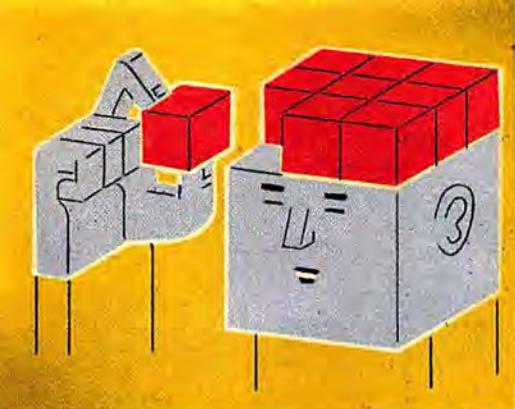
1 IE Tab: If you use Firefox as your primary browser, you probably get stymied occasionally by Web sites that don't look right in its windows. Don't fire up Internet Explorer (which maintains a separate history and won't have your bookmarks); instead, use the IE Tab plug-in to instruct Firefox to temporarily use Internet Explorer's rendering engine. IE Tab resides in the bottom right corner of your browser. Click the Firefox icon to switch to IE mode and vice versa. find.pcworld.com/59881

2 Duplicate Tab: Want a copy of the current window you're visiting, complete with the history of that browsing session? IE users can accomplish this without having to install and use a plug-in: Press <Ctrl>-N to open a new window with the entire history of the current window. For Firefox users, Duplicate Tab lets you obtain such a history with a single shortcut key-stroke; or you can use the tool to merge multiple open windows into a series of tabs. find.pcworld.com/59882

3 ErrorZilla: The standard "server not found" page is useless if you're looking for a Web site that's gone AWOL. ErrorZilla adds a series of buttons to the bottom of the standard "Firefox can't find the server" message, providing instant access to the Wayback machine, Google Cache, Whois lookup, and more. find.pcworld.com/59923

4 Inline Search: IE users can obtain search-as-you-type functionality that works the same way it does in Firefox with this free, simple extension. find.pcworld.com/59883

5 Extended Statusbar: This plug-in supplements the data that Firefox provides about a Web page and your Internet connection, providing such details as the total size (in KB) of the page, the transfer speed, and the load time. find.pcworld.com/59884



Office Optimizers

Get more out of Microsoft Office by adding a few extras. Watch Word, Excel, and Outlook perform tricks you never dreamed were possible!

Open Office 2007 files with older Office versions: Microsoft changed its default file format in Office 2007, so you won't be able to open files saved in the new format with older versions of the Office suite. However, if you have any of three prior versions of Office—2000, XP, or 2003—you can install the Office Compatibility Pack and thereby establish forward compatibility with the new format. find.pcworld.com/59885

Open old files with Office 2003: Conversely, with Service Pack 3 for Office 2003, Microsoft disallowed opening file formats that predate Office 97, citing security concerns. To re-enable Office to open these files, you have to run a series of Registry hacks. Fortunately, Microsoft has created Registry scripts to make this task easy. Download them, right-click them, and then select *Merge*. At once, you'll be able to open old files again. find.pcworld.com/59886

Put offline docs online in a jiffy: Online document-processing tools are wonderful for people who are working on files as a group, but getting files online—and keeping online versus offline versions straight—can be a hassle. The Zoho Plug-In for Microsoft Office simplifies uploading your offline documents to the Web service and downloading online documents from it, all without your having to leave your Office application. find.pcworld.com/59895

Make PDF files inside Office: You don't need full-blown Adobe Acrobat to cre-

ate and edit PDF files. CenoPDF lets you build PDFs without leaving Word, PowerPoint, or Excel. After installing CenoPDF, simply print your .doc files and choose the PDF printer option—or build PDF-based forms using text-entry fields, buttons, and boxes to be filled out electronically. The program is free to try, though PDFs are watermarked; it costs \$29 to buy. find.pcworld.com/59887

Add holidays to Outlook: Want to avoid manually adding Memorial Day and Christmas to your Outlook calendar each year?

You can input 12 months' worth of holidays at once by clicking *Tools•Options•Calendar Options* (on the *Preferences* tab). On the next screen, click *Add Holidays*, select the appropriate country or countries, and click *OK*.

Organize and prioritize Outlook data: The ClearContext Information Management System offers tools that are useful for organizing your Outlook data, starting with a dashboard that provides a consolidated look at your tasks and calendar items. ClearContext allows you to assign topics (which you define) to messages; then it automatically files subse-

CLEARCONTEXT IMS's dashboard view keeps key Outlook data handy.

quent messages in the thread. The system flags your most important contacts based on how often you deal with them, and it color-codes messages based on the sender's importance. ClearContext reduces inbox clutter by "snoozing" noncritical messages—that is, by removing them from the Inbox for a specified period of time. The program is free for

30 days, and then costs \$90 to buy. find.pcworld.com/60007

Become a meeting power user: MeetingSense takes Outlook's rudimentary calendar system and turns it into a powerhouse. An extensive meeting dashboard gives you a hub for making agendas, creating minutes,

and sending out summaries, all while providing a centralized meeting space where you and other MeetingSense users can share files, make notes, and create action items. It's perfect for scattered groups that meet frequently. After a 14-day free trial, the software costs \$199. find.pcworld.com/60008

Import Outlook contacts to Lotus Notes, and vice versa: Moving your contacts list from Lotus Notes to Outlook (or making the opposite migration) is a snap using the Personal NAB (Notes Address Book) Import/Export Utility, a no-cost download from Lotus' Web site. Open



OUTLOOK HAS A built-in setting for automatically adding your national holidays to its calendar.



the utility the same way you would any Notes database, and you'll see a simple form where you can point to the file that you wish to convert, choose the desired operation, and hit a button to start the conversion. It's very useful if you're migrating to a new platform, for example. find.pcworld.com/59891

Get a bird's-eye view of your contacts: Xobni is *inbox* spelled backward, but there's nothing misdirected about Xobni Insight's cool interface, which provides information about each person that you correspond with as you read messages from them. Xobni (currently available only if you sign up for a private beta invitation) lives on the right side of your Outlook window. It provides a graphical look at e-mail frequency, contact information, and old conversations with each contact. Don't miss the Xobni Analytics feature, which tracks how much e-mail you send and receive every day. find.pcworld.com/60010

18 ways to tweak Outlook: MAPILab Toolbox is a pile of 18 Outlook add-ins bundled into one big package. Some of the tools are simple; one, for instance, hides fax numbers in contact searches. Others are pure genius, such as a plug-in that scans outgoing e-mail for phrases like "see the attachment" and then pops up a reminder in case you forget to attach anything. The toolbox is free for 30 days, \$24 thereafter. find.pcworld.com/59894

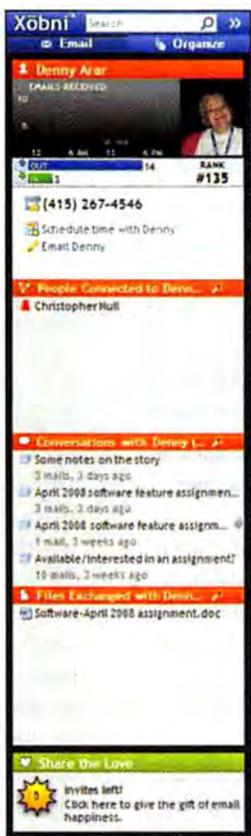
Redact text in Word: You know how the feds black out sections of documents they deem too sensitive (or embarrassing) for public consumption? You can too, if you download Microsoft's Word

Redaction add-in for Office 2003. So the next time your [redacted] requires you to [redacted] your [redacted], you can [redacted] and no one will be any the wiser. You can read your own redacted text; but when you export the documents in redacted form, the marked portions cannot be read (or edited, if you choose this limitation). find.pcworld.com/59889

Share Excel files without groupware: You can share an Excel file without using a Web-based collaboration system: The eXpresso Plug-In for Excel (a 2007 Innovations Award winner) lets you store the file while working in Excel, locking it while one user meddles with it, and then making it available for others to edit. E-mail alerts tell when the file is unlocked. You can even lock specific portions of a spreadsheet to prevent others from editing them. find.pcworld.com/59893

Swell your spreadsheets with demographic data: An Excel spreadsheet is only as good as its data. But manually adding information (such as the population in an area code or the average income in a zip code) is tiresome. CDXStreamer does the heavy lifting: Install this Excel plug-in, and configure it to find information about a region or a stock ticker you are interested in. CDX-Streamer then grabs the latest content from the Web, automatically. Over 100 pieces of demographic data are indexed to each zip code. The free trial lasts 14 days; regular CDXStreamer service costs \$30 per month. find.pcworld.com/59888

Add real-time stock quotes to Excel: Obsolete stock data in a spreadsheet does



XOBNI PROVIDES INFO about Outlook contacts as you read e-mail from them.

Five Essential Office Add-Ons

1 International Character Toolbar: Add this toolbar to Office to gain one-click access to a palette of the most common special characters used in the foreign language(s) of your choosing. Warning: You may have to sign on to the Office Genuine Advantage program to get this add-on. find.pcworld.com/59897

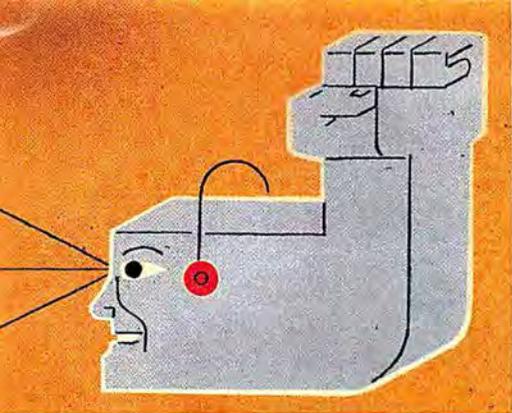
2 ToolbarToggle: Not thrilled with Office 2007's radical new "ribbon" design in lieu of good old menus and toolbars? ToolbarToggle restores the 2003 suite's arrangement. A single-user license costs \$20 after a free five-day trial. find.pcworld.com/60015

3 Word Frequency Count: This shareware application (full name: Word Frequency Count in Multiple Text & HTML Files) adds up the number of times that every word occurs in multiple text, HTML, and Word documents. Unlocking the full utility will cost you \$30. find.pcworld.com/59903

4 Remove Hidden Data: You probably sometimes receive files filled with embarrassing "track changes" information and personal data that the creator accidentally left in. Don't be that person yourself. Thank Microsoft for this free add-in. find.pcworld.com/59904

5 ClearType Tuner: Part of the Windows XP PowerToys suite (and available in an online version, as well), this add-on gives you fine-grain control over how fonts look on your LCD screen. You'll be amazed at how much of a difference a slight alteration in font thickness and smoothing can make on your eyes. find.pcworld.com/59905

you no good. The MSN Money Stock Quotes for Excel add-on inserts MSN stock prices (which are delayed by 15 minutes) into any Excel spreadsheet, with updates every time you change the spreadsheet. find.pcworld.com/59896 >>



Get More Media Muscle

From music players to image editors, add-ons abound in the world of multimedia. To upgrade your audio or make your photos and videos pop, check out our favorite plug-ins for iTunes, Windows Media Player, Photoshop, and other popular programs.

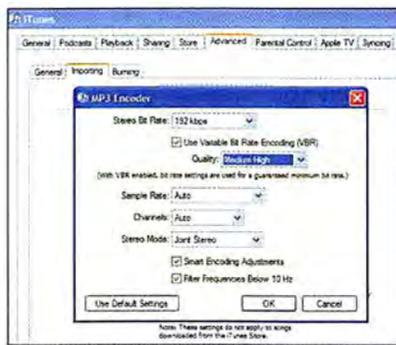
Make music friends, get worthwhile recommendations: iLike is a plug-in for

Apple iTunes that expands your music listening options. A standard (and popular) social networking component turns you on to people with musical tastes similar to yours, but the "related music" system seals the deal. Choose a song in your library, and iLike offers other music you might like (with instant previews you can play), along with free, similar MP3s from independent artists. find.pcworld.com/59906

Use Variable Bit Rate encoding in iTunes: No matter what overall bit rate you rip tunes at, Variable Bit

Rate (VBR) delivers the best-quality music while keeping file sizes small. Finding the option in iTunes isn't easy. To get there, click *Edit*•*Preferences*•*Advanced*, click the *Importing* tab, and then click the *Setting* drop-down menu. Choose *Custom*, and check the *Use Variable Bit Rate Encoding* box. A transfer rate of 192 kbps and Medium High quality for VBR yield exceptional results; aim higher if you think you can hear the difference.

Give WMP an upgrade: Windows Media Player may not be the most exciting application on its own, but the free Windows Media Bonus Pack add-on for Windows XP gives WMP considerably



USING VARIABLE Bit Rate recording will give you great sound quality plus smaller files.

more oomph. Extras include additional visualizations, skins, and sound effects, plus new features such as the ability to export your playlist to Excel and a better tool for finding missing artwork and other metadata on your audio tracks.

find.pcworld.com/59916

Upload to Flickr in bulk: Sending 10, 20, 50, or more photos to the Flickr photo-sharing site can be dull and time consuming. Download the Flickr Uploader (now in version 3.0) for a quick and easy way to upload photos in bulk, all in a stand-alone application. The program also plugs into Windows Explorer. Right-click any image (or group), and you'll get a 'Send to Flickr' menu item, which opens the Flickr Uploader application and gets your shots ready to go. find.pcworld.com/59910

Upload to Flickr by e-mail: Don't have Web access? You can send pictures to

Five Essential Multimedia Add-Ons

1 Picasa to flickr: This plug-in for Picasa is free, handy, and platform-independent. It uses a simple Java applet to let you zip files from the popular image editor directly to the equally popular Flickr photo-sharing service. find.pcworld.com/59917

2 The Filter: Your party starts in 15 minutes and you forgot to make the music playlist. No problem—seed this iTunes and Windows Media Player add-on with a handful of tunes you like. Not only will it generate a killer party sound track, but it will dredge up hot tracks that you might even have forgotten you had. find.pcworld.com/60016

3 EvilLyrics: This free download gets rid of the junk code that accompanies most lyrics search results by looking for lyrics in the background whenever you play a song in iTunes, WinAmp, Windows Media Player, or another application. The results aren't perfect, but they're on target more often than not. find.pcworld.com/59909

4 ffdshow: Dodge the hassle of juggling multiple video formats by turning to this versatile plug-in, which supports most video players and provides all the video codecs you are likely to need. find.pcworld.com/59913

5 Plugin Galaxy: This collection of free effects and filters for Photoshop and Paint Shop Pro offers a range of warping and blurring effects, plus handy features like a "page curl" for image corners, all accessible within a single interface. find.pcworld.com/59919



AS YOU PLAY your favorite music in iTunes, iLike will recommend other artists you might enjoy.

your Flickr account by e-mail from any PC or even by phone. First, find your custom upload e-mail address (at find.pcworld.com/59911). Use the subject line of your message for the photo's title and the body for a description. Flag any tags by prefacing them with the >>

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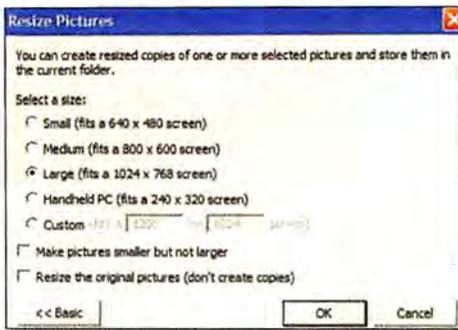
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phrase “tags:” on their own line. Get more info at find.pcworld.com/59912.

Quickly shrink those pics: It's wise to take photos at the highest resolution that your camera supports, but your friends and family members probably don't want to be custodians of an inbox full of 4MB files. If firing up a full-blown image editor such as Photoshop seems like overkill, use Microsoft's Image Resizer PowerToy to right-click any image and open a Resize Pictures menu for easily making pics smaller. To resize in bulk, select multiple shots. find.pcworld.com/59907

Make GIMP look like Photoshop: GIMPshop, a tweaked version of the free, open-source GIMP image editor, mim-

MICROSOFT'S modest Image Resizer PowerToy gives you the ability to cut high-resolution images down to size with a minimum of fuss.

before getting started. find.pcworld.com/59918

An avalanche of art effects: Filter Forge offers a monster collection of methods (including more than 4000 filters) for

ics the look and feel of Photoshop, so you can use this full-featured application without having to learn any new commands. Think of it as a GIMP mod that doesn't require you to install GIMP be-

Forge community. Contributors get the plug-in for free; everyone else pays \$99 to \$299, depending on the resolution they require. find.pcworld.com/60013

Apply film effects to stills: OptikVerve VirtualPhotographer, a Photoshop plug-in, lets you apply dozens of preset film styles (extra grain, soft focus, high contrast, and so on) to photos in just a couple of clicks. find.pcworld.com/59920

Silence noisy photos: On some cameras, ISO modes as high as ISO 3200 tempt a lot of people to shoot pictures in the dark—leading to disappointment with

the resulting noisy photos. Noise Ninja cleans up grainy, pixelated shots. Plug the app into Photoshop and select noisy areas by hand, or use the Noise Brush to swipe your pointer over trouble spots. The program costs \$45 for home use, and \$80 for pros. find.pcworld.com/60014

Give pics the TV treatment: Looking for a way to crop a photo onto a television

screen and make the resulting image look realistic? Namesuppressed Design's Autointerlace plug-in for Photoshop adds telltale horizontal lines to your image, just as if you had photographed your old CRT. find.pcworld.com/59915

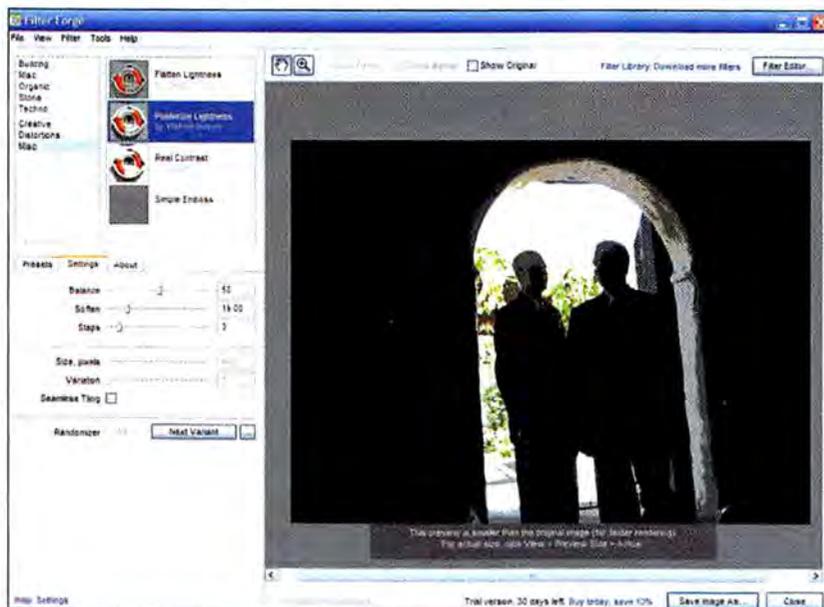
Expand your 3D library: Adobe's free Photoshop CS3 Extended Plug-In for Google 3D Warehouse lets you search and import 3D models from Google's online repository of photorealistic art. find.pcworld.com/59921

Get the best possible color from your PC: Printed photos don't look the same as photos on a monitor. Reconciling the two (and images from other sources, like scanners) involves installing a color profile for each device. The Microsoft Color Control Panel Applet for Windows XP enables you to switch among all the profiles on your machine; if you have multiple monitors or printers, you can easily tweak output to look its best on the device you're using. find.pcworld.com/59908



GIMPSHOP PUTS a Photoshop-like face on the free GIMP image editor.

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FILTER FORGE HAS more than 4000 Photoshop filters and other tools to tweak your photos.



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The Best **Bargain** PCs

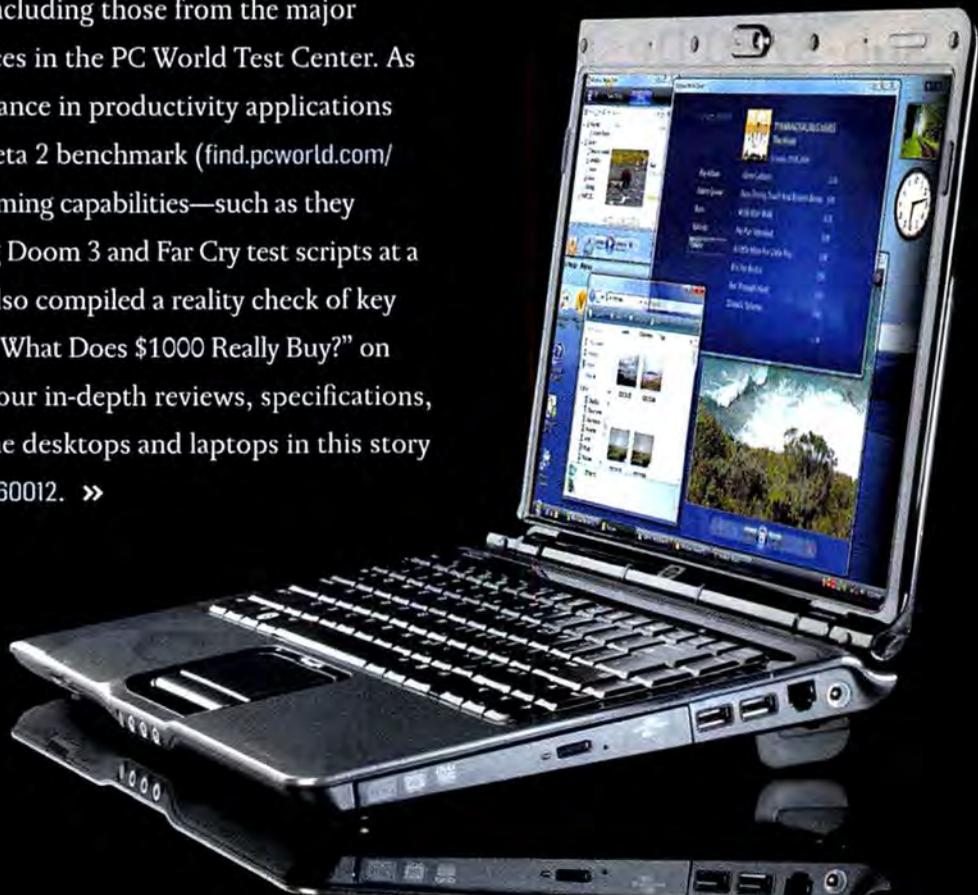


Basic laptops and desktops have never been less expensive, but are you giving up too much if you go cheap? We tested 12 low-cost machines to find the real values.

| BY CARLA THORNTON, RICHARD JANTZ, AND DANNY ALLEN |

BUYING A COMPUTER is always an exercise in compromise. When you're deciding whether a budget-priced PC will match your power and expandability needs, the answer depends on how many concessions you're willing to make.

To help with your decision, we put seven sub-\$750 desktop PCs (each came with a monitor, a mouse, and a keyboard) and five sub-\$1000 laptops—including those from the major brands—through their paces in the PC World Test Center. As always, we tested performance in productivity applications using our WorldBench 6 Beta 2 benchmark (find.pcworld.com/60017) and evaluated the gaming capabilities—such as they were—of each system using Doom 3 and Far Cry test scripts at a variety of resolutions. We also compiled a reality check of key budget-PC trade-offs: See “What Does \$1000 Really Buy?” on page 100. Finally, look for our in-depth reviews, specifications, and test scores for all of the desktops and laptops in this story online, at find.pcworld.com/60012. >>



BUDGET BEST BUYS: The \$689 **Dell** Inspiron 530 desktop with 19-inch monitor (opposite page) and the **HP** \$900 Pavilion dv2660se laptop.

Windows Shopping

All the desktops and laptops we tested shipped with Windows Vista—usually the 32-bit version of Vista Home Premium, which costs about \$100 if you were to buy it separately. Sys Technology's \$708 Sys SlimLine Si200 desktop and Toshiba's \$699 Satellite Pro A210-EZ2201 laptop came with the less expensive (roughly \$70) Vista Home Basic. Among other things, Basic lacks support for the Aero environment and its translucent effects. Acer's \$748 Veriton M460-UD2180C desktop and Fujitsu's \$899 LifeBook S7211 had Vista Business, which retails for about \$120; it lacks Vista Home's Parental Controls but adds office-centric extras such as full Remote Desktop support and Rights Management Services.

Despite boasting more expansion room than most value PCs have, the Acer Veriton wasn't as well equipped as competing desktops that cost less, and so it missed our Top 5 chart. Also missing the cut was HP's \$719 Pavilion Slimline s3300z. It sports the same ultracompact design as other models in HP's Slimline series do and uses an energy-efficient 1.9-GHz AMD Athlon 64 X2 BE-2300 processor, but its unexceptional speed and limited expansion options were big drawbacks.

The desktops we tested earned Superior ratings for their performance, but we evaluated them only among the group of inexpensive systems. Their scores would be much lower had we compared them to models on our power-PCs chart.

Sub-\$750 Desktops

Our value-system lineup included three different case sizes. The three compact models—from HP (the very smallest), Polywell, and Sys Technology—are all based on microATX motherboards. The Compaq and the eMachines units came as minitowers with microATX-based motherboards, and the other two models, from Acer and Dell, were midsize towers. As far as connectivity options go, the larger the case, the more ports you get (including USB, but not always FireWire).



POLYWELL'S \$729 POLY i7050 desktop delivers strong performance in a compact case.

1 Dell Inspiron 530

The Dell Inspiron 530 was powerful enough to earn Superior scores (for a value PC) in both its productivity and graphics tests, yet it's quite inexpensive at \$689.



Most value systems use integrated graphics that rely on main system memory, but a 128MB nVidia GeForce 8300GS graphics card handles the 530's graphics duties. A 250GB hard drive provides an average amount of storage space, and our test unit had a combo DVD/CD writer, too.

The 530 earned a WorldBench 6 Beta 2 score of 73—commendable in the value desktop category, and slightly better than the 71 posted by the Compaq Presario SR5350F, which uses the same Intel Pentium dual-core E2160 CPU. Not surprisingly, the Dell also received top scores among value systems for its graphics performance—but as its graphics card has only 128MB of memory, the system still isn't powerful enough for intensive gaming. In our Doom 3 tests for example, it managed a subpar score of 20 frames per second running at 1024 by 768 with antialiasing turned on.

The 530's attractive, glossy, white-and-silver midsize-tower case is well ventilated, and its sliding front panel covers an external-bay module containing a media card reader and connectivity ports. Inside its case, you'll find good old-fashioned screws securing the components, so you'll need a screwdriver when installing expansion cards and optical drives. Like most other value systems, the 530 uses a smaller motherboard that supports fewer expansion options than larger (and pricier) boards do. Available options include one 5.25-inch external and one 3.5-inch internal drive bay, two PCI slots and one PCIe x1 slot, and two (out of four) DIMM memory sockets. The 530 lacks FireWire, but you can get such ports for an extra \$30.

The included Dell SE198WFP monitor delivered sharp text and fine color in both still and moving images. The bundled USB optical mouse and enhanced keyboard are better than the standard-issue input devices that come with most value PCs. Among the keyboard's extras are quick-launch keys, a retro-style volume knob, and two upstream USB ports.

If you want a value PC with an excellent price-to-performance ratio and some room to grow, Dell's Inspiron 530 is the best deal among the budget PCs we've tested recently.



THE \$620 PRICE of the eMachines T5246 includes a comparatively small 17-inch monitor.

2 Polywell Poly i7050

If you want a space-saving value desktop computer that's powerful enough for general applications, Web surfing, and other routine tasks, the \$729 Polywell Poly i7050 fills the bill. It weighs only about 12 pounds, versus 28 pounds for Dell's Inspiron 530. As is the case with nearly all compact models, the trade-off is that you have fewer expansion options inside.

Despite its entry-level CPU, the Poly i7050 scored admirably in our productivity-application benchmarks. It tied with the Sys Technology Sys SlimLine Si200 in earning a WorldBench 6 Beta 2 score of 77, the best in our roundup. But like all of the other low-priced systems that use integrated graphics instead of a discrete graphics card, the Poly i7050 did poorly in graphics tests (though it does have an HDMI port for connecting a TV). You can add a low-profile graphics card in the system's open PCI Express x16 slot; Polywell charges \$72 for a 256MB nVidia GeForce 8400GS card (which has twice the memory as the card in the Inspiron 530 does).

The machine's components are housed in a small (13-by-16-inch) black-and-silver case that's barely 4 inches high. You can get the same Poly i7050 system components in a cube-shaped case, as well. Numerous vents, along with a quiet CPU fan inside, helped keep our test unit cool.

The unit we tested had a 250GB hard drive and a combo DVD/CD writer, leaving only one drive bay (an external 3.5-

How Do Linux-Based Budget PCs Compare?

FIND OUT ON PAGE 78, where we review two low-cost Linux-based desktop PCs (Everex's "green," \$199 gPC TC2502 and Mirus's \$299 SITLC420) and see how they handle everyday computing tasks. You can also find our review of the \$399 Asus Eee PC 4G (a Linux-based sub-laptop with a 7-inch display) online at find.pcworld.com/60019.



inch one) free; accessing it requires unlocking a large metal cage and tilting it upward, a somewhat cumbersome procedure.

Our i7050 shipped with a KDS K-92BW 19-inch LCD (1440 by 900 native resolution) that had a VGA analog-only interface and decent image quality, though it wasn't quite as bright as some of the other 19-inch LCDs of competing systems. The i7050's Logitech USB optical mouse and keyboard surpass those bundled with some budget PCs, but they also take up two of the machine's seven USB ports.

The Poly i7050's small size, strong performance, and HDMI output make it a good living-room PC candidate. The midsize, \$689 Dell Inspiron 530 is arguably a better deal, however, since it costs a bit less and has a discrete graphics card.

3 eMachines T5246

At \$620, the eMachines T5246 is the least-expensive value PC in our lineup, but since it's a prebuilt retail system available in only one configuration (also sold as the 4200+ Desktop at Best Buy), you can't mix and match compo- ➤

PC World Top 5 Sub-\$750 Desktop PCs

MODEL	PCW Rating	Performance	Features and specifications	Bottom line
1 BEST BUY Dell Inspiron 530 \$689 find.pcworld.com/59995	89 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 73 Superior Overall design: Good Graphics: Superior 	<ul style="list-style-type: none"> 1.8-GHz Pentium Dual-Core E2160 250GB drive capacity 19-inch Dell SE198WFP monitor 128MB nVidia GeForce 8300GS 	Impressive performance aided by dedicated graphics makes this model the best value in our test group.
2 Polywell Poly i7050 \$729 find.pcworld.com/59996	86 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 77 Superior Overall design: Good Graphics: Poor 	<ul style="list-style-type: none"> 2-GHz Pentium Dual-Core E2180 250GB drive capacity 19-inch KDS K92BW monitor Integrated nVidia GeForce 7150 	Delivers solid performance for basic tasks but not for fast-action games, and a compact case limits expansion.
3 eMachines T5246 \$620 find.pcworld.com/59997	86 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 70 Superior Overall design: Good Graphics: Poor 	<ul style="list-style-type: none"> 2.2-GHz Athlon 64 X2 4200+ 400GB drive capacity 17-inch eMachines E17T4W monitor Integrated nVidia GeForce 6100 	Low-priced PC has capacious storage and good expansion options, but its graphics performance and small monitor disappoint.
4 Compaq Presario SR5350F \$680 find.pcworld.com/59998	85 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 71 Superior Overall design: Good Graphics: Poor 	<ul style="list-style-type: none"> 1.8-GHz Pentium Dual-Core E2160 360GB drive capacity 19-inch Compaq w11907 monitor Integrated Intel 945G 	Inexpensive PC with a big hard drive succeeds at standard multimedia tasks, but its graphics are too weak to satisfy serious gamers.
5 Sys Technology Sys SlimLine Si200 \$708 find.pcworld.com/59999	85 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 77 Superior Overall design: Good Graphics: Poor 	<ul style="list-style-type: none"> 2-GHz Pentium Dual-Core E2180 160GB drive capacity 19-inch ViewSonic VA1903wb monitor Integrated Intel 945G 	Fine general performer is hampered by traits common to mini PCs, namely lackluster graphics and limited expansion options.

CHART NOTES: Prices and ratings are as of 2/7/08. Visit find.pcworld.com/60011 for full specifications and reviews.

nents before you purchase it. Our test T5246 included a generous 400GB hard drive and such essentials as a combo DVD/CD writer and a memory card reader. The 17-inch, \$190 eMachines E17T4W LCD (1280 by 720 resolution) we added produced sharp text and realistic color graphics, but its screen space is considerably less than that of the 19-inch (and larger) LCDs that ship with the other value desktops. We recommend going for a larger wide-screen LCD, such as the \$210 eMachines E19T5W or the \$220 eMachines E19T6W (both 19-inchers that are sold at Best Buy). We think you'll find the extra screen space worth the money.

In our WorldBench 6 Beta 2 tests, the T5246 earned a score of 70—average for our test group—but its scores in the Firefox and multitasking parts of the test suite were the best of the sub-\$750 PCs here. Like the other systems that rely on integrated graphics rather than on a discrete graphics card, the T5246 fared poorly in graphics performance. Although you can add a graphics card to the PCIe x16 slot, it will work only at half speed (x8) rather than at full speed (x16).

The T5246's black-and-silver minitower case is a no-frills design with no front cover for its external drives and ports. Open expansion options inside the neat and tidy interior include one external 5.25-inch and one internal 3.5-inch drive bay, and three card slots (one PCIe x16, one PCIe x1, and one PCI). The bundled input devices were a mixed bag: The eMachines multifunction keyboard worked fine, but we would have preferred an optical mouse instead of the clunky ball mouse.

The T5246 provides respectable speed for common tasks, and a sizable hard drive. Its small monitor and its weak graphics capabilities, however, limit its overall appeal. Of course, you could spend an extra \$70 or so for a larger LCD and a cheap add-in graphics card, bringing the price close to that of the \$689 Dell Inspiron 530. The Dell would still have faster, full-speed (x16) graphics, though.

THE \$680 COMPAQ Presario SR5350F comes with a 360GB hard drive.



SYS TECHNOLOGY'S \$708 small-form-factor SlimLine Si200.

4 Compaq Presario SR5350F

Like the eMachines T5246, the SR5350F is a prebuilt retail system available in only one configuration, so you can't select different components before you buy it. Priced at \$680, the system has a 360GB hard drive that provides more storage space than the drives of most value systems. Other goodies include a combo DVD/CD writer with LightScribe labeling capability, and a memory card reader. The bundled Compaq wf1907 19-inch LCD has basic built-in speakers that are best suited for Windows alerts rather than movie soundtracks. Though the monitor provides both digital and analog inputs, the SR5350F's integrated-graphics setup allows only a VGA connection. Still, image quality was good, and the screen displayed accurate color graphics and readable fine text.

The SR5350F scored 71 on WorldBench 6 Beta 2, just behind the 73 mark of the Dell Inspiron 530, which uses the same CPU. Lack of a dedicated card led to poor graphics results.

All external connections are easy to access, but you'll find no FireWire ports. Though thumbscrews hold the side panel in place, inside you need a screwdriver to secure cards and to work on the drive bays. Three open bays (two 5.25-inch external, one 3.5-inch internal) and three card slots (one PCIe x16, one PCIe x1, and one PCI) are available for upgrades.

The Compaq-branded multifunction keyboard worked fine, but the ball mouse felt clumsy compared with the optical mice bundled with most value desktops.

All in all, Compaq's Presario SR5350F is a good-performing system with plenty of storage space, but you may want to add a discrete graphics card after you get it home.

5 Sys Technology Sys SlimLine Si200

Sys Technology lets you choose different parts for this compact PC, including either an Intel or AMD processor. Our \$708 test system featured a 2-GHz Intel Pentium Dual-Core E2180 CPU, and a 160GB hard disk, which is on the small side. But it also had a combo DVD/CD writer with LightScribe labeling capability, a multiformat memory card reader, and a ViewSonic VA1903wb 19-inch display.

In our WorldBench 6 Beta 2 tests, the SlimLine Si200 distinguished itself by earning a mark of 77—putting it in a tie with the Polywell Poly i7050 for the best score of this budget >>

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PC test group. But similar to all the other value systems that rely on underpowered integrated graphics, the Si200 turned in poor performance in our gaming tests, and it lacks full-screen antialiasing support for rendering smoother edges in graphics frames.

The SlimLine Si200's case, not quite 4 inches high, is easily opened but has little room for expansion inside. All three drive bays—two external, one internal—are occupied, so you'll need to use the USB connectivity ports (no FireWire ports are provided) if you want to add another hard drive. The system has four open slots (one PCIe x16, one PCIe x8, and two PCI) but they accommodate only low-profile (half-height) expansion cards. Using the plastic "feet" that come in the package, you can place the Si200 in a vertical position, though you can't reorient the DVD drive.

Sub-\$1000 Laptops

These all-purpose notebooks have screens ranging from 14.1 to 15.4 inches in size. Most have 2GB of memory, at least 120GB of hard disk space, dedicated multimedia shortcut keys, and underpowered integrated graphics. All the models we tested include 802.11b/g wireless networking; the second-place Acer Aspire 5920-6954 was the only one to support draft-n Wi-Fi, and it also featured discrete graphics and an HD DVD-ROM drive. Additionally, the Acer and the Dell Inspiron 1525 sported HDMI connections—extras we didn't expect at this price point.

ACER'S \$999 ASPIRE 5920-6954 includes dedicated graphics, an HD DVD reader, and an HDMI port.



1 HP Pavilion dv2660se

The \$900 HP Pavilion dv2660se offers strictly middling performance, but its battery life and a great design make it our winning laptop under \$1000.

BEST BUY

The notebook's WorldBench 6 Beta 2 score of 67 is significantly lower than the high-eighties marks of some portables with the latest mobile chips, but it's not bad for a budget machine. In fact, the score beats the average of 65 earned by the five sub-\$1000 laptops we tested for this roundup, and is only five points below the average for all of the all-purpose notebooks that we've tested of late, regardless of price. Its graphics power isn't enough to play 3D games well, however.

Battery life was exceptional. This 6-pounder's high-capacity 12-cell battery endured for 6.3 hours—about 2.5 hours longer than what the average mainstream laptop can manage. >>

PC World Top 5 Sub-\$1000 Laptops

MODEL	PCW Rating	Performance	Features and specifications	Bottom line
1 BEST BUY HP Pavilion dv2660se \$900 find.pcworld.com/59989	84 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 67 Good Overall design: Very Good Tested battery life: 6:19 	<ul style="list-style-type: none"> 1.5-GHz Core 2 Duo T5250 14.1-inch wide screen 6.0 pounds DVD±R DL/DVD±RW 	HP's designer notebook offers excellent battery life, and will appeal to both multimedia fans and frequent travelers.
2 Acer Aspire 5920-6954 \$999 find.pcworld.com/59990	84 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 70 Very Good Overall design: Very Good Tested battery life: 3:52 	<ul style="list-style-type: none"> 1.66-GHz Core 2 Duo T5450 15.4-inch wide screen 7.2 pounds HD DVD-ROM 	Moderately powerful laptop has dedicated nVidia graphics, HDMI output, and an HD DVD reader.
3 Dell Inspiron 1525 \$999 find.pcworld.com/59991	82 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 78 Superior Overall design: Good Tested battery life: 4:04 	<ul style="list-style-type: none"> 2-GHz Core 2 Duo T7250 15.4-inch wide screen 6.0 pounds DVD±R DL/DVD±RW 	The customization options on this zippy \$999 portable will please picky shoppers, and it's fast, too.
4 Fujitsu LifeBook S7211 \$899 find.pcworld.com/59994	78 GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 56 Fair Overall design: Good Tested battery life: 3:50 	<ul style="list-style-type: none"> 1.6-GHz Pentium Dual-Core T2330 14.1-inch wide screen 5.2 pounds DVD-ROM/CD-RW 	Thin and light portable with so-so speed could still satisfy budget-minded road warriors.
5 Toshiba Satellite Pro A210-EZ2201 \$699 find.pcworld.com/59993	77 GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 54 Fair Overall design: Good Tested battery life: 2:14 	<ul style="list-style-type: none"> 1.8-GHz Athlon 64 X2 TK-55 15.4-inch wide screen 6.0 pounds DVD±R DL/DVD±RW/-RAM 	Bargain-priced laptop has sweet built-in speakers, but it's too slow for demanding users.

CHART NOTES: Prices and ratings are as of 2/7/08. Weight does not include AC adapter, power cord, docking station, or extra batteries. Visit find.pcworld.com/60009 for full specs and reviews.

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Nice extras include the ability to play a CD or DVD without first launching Windows, and dual headphone ports on the front for two people to listen in private at once. (Not that you really need that, as the built-in speakers sound pretty darn good.)

Though the 14.1-inch, 1280-by-800-pixel screen could be a tad brighter, it's easy enough to read. The dv2660se lacks some increasingly mainstream features, such as 802.11n Wi-Fi, Bluetooth, and gigabit ethernet, but it does have 802.11g Wi-Fi, a DVD writer, and an ExpressCard slot. The dv2600se is one of the few laptops in this price range to bundle a productivity suite in the form of Microsoft Works 8.5. It also has the most upgrade potential, thanks to a side connection that all Pavilion laptops have for HP's xb3000 Notebook Expansion Base. Though it costs several hundred dollars more, the stand/docking station lets you add better speakers and another hard drive.

2 Acer Aspire 5920-6954

Except for business applications, which it lacks, this \$999 Vista Home Premium laptop has just about everything home-office buyers could ask for in a solid budget notebook.

At 7.2 pounds, the Aspire 5920-6954 is the heaviest budget laptop we looked at, but it has a 250GB hard drive and a fairly nice 15.4-inch screen (it's a bit too reflective). Though it lacks a few things such as Bluetooth, the Acer unit is the most high-definition-ready one here, offering both an HDMI port and an HD DVD reader. It has a subwoofer for better-than-average sound and a handy volume wheel. The terrific keyboard also boasts loads of useful shortcut buttons, including one to play music or movies without first launching Windows.

This is the only sub-\$1000 laptop here with a dedicated graphics chip: an nVidia GeForce 8600M GS with 256MB of memory. Tested frame rates weren't the highest we've recorded, but you should manage smooth enough game play.

The Aspire posted a solid WorldBench 6 Beta 2 score of 70, the second best in this group and equal to the average earned by 16 recently tested all-purpose notebooks in any price range. Battery life was average at 3.8 hours.

The cost of any applications will make the Aspire's price spill over \$1000, but its graphics performance and high-definition charms deserve your attention. >>



THE \$999 DELL Inspiron 1525 is our top-performing laptop under \$1000.

Reality Check: What Does \$1000 Really Buy?

WHAT EXACTLY DO you give up if you buy a budget system?

Budget price? Expect budget speed: Cheap machines are fast enough for everyday jobs such as e-mail and Web surfing, but they can be noticeably slow at handling heavier workloads, such as multitasking in several windows at once, especially if one involves some type of multimedia. For example, a 2.2-GHz Core 2 Duo T7500-equipped Fujitsu LifeBook N6460 laptop tested last month (see find.pcworld.com/60077) finished our multitasking test in 6.8 minutes, whereas the average notebook in this roundup needed 9.5 minutes. Don't waste money on the next-fastest CPU; it generally won't make much difference in speed. A chip several levels higher—say, a 2-GHz Core 2 Duo T7250 instead of a 1.5-GHz Core 2 Duo T5250—will boost speed as much as 20 percent.

Fewer upgrade options: With any laptop, cheap or not, you almost always have only two upgrade options: replace the hard drive or add memory. (In this roundup, only the Toshiba portable offers the rare option of adding a second internal hard drive.) With a budget desktop PC, however, you'll likely sacrifice some expandability. For example, don't expect to find the seven or so expansion slots you see in power and gaming towers. Most of these value desktops offer only four expansion slots, and some of the compacts have fewer.

Missed connections: Though you should have more than enough to get by, you'll have fewer slots, ports, and features in general. For instance, many sub-\$1000 laptops lack Bluetooth or FireWire. Also expect fewer FireWire and USB ports on desktops, and generally none of the new, high-end connections like eSATA (for adding a fast external hard drive).

Cheap PCs got no game: Budget PCs rarely have discrete graphics cards, which are necessary for keeping you alive and well in 3D shoot-'em-up games. The cheaper the system, the more likely it will rely on video memory that is shared with main system RAM, and that's especially true with laptops. For instance, our HP Pavilion dv2660se Best Buy (which uses integrated Intel graphics) managed only 8 frames per second in Doom 3, while the costlier Acer Aspire 5920-6954 (which has a 256MB nVidia GeForce 8600M GS video chip) played the same game at 59 fps and Far Cry at 76 fps.

Of our sub-\$750 desktop group, only the Dell Inspiron 530 shipped with a discrete graphics board (a 128MB nVidia GeForce 8300GS), though several PCs provided the option.

Plainer looks: Except for HP's imprinted designer laptops, which tend to look good at any price, none of these systems will win a beauty contest. Laptops tend to come enclosed in a lower-grade plastic, and some desktops have cheap cases with small, buzzy fans and components that are held in by screws. Though some budget computers clearly look a bit more elegant than others, most have designs that trend toward the utilitarian, to put it politely.

—Carla Thornton

Calculus Is the Exploration of Two Basic Ideas. Master Them and Open a New World for Yourself!

Change and Motion: Calculus Made Clear, 2nd Edition, on DVD

One of the greatest achievements of the mind is calculus. It belongs in the pantheon of our accomplishments with Shakespeare's plays, Beethoven's symphonies, and Einstein's theory of relativity. Calculus is a beautiful idea exposing the rational workings of the world.

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Professor Starbird teaches that calculus does not require a complicated vocabulary or notation to understand it. "Calculus is a crowning intellectual achievement of humanity that all intelligent people can appreciate, enjoy, and understand."

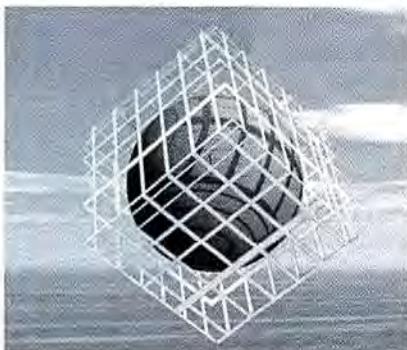
This series is not designed as a college calculus course; rather, it will help you see calculus around you in the everyday world. Every step is in English rather than "mathese." The course takes the approach that every equation is also a sentence that can be understood, and solved, in English.

About Your Professor

Professor Michael Starbird is a distinguished and highly popular teacher with an uncommon talent for making the wonders of mathematics clear to non-mathematicians. He is Professor of Mathematics and a Distinguished Teaching Professor at The University of Texas at Austin. Professor Starbird has won several teaching awards,

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most recently the 2007 Mathematical Association of America Deborah and Franklin Tepper Haimo National Award for Distinguished College or University Teaching of Mathematics, which is limited to three recipients annually from the 27,000 members of the MAA.

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3 Dell Inspiron 1525

If you don't like the specifications of the particular Dell Inspiron 1525 we tested, you can easily configure your own online. That's an important difference between this unit and most other inexpensive laptops: You can customize it down to the smallest detail—even the lid color—before finally clicking the 'Buy Now' button.

Our review unit would please those for whom good performance is a priority. Equipped with 2GB of memory and the best notebook CPU Dell offered for this model at the time of our review (a 2-GHz Core 2 Duo T7250), our \$999 Windows Vista Home Premium machine earned a WorldBench 6 Beta 2 score of 78. That's 17 percent faster than the average score of 65 posted by the five under-\$1000 laptops in this roundup. With the battery upgraded from the standard four-cell to a six-cell (\$15 extra), our unit lasted just over 4 hours on a charge, about 10 minutes longer than our laptop test group's average. About all the Inspiron 1525 can't handle is 3D graphics: With an Integrated Graphics Media Accelerator X3100 and no dedicated video card option, it's limited to simple games and 2D apps.

The Inspiron 1525 is wedge-shaped but svelte at 6 pounds, and it has a 15.4-inch 1280-by-800-resolution screen, a DVD writer, and a good keyboard. The 1525 is also one of the few notebooks in this price range with an HDMI connection.

Like the excellent HP Pavilion dv2600se, this Dell has lots of entertainment features: an instant-on button, a Webcam, and even dual headphone jacks. In fact, we like the 1525's Media-Direct button more than the HP's QuickPlay because it also has Instant Office, an application viewer that lets you access your calendar, contacts, and PowerPoint presentations.

If a reasonably wide choice of features in a laptop is paramount to you, the Inspiron 1525 is your best bet here.

4 Fujitsu LifeBook S7211

This svelte \$899 Windows Vista Business laptop has only two significant drawbacks: so-so speed, and an inability to burn DVDs. But if getting basic work done on the go is all you need, this attractive unit might be just your cheap ticket.

Fujitsu's LifeBook S7211 weighs 5.2 pounds with its built-in CD writer/DVD read-

TOSHIBA'S SWEET-SOUNDING, \$699 Satellite Pro A210-EZ2201.

THE \$899 FUJITSU LifeBook S7211's modular drive bay can house a second battery.



er installed in its modular bay. Swap the optical drive out for a battery instead (\$120 extra), and you can really cut the cord to a wall outlet. Our review unit lasted an average 3.8 hours with a single battery. If you have the second battery in place (a setup that we didn't test), Fujitsu estimates 6.5 hours of operation.

The S7211 notched a WorldBench 6 Beta 2 score of 56, putting it 14 percent behind the average of 65 earned by the five sub-\$1000 laptops we tested. Aside from a minor glare problem, the 14.1-inch, 1280-by-800-resolution screen is crisp and readable. We quickly acclimated to the petite keyboard, which features Fujitsu's dual-purpose Security Application Panel (numbered buttons for shortcut keys or a password).

If your laptop budget is tight, this lightweight, basic notebook can help you stay within your price parameters.

5 Toshiba Satellite Pro A210-EZ2201

The basic \$699 Toshiba Satellite Pro A210-EZ2201 is the lowest-priced laptop of our sub-\$1000 group, and it's also rather slow, with short battery life too. If pinching pennies is paramount, however, this Windows Vista Basic notebook can get mainstream work done without too much fuss.

The only model here using an AMD processor, and only one of two to include just 1GB of RAM, the Satellite Pro A210-EZ2201 achieved a WorldBench 6 Beta 2 score of just 54. The sub-\$1000 laptop average was 19 percent faster.

Performance aside, this black-and-silver unit has some nice features for a \$699 notebook, including a DVD writer, a FireWire port, and an ExpressCard/54 slot. It even has two surprises. One is an empty bay inside for adding a second hard drive. (A single 80GB hard drive comes standard.) The other is great sound—this plain little laptop belts out music like Ugly Betty channeling Celine Dion.

But the keyboard, while easy to type on, looked and felt cheaply made, and the 15.4-inch, 1280-by-800-resolution screen was on the dark side and prone to glare; the brightness controls seemed to have no effect whatsoever.

Considering that much better notebooks cost a mere \$200 more, it's hard to recommend the Toshiba A210-EZ2201 with much enthusiasm. On the other hand, we've never heard a better-sounding laptop at this price. And for music lovers, at least, there could be a real deal on offer here. ●





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BY SCOTT SPANBAUER

WITH HUNDREDS OF millions of user accounts, MySpace is the Internet's most recognizable (and reviled) social network. From teenagers to grandmas, seemingly everybody has a page. But Rupert Murdoch's online leviathan may not be the best >>



option for satisfying your Web communication needs. Nimble new startup companies are creating both general-purpose and specialized services—all of them free, just as MySpace is—that could get you a job, find you a date, connect you with friends new and old, and fill your life with beautiful music.

With so many social networks dotting the Web, though, it's hard to know which ones are worth your time and bandwidth. To help clarify things, we examined 17 alternatives to MySpace in five broad categories: general-purpose, special-purpose, taste-based, mobile, and media-sharing social networks. As we discuss our findings, we'll also offer a few tips for maintaining your safety and privacy, finding friends online, and getting the most out of each service.

General-Purpose Sites

Facebook: Though it began in 2004 as an online yearbook for Harvard students, Facebook soon opened its membership to other universities, then high schools, then everyone else. You can search for friends according to their school, city, or work affiliations, and you can join more than one of these networks, allowing you to maintain connections with ex-classmates, neighbors, and co-workers. Using this approach, the site has grown to a staggering 60 million members. Its main features—photo and video sharing, messaging, and public message boards—are similar to those on MySpace, but it eschews the crazy skins and music players that render many MySpace profiles illegible.

Unfortunately, beneath Facebook's



DAVEE EVANS, a freelance software designer from Portland, Oregon, says he receives regular job referrals from his LinkedIn profile, and has gotten back in touch with long-lost high-school friends as his 20-year reunion approaches.

clean, blue-and-white facade lies potential risk. Last year, Facebook's controversial Beacon advertising scheme, which made members' online purchases viewable by other members, caused an uproar as members objected to being transformed into unwitting (and uncompensated) product endorsers. If you (reasonably) worry that such a privacy gaffe could recur, you can use Facebook's fine-grained security settings to establish an appropriate level of privacy protection. See "Give Your Facebook Page a Much-Needed Lift" (find.pcworld.com/59973) from our December 2007 issue for additional Facebook safety and customization tips. www.facebook.com

LinkedIn: Unlike Facebook and MySpace, which are essentially about fun

and friends, LinkedIn promotes your career or your business. LinkedIn has become one of the most talked-about social networks, and has quickly grown to nearly 20 million members.

Like other social networks, LinkedIn revolves around your personal profile. But instead of displaying lists of your favorite bands and collections of party snapshots, your LinkedIn profile showcases your employment history, your professional skills, and your education and awards, and explains how and why you want to be contacted. To get the most out of your LinkedIn membership, you should make these entries brief, complete, and sparkling, just as you would on any résumé or curriculum vitae. The most important items in your profile, however, are the recommendations you receive from current and former coworkers and employers regarding the positions you've held. As more members write recommendations about you, you can decide whether to include them in your profile. The more positive recommendations you have,



Compose Message

FACES FROM THE past and the present, as well as from near and far, are alive and well on Facebook, where you can reconnect with them in a few clicks.

Glossary of Social Networking Terms



Financial Services
Information Technology and Services
Internet

IT'S WHO YOU KNOW
on LinkedIn, where
you can search your
contacts by industry
for people who can
help you land the job
of your dreams.

the better you'll look to potential employers in LinkedIn's Jobs & Hiring area, and to prospective clients in the Services area. To improve your chances of receiving a recommendation, consider writing recommendations for your connections without waiting until they ask you for one. www.linkedin.com

Twitter: Is Twitter really a social network? Yes, but not in the way Facebook and MySpace are. The content that drives Twitter is a relentless stream of real-time personal status postings called tweets, each limited to a maximum of 140 characters. "Going out for more batteries," or "Feeling snacky, I think I'll have a salad" are the stuff of Twitter greatness—as long as tracking your friends' ephemeral actions and mutterings is your cup of tea.

After you've signed up, it's worthwhile to peruse the ever-changing public updates page—to see the variety of ways people use Twitter and to find interesting Twitterers to follow. You can also allow Twitter to search through your e-mail address book to see whether any of your contacts are already Twitter users. In time, other people may follow your tweets, too. If you'd rather not broadcast your posts to the universe, select the 'Protect my Updates' option in Twitter's settings to keep your posts out of the public timeline and approve any followers before they can see your tweets. You can even have Twitter "nudge" you with an e-mail reminder should you forget to post for a while. When you're away from your computer, Twitter permits you to send and receive tweets on your cell phone via SMS or

Twitter's mobile Web site. I recently used the latter to keep tabs on Steve Jobs's January Macworld Expo keynote via the twittering of several Mac pundits in the audience. www.twitter.com

Special-Purpose Sites

The problem with the big mass-market social networks is that, to paraphrase Yogi Berra, nobody uses them any more—they're too crowded. How will anyone find your profile among the 400 million MySpace pages? Now, however, thousands of social networking sites have emerged that are built around specific activities, ideas, or interests, or that target particular groups of people, such as Baby Boomers.

Some examples: With help from the no-frills **iMedix**, you can find information on the Web related to specific conditions or illnesses, and chat with or e-mail other people who have the same concerns. At **BlackPlanet.com**, African-Americans can connect around various topics or geographic locations; **MiGente** is a sibling site with similar features intended for the Latino community, and **AsianAve.com** serves Asian communities. And people who are approaching or already experiencing their golden years can make virtual connections at **TeeBeeDee.com**, a site dedicated to social networkers ages 40 and up.

Ning: If you can't find an online community that matches your needs, you can build your own. At Ning, you create a customized social network with its own domain name and banner art, individual member profile pages, photo and video sharing, multiple sub- >>

Add: *n.* The act of gaining a new friend, and social networking's common currency, as in "Dude, thanks for the add."

Block: *v.* To configure your social networking service to prevent a particular user from contacting you or viewing your profile.

Check-in: *n.* In mobile social networking, an electronic message that alerts your group of friends that you have arrived at the local pub and are ready to party.

Cyberbully: *v.* To attack, harass, or ridicule a fellow community member via posted text, video, or other electronic means.

Defriend: *v.* The inverse of adding a friend, and the very epitome of coldness. Same as *unfriend*.

Faceslam: *v.* To ignore a Facebook friend request from someone you don't know and/or wish would just go away.

Facetalk: *v.* To scan, jealously, the Facebook profiles and photos of people you know, are going out with, or are going out with in your dreams.

Friend: *v.* To request that another user add you as a friend—sometimes an awkward moment for the social networker.

MySpace Suicide: *n.* The act of deleting one's MySpace account forever.

Nudge: *v.* On Twitter, to send a message notifying someone you follow that they're not posting frequently enough.

Poke: *n.* On Facebook, a feature that lets other users know that you're looking at their profile, and possibly stalking them.

RL: *n.* Real life—the world of flesh, bone, and face-to-face meetings that existed before the Web browser.

Slurping: *n.* The ability of most social networks to import your Web-based mail contacts to see if any are already on the service. Watch out for slurpers that spam every contact with membership invites.

Twitterhea: *n.* A condition resulting in an excess of Twitter posts. For even more Twitter jargon, see the Twitter Fan Wiki's glossary (find.pcworld.com/59941).



topic groups, and discussion forums. Once your custom network is complete, anyone—not just Ning members—can find it in Ning’s directory or through the site’s keyword tag cluster. Creating a Ning network takes only a couple of minutes: You come up with a name and a domain name (at the end of which the site will add “.ning.com”), enter a description of the network, put in some keyword tags, and insert an icon image, and you’re off. To increase the safety and privacy of your network’s users, you can make it visible only to members, and you can opt to approve each would-be member or make membership by invitation only. www.ning.com

Taste-Based Sites

Library Thing: Despite Steve Jobs’s recent assertion that nobody reads anymore, a growing number of sites focus on something almost everyone can relate to: what’s on your bedside table. Library Thing lets you catalog the contents of your library, share your reading preferences with other users, and discover books and authors that you might otherwise have ignored. Are you a fan of Spanish author Ramón Del Valle-Inclán? A surprising number of Library Thing subscribers share your eclectic taste, and are ready for a discussion. At the moment, Library Thing has about 330,000 subscribers.

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Last.fm: Tired of hearing your same old favorite songs? Wish you could find a bunch more music in the same vein and enjoy those tunes for free? Last.fm’s downloadable media player plug-in listens to what you play in your PC’s audio player or on your iPod, compares that with the listening habits of Last.fm users with similar tastes, and then suggests music it thinks you’ll like. As you click the ‘Love’ and ‘Ban’ buttons in response to Last.fm’s suggestions, the site learns even more and provides new

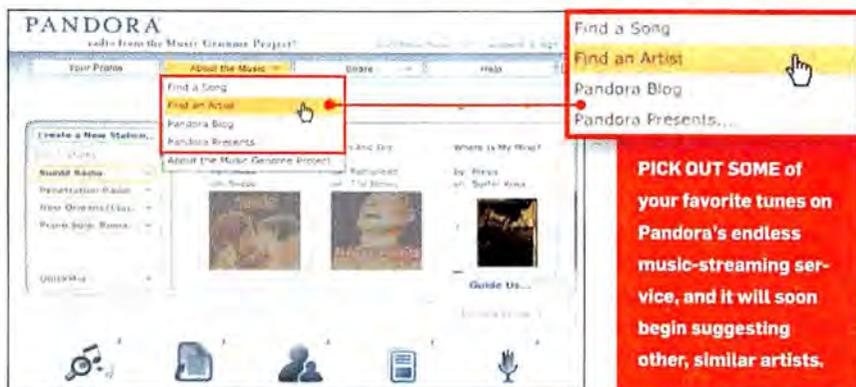
and different tracks in the same style.

As in the real world, friends on Last.fm are the people who turn you on to great music selections that you would not have known about otherwise; but if you don’t end up making many friends at the site, that’s okay. You can still browse through the profiles of users who have tastes akin to yours for music that might be to your liking. www.last.fm

Pandora: Though its purposes are similar to Last.fm’s—to find out what kind of music you like and to stream it to you—Pandora runs entirely in your Web browser and relies on people to suggest new music. As you select and listen to songs on Pandora and give them a thumbs-up or -down, the site provides you with new songs that human music evaluators have determined to be similar in style. At any time, you can search for a particular artist, song, or genre, and Pandora will create a whole “radio station” for you, full of music drawn from the same category.

Pandora’s social networking features are lightweight. Your profile’s half-dozen, optional fields contain nothing terribly revealing about you, but it’s enough to introduce yourself—and you can always elect to be completely invisible to others. I couldn’t find anyone I knew on Pandora, and the site doesn’t offer to search your contacts for existing users. Other fans of the artists or composers you search for do show up on your screen, though, and you can “bookmark” them, as well, to see what they’re listening to. www.pandora.com

iMeem: Facebook’s photo-sharing feature is great, and you can list your favorite shows, movies, and musicians



How Safe Is Social Networking?

on your profile page there, but that's it. iMeem takes the sharing of movie and music preferences a step further, combining Facebook-like socializing with MySpace-style embedded players, playlists, and profile themes. When you join, you enter as little or as much information about yourself as you like into your iMeem profile, including your location, your schools and employers, your music, movie, and TV favorites, and other interests. Then you can assemble a list of friends—either by adding specific friends or by having iMeem search your Web-mail accounts for existing iMeem users. You can search for music and videos that you like and add them to your playlist, enjoy others' playlists, and join or create groups dedicated to particular interests, artists, or genres.

Most of the audio and video available on iMeem consists of short clips (with links to iTunes or Amazon pages where you can purchase a downloadable version), but you can also upload entire songs for your own playback. Musicians and directors can upgrade their accounts to free professional versions, which showcase their work and include an iMeem subdomain (like elvispresley.imeem.com). Real movie nuts looking for a community dedicated to watching and discussing film might want to try Flixster.com instead. www.imeem.com

Mobile Social Networking

Dodgeball: Many social networks offer mobile features, but an emerging field of social networks is designed with the cell phone as the hub. The most practical use of these services appears to involve friends keeping friends apprised of their bar-hopping locations via SMS messages or a phone Web browser so that they can join in the revelry.

Dodgeball, the brainchild of two New York University grad students, provides just such a cell-based location service. After creating a Dodgeball account (by providing your name, city, phone number, and wireless carrier), you start adding friends: Dodgeball detects and sends invites to your Gmail contacts, or >>

IN LIGHT OF a high-profile cyberbullying and suicide case on MySpace last year, many social network users—and the parents of teenage MySpacers, especially—are thinking twice about the wisdom of spending life online.

Midwestern mom Mary (not her real name) has a deal with her high-school-age daughter that her MySpace profile must be private, shielding her from all but her known, real-world friends. But when the 15-year-old created a fictional female MySpace character with her 14-year-old friend, who was still in middle school, they made the account public and soon began chatting with an older high-school boy. Then, the middle-schooler agreed to meet the boy in person, triggering a crisis in both girls' families.

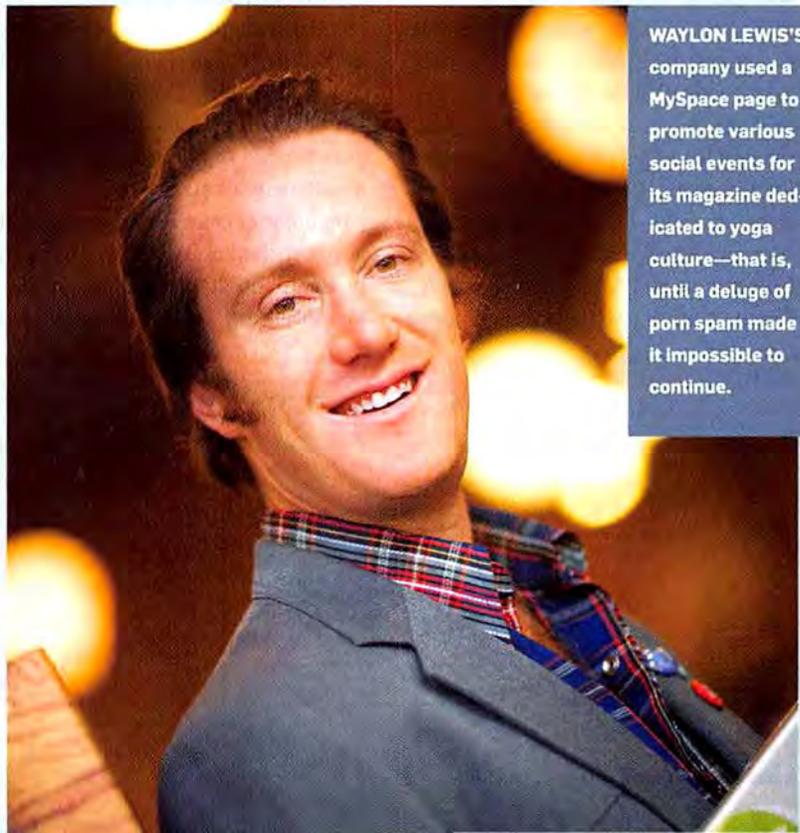
"When you get to make up somebody, they're exciting, they're more adventurous than you really are," says Mary, who was unhappy with the fake account but even more shocked that it progressed to a face-to-face meeting.

Kate Casavecchia Crisp, director of a Boulder, Colorado-based nonprofit organization, has weathered online dangers, too, but continues to participate actively at social networking sites. She has em-

ployed more than a dozen social sites, including Facebook, LinkedIn, Ning, and Twitter, to promote her organization's education and advocacy goals, attracting the occasional loony along the way.

"I got stalked by a crazy in a group I led for awhile," she recalls, after kicking the woman out of a discussion group for repeatedly cursing at other members. The episode has made her wary of posting her photo in online profiles, so she often replaces it with a cartoony avatar. "These virtual types, some of them are scary," she says. "I don't want to run into them at the market."

Magazine publisher Waylon Lewis says his company used a MySpace page to promote parties and other events for its yoga-culture magazine, *Elephant*, until the page began attracting so much porn spam that he had to abandon the effort. But Lewis's story has a happy ending: His company fled from MySpace to Facebook, and he finds it a great place to publicize events and build community around the magazine. Lewis says his Facebook inbox is completely spam-free, but he wonders whether that, too, might pass if Facebook's ownership or policies change: "I didn't used to get triple-X spam on MySpace."

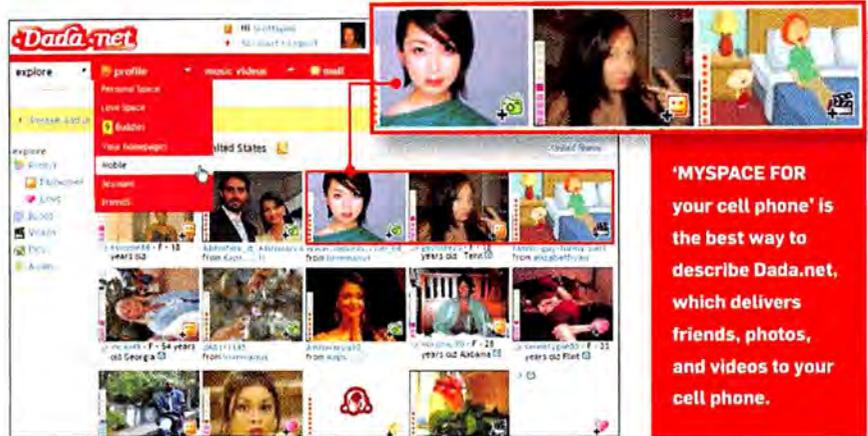


WAYLON LEWIS'S company used a MySpace page to promote various social events for its magazine dedicated to yoga culture—that is, until a deluge of porn spam made it impossible to continue.

you can search the directory of other Dodgeball members. When you hit your favorite saloon and you want your buddies to drop by, you simply send a text message to Dodgeball's SMS code containing the @ symbol and the venue name—a "check-in" in mobile social networking parlance. Dodgeball then fires off a text message to your friends declaring the same (frequent Dodgeball users had better be on an unlimited-text-messaging plan). Other shorthand codes send announcements ("shout-outs") or retrieve venue locations from Google Maps. Dodgeball's main drawback (other than its party focus) is that currently its coverage is limited to just 22 major U.S. cities. Here's hoping that Google, which recently acquired Dodgeball, will soon take steps to expand the service's reach. www.dodgeball.com

Dada.net: Though it was built with cell phone users in mind, Dada.net takes a completely different approach than Dodgeball does. A kind of mobile MySpace, Dada.net lets you create and customize a personalized home page—and more important, upload photos, videos, music, and blog posts. And you can do all of that from your phone's Web browser (or from your PC).

The service makes some of its income from the Google Ads its members view. You can share in the revenue if you have a Google AdSense account: The greater the number of people who see your profile and its ads, the more money you and Dada.net make. For that reason, you'll start receiving friend requests right away from people you don't know; however, the site's privacy settings let you screen



'MYSPACE FOR your cell phone' is the best way to describe Dada.net, which delivers friends, photos, and videos to your cell phone.

out most of those unwanted inquiries.

Dada.net also specializes in hooking you up, and provides a "Love" profile separate from your "Friendship" profile. Many of Dada.net's mobile services are available for free, but some others—including "Love" chats and cell phone ring-tone and wallpaper downloads—require a monthly subscription that can run as high as \$10 per month, so be sure to click cautiously. www.dada.net

Media Sharing Sites

eSnips: Friends on one of the mailing lists to which I subscribe often attach Microsoft Word files containing poems, reports, and other kinds of text to their messages, hoping that someone on the list will read them. Undoubtedly, most recipients simply delete those messages, because e-mail is not a convenient way to share files. Online file storage has boomed in recent years, but eSnips goes beyond simple storage, combining it with networking and creating online communities centered on content categories such as musical styles, painting, poetry, photography, animation, and humor. After you have uploaded your

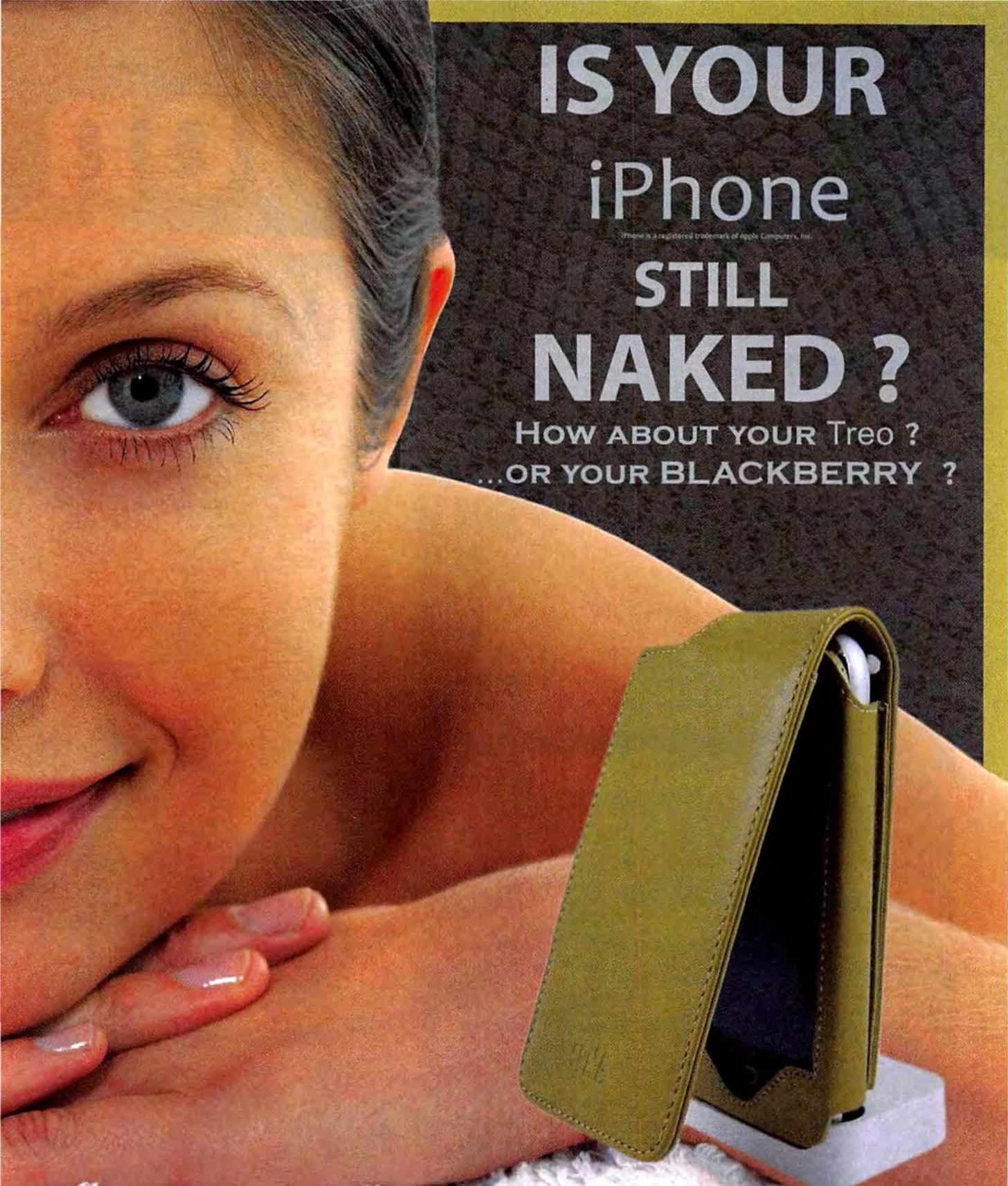
text, audio, image, video, or other type of file to eSnips (using a handy browser toolbar, if you wish), you can opt to share it with the world or with a more select group by e-mail invitation. You can even sell your work through the eSnips Marketplace. eSnips helps you find like-minded people among its reported 4 million users by creating a statistical analysis of your uploaded content, called your "SocialDNA," and matching it with that of other users. Each account receives 5GB of storage for free, currently with no additional storage options. www.esnips.com

Scribd: This service differs from its competitor eSnips in one important way: It has no storage limits. In fact, you don't even need to sign up for an account to upload files—just browse over and click the big green upload arrow. You do need to sign in with a user account if you want to maintain ownership of the files you upload, however, and you must designate who can see them or delete them later on. In addition, logging in lets you specify whether your files are private, either making them invisible to everyone else until you send out e-mail invitations or marking them as publicly viewable.

Used in combination with Scribd's bulk file uploader, the service can act as a handy limitless online backup tool, or as an alternative to Flickr's limited accounts. Scribd arranges your uploaded content into topical groups, as eSnips does, but Scribd doesn't suggest files it thinks you'll like—a feature you may be willing to give up in exchange for unlimited storage. www.scribd.com



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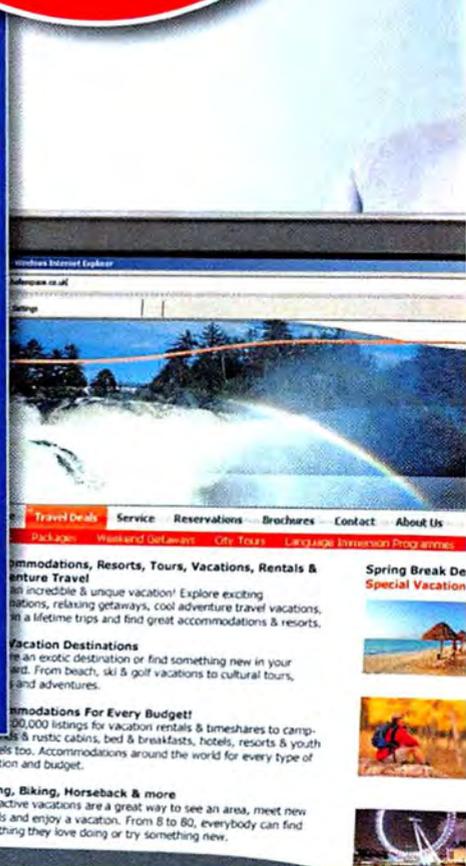
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Here's How

Fantastic Freeware Finds

Get to your favorite folders fast. Stream TV stations from around the globe. Add new power to Internet Explorer. All that and more, and all of it for free.

BY SCOTT DUNN

SOMETIMES I WONDER why I ever pay for software. After all, clever people keep turning out great new programs and giving them away! Here's my latest collection of cool finds that will cost you absolutely nothing to download, try, use, or keep.

File Management

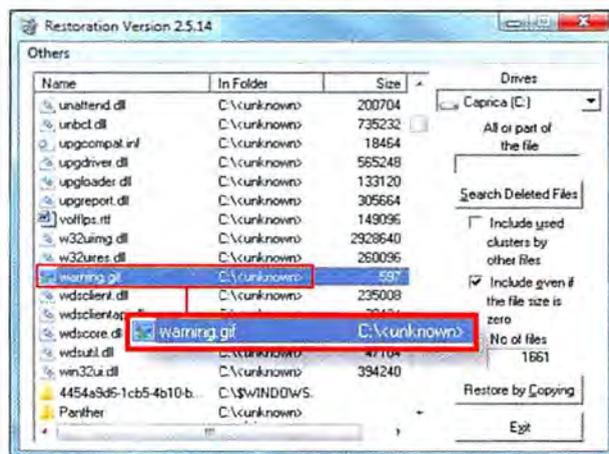
Windows Explorer doesn't do everything. That's where free downloads come in handy. Here are some extras to fill in the gaps in your file-management chores.

Check file contents fast:

Let's face it, file names don't always tell the whole story about what's inside a file. Sure, you can open files in the programs that created them. But who wants to open a half-dozen huge programs when all you need to know is the basic contents of a document? Vista lets you add a preview pane to its Explorer; XP, unfortunately, does not. Alexey Tor-gashin's Universal Viewer (find.pcworld.com/59943) to

the rescue. This free utility lets you peek inside various common file types (graphics, PDF, HTML, and many others) by right-clicking and selecting the Universal Viewer command. Install the plug-in for Microsoft Office (a separate free download), and you can view Word and Excel files as well. Navigation buttons make skimming through all files in a folder easy. To get features such as rudimentary file-management capabilities and an Explorer-like tree pane for navigation, you'll have to shell out \$20 for the personal version.

Recover deleted files: Everybody makes mistakes. You flushed the Recycle Bin without thinking, or someone else—or even a program—deleted the file you really wanted. Now what? The easiest answer is Brian Kato's Restoration (find.pcworld.com/59944; see the screen shot above right), which attempts to recover all or parts of deleted files whose bytes still lurk on your hard drive. The more recent the deletion, the better your chances: Restoration can't help you if other files or programs occupy the old location of your lost document, but it's always worth a try. Restoration can also work as a shred-



ZAPPED A FILE by mistake? You can recover deleted files even after you've emptied the Recycle Bin, by using the free Restoration utility.

der to destroy the files it does find. The entire utility is tiny (four files totaling 4KB), requires no installation (just unzipping), and can even run from a floppy or a USB flash drive.

Eliminate duplicate files quickly: Are duplicate photos, tunes, or other files wasting space on your system? Big Bang Enterprises' DoubleKiller (find.pcworld.com/59945) is a fast way to find out. Its Options tab gives you plenty of control over which files are com-

pared or ignored, and it also allows you to choose the criteria for finding duplicates. After DoubleKiller completes its analysis, the utility's results list provides helpful buttons to simplify selecting the first or second duplicate, plus others to move or delete selected items. DoubleKiller can also check files on networked drives. The product is free for personal, noncommercial use. DoubleKiller Pro, a commercial version with more features, sells for \$40.

Navigate your folders instantly:

An annoying aspect of Windows is the time it takes to navigate to frequently used folders. One powerful solution is XFileDialog (find.pcworld.com/59946), but that shareware tool costs about \$30. So for a free alternative, try the easy



NAVIGATE TO YOUR favorite folders instantly by adding Folder Guide to your right-click menu.

Get TV on Your PC for Free With AnyTV

YOU CAN WATCH television, radio, or video channels from around the world, in three simple steps. Whether you're taking a break while you're on the road, or goofing off at your desk, it's easy to squeeze a little tube time into your day. Here's how to get hundreds of free TV channels on your PC.

1 The first time that you launch AnyTV, you'll be prompted to download a channel list. Click **Yes** to get started. Once the channel list has finished downloading (which takes a minute or two), click **Close** to view the long list of available channels.

2 If you'd rather not scroll through hundreds of foreign-language channels from all over the world, click the **All Countries** drop-down menu and select a location that interests you. You can even choose from several U.S. regions. For more variety, leave **All Countries** selected, and explore. To narrow your choices to TV, radio, or video broadcasts, click the appropriate icon at the top of the screen.

3 Pick a channel, and click the **Play** button at the bottom-center of the screen to start watching.



and elegant Folder Guide (find.pcworld.com/59947; see the screen shot below left), from Freeware365.com. You can add your favorite folders in its Settings window, or right-click a folder in Explorer and choose **Add to Folder Guide**. Once you've set up a list of folders, right-click in any Explorer window or any Open or Save dialog box. Choose a destination from the Folder Guide submenu, and you'll instantly be redirected to that folder.

Multimedia

Computers wouldn't be nearly as much fun without entertainment, sound, and graphics. Here are several freebies to help you enjoy

dynamic media and create some of your own.

Watch PC TV without having to add hardware: If you're not getting enough entertainment value out of your PC, give FDRLab's AnyTV (find.pcworld.com/59956) a shot. In theory, this freebie brings

thousands of streaming Internet TV and radio stations from around the globe right to your computer. In practice, your mileage may vary: I couldn't view many of the stations. But even if you find only a few stations or clips that you enjoy, giving it a try

hasn't cost you anything. AnyTV lets you filter stations by a variety of categories (country, channel, genre, bit rate, and so on), as well as save a list of favorites.

Get a ruler for your screen: Ever wonder how big your latest family photo is? Or how big it might be if you cropped out Auntie Jane? Wonder no longer after you download JR Screen Ruler (find.pcworld.com/59958) from JR Free Tools. There's nothing to install; just unzip and launch this tiny program to see a ruler you can use to measure anything on screen. You can adjust the size of the ruler itself, rotate it 90 degrees, and set it to display pixels, inches, picas, or >>



YOU CAN ENCRYPT, password-protect, and make self-extracting archives out of your files, within the Androsa FileProtector window.

Here's How

centimeters. JR Screen Ruler is a handy tool for Web designers, product developers, and others.

System Utilities

Are you looking for a better way to keep your files safe and private, to protect yourself against baddies, or to customize your system for more efficiency? There's no end of free tools available to help you out. Here are a few.

Encrypt easily at no charge: Androsa FileProtector (find.pcworld.com/59948; see the screen shot at the bottom of the preceding page) lets you password-protect your sensitive files with up to 256-bit AES encryption. Just drag the files (or whole folders) into the FileProtector window, assign a password, and specify other settings—and you're all set. FileProtector can compress files as it encrypts them and can create self-extracting archives, too. You can also scramble the names of the encrypted files for added privacy. This useful tool comes from Androsa-Soft, which also makes a portable version that can run from USB flash drives.

Put your shields up with Hazard Shield: Looking for an

antimalware tool with a little something extra? Orbitech describes its Hazard Shield (find.pcworld.com/59949) as a fast antimalware program that performs manual scans and real-time monitoring for ongoing protection. Hazard Shield definitely completed its scan faster than my regular antispymware program, Webroot Spy Sweeper, did. And it found several items that Spy Sweeper seemed to have missed. Hazard Shield has a few other nifty features, too, such as an uninstaller and the ability to delete pesky, hard-to-remove files that are locked or in use. Hazard Shield can scan both local and network drives.

Give Windows a sleeping pill: You want to do your part to save energy while lowering your electric bill, but how? Keeping your computer in standby or sleep mode is a great start. Unfortunately, Windows sometimes interprets network activity or other signals from your peripherals as reasons to keep

You saved: 3.03 lbs.



SNAP'S CO2 SAVER comes to Earth's rescue by putting Windows to sleep more efficiently and tracking how much carbon you're saving.

your system wide awake. To nudge Windows toward the land of Nod, try CO2 Saver (find.pcworld.com/59950; see the screen shot above) from Snap.com—the Custom Power Saving dialog box of this freeware tool has a check box that does just that. It also sits on your desktop and reports how much carbon dioxide you (and others) have saved this way. CO2 Saver includes a configurable Web search bar, but it routes search data through Snap's servers for Snap's own uses, so I avoid it.

Mail and Internet

Some people use their systems for little more than keeping in touch with the outside world. Freeware can help smooth out the bumps in your ride over the e-ways.

Prevent spam from getting its foot in the door: Bayesian spam filters, which can calculate the spam probability of e-mail messages, are all the rage. One such tool is Michael Kramer's Spamihilator (find.pcworld.com/59953; see the screen shot at left), which sits in the taskbar tray and intercepts incoming mail before it gets to your e-mail client. The product has its own Recycle Bin, from which you can retrieve erroneously halted messages, and a training area where you can teach the software what not to filter in

the future. You can specify which senders never (or always) to block, and which e-mail attachment types—if any—to permit.

Add some muscle to Internet Explorer: Microsoft finally added tabs and other features to Internet Explorer; but to make it even stronger, check out the free IE7Pro (find.pcworld.com/59954; see the screen shot below) by Daniel Fang and Chris Li. IE7Pro boasts a configurable ad blocker, mouse gestures (for scrolling, navigating, and performing other actions by right-dragging the mouse), tab management, crash recovery of your last-open



ADD AUTOMATIC refreshing, ad blocking, and a variety of other useful features to Internet Explorer by installing IE7Pro.

tabs, a tool that dynamically checks spelling as you type into a browser, options to save a Web page as an image file, the ability to open new tabs by dragging links, and more. IE7Pro includes user scripts, too, such as one that adds a Download link to YouTube videos. Many features are listed on a pop-up menu whose icon IE7Pro adds to IE's status bar, but you'll have to learn others from the user guide or by consulting the massive, multipanel Preferences dialog box.



GET A FREE Bayesian spam filter when you install Spamihilator.

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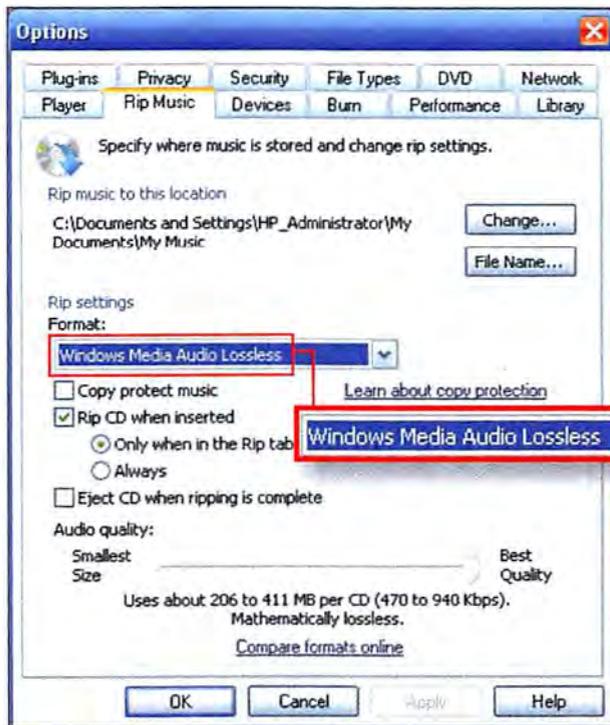
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Rip a Music CD to Your PC With Pristine Fidelity

RIPPING YOUR CDs to a digital format is easy, but if you blindly accept the default settings in your media player software, you may be losing audio fidelity in the conversion process. Because the MP3 format and other compressed music file formats sacrifice some digital information in exchange for saving disk space, you may want to try a lossless codec—so named because it converts the file type without losing a single bit of audio data—to save a perfect copy of the original recording. If the thought of losing any music quality makes you squirm, follow these instructions to choose a lossless format when you copy CDs to your PC and music player.

The trade-off in going for the highest fidelity is that lossless files require considerably more storage space on your hard drive. A lossless codec produces a file about half the size of the original CD version, whereas an MP3



CHOOSE 'WINDOWS Media Audio Lossless' format in Windows Media Player's Options menu to save tunes from your CDs at highest quality.

file is usually about a tenth the size of the original CD. That means that a single 3-minute lossless audio track can take up about 30MB of space on your hard drive, and

an entire 15-track CD can occupy as much as 0.5GB. Still, if you insist on retaining the highest-quality audio in your ripped tunes—and you have hundreds of gigabytes of disk

space to spare—it's a good idea to pick a lossless codec.

In iTunes, you'll want to use the Apple Lossless codec: Select *Edit>Preferences*, click the *Advanced* tab, and then click the *Importing* tab. Next choose *Apple Lossless Encoder* from the pop-up menu, and click *OK*. Henceforth, all of your CD imports will be copied in Apple Lossless format, and they'll sound just as crisp as they did the moment they were mastered.

In Windows Media Player, the appropriate codec to use is Windows Media Audio Lossless. To specify this format, right-click the *Rip* tab and choose *More Options* from the drop-down menu. Then change the selected entry in the *Format* pop-up menu to *Windows Media Audio Lossless* (see the screen shot at left). The playback quality of any audio file that you copy in this format should be indistinguishable from that of the original CD.

—Zack Stern

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? How can my wireless speed vary without affecting Internet performance?

Fritz Clayton, Las Vegas

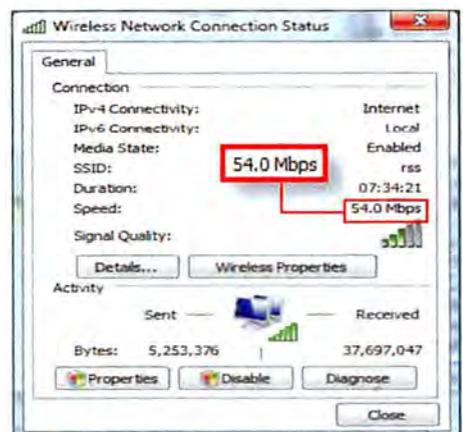
ENVIRONMENTAL VARIABLES affect wireless signals. A family member turning on the microwave oven or a neighbor booting a Wi-Fi-equipped PC next door can degrade the Wi-Fi signal in your home, resulting in a slower connection.

Why doesn't the lower data transfer speed appear to slow your Internet connection? The 802.11g Wi-Fi standard tops out at a transfer rate of 54 mbps. Even if interference cut the actual rate to a fifth of that speed, it would still be fast-

er than most U.S. household broadband connections. In Japan, where speeds of 60 mbps and higher are common, you'd probably notice the difference.

A lower transfer rate will certainly hamper your system's performance of such non-Internet network chores as transferring files from one PC to another. So hope for a strong Wi-Fi connection on the day you want to transfer several gigabytes between networked computers.

—Lincoln Spector



WINDOWS MAY REPORT a swift connection, even when interference slows your true transfer speed.

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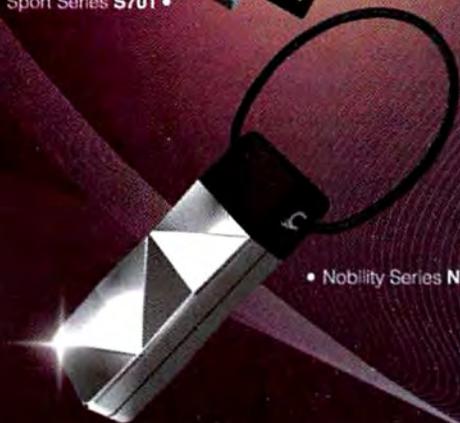
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A-DATA

Run Multiple OSs Harmoniously on One PC (or Mac)

YOU DON'T NEED separate computers to run different operating systems. Sure, Windows is the most common OS running on the millions of PCs in daily use, but that doesn't mean you're stuck with using only XP or Vista on your PC, or with using only OS X on a Mac.

Multibooting on a PC

You can add a different Windows version to your current one, and you can decide which one to load from the PC's boot menu when you start up your system.

(Warning: Creating multi-boot configurations can destroy your data. Before modifying any partitions, be sure to back up all of your files.)

Q. *I'm not sure that I want to upgrade from Windows XP to Windows Vista. Can I instead just add Vista to my existing XP installation so I can boot either one?*

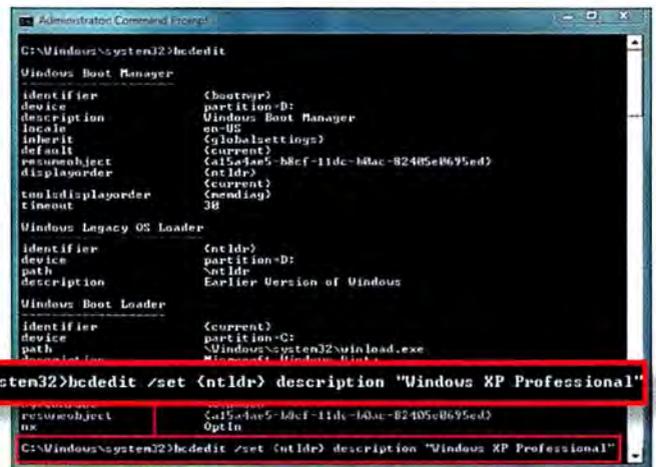
Yes. When you install Windows Vista, choose the Custom option, then install to a different partition than your existing Windows XP installation. To modify partitions, boot your system with the Vista install disc; this approach gives you additional options for creating and deleting (but not resizing) partitions. To shrink existing partitions and make room for a new one, use a third-party partitioning program like the free Partition Logic (find.pcworld.com/59983). After you install Windows Vista, the operating system's boot menu will give you the option of booting either Vista or your previous Windows version.

Q. *How do I change the OS that boots by default and the menu text in the multiboot menus in Windows XP and Vista?*

In XP, open the Control Panel's System applet, select the *Advanced* tab, and click *Settings* under 'Startup and Recovery'. Select the default OS from the list under System Startup. Click *Edit*

under System Startup to open the boot.ini configuration file in the Notepad text editor; this lets you modify the label for each OS. Vista's boot menu options are similar to those in Windows XP (click the *Advanced system settings* link in Control Panel's System applet, and choose the *Advanced* tab), but Vista lacks the Edit button.

To modify the boot menu listings, open a Command Prompt window as Administrator (choose *All Programs* • *Accessories*, right-click *Command Prompt*, select *Run as Administrator*), and enter `bcdedit`. You'll see a list of boot menu settings, with separate sections for each OS listed. To modify the menu text for an OS, type



YOU CAN CUSTOMIZE your boot menu listings and settings in Windows XP by entering a `bcdedit` line in a Command Prompt window.

`bcdedit /set identifier description "Menu text"`, where *identifier* is the identifier listed in the `bcdedit` output, and "*Menu text*" is the new menu text you want. For example, to change Windows Vista's default entry for Windows XP to 'Windows XP Professional', type `bcdedit /set {ntldr} description "Windows XP Professional"` (see the screen shot above).

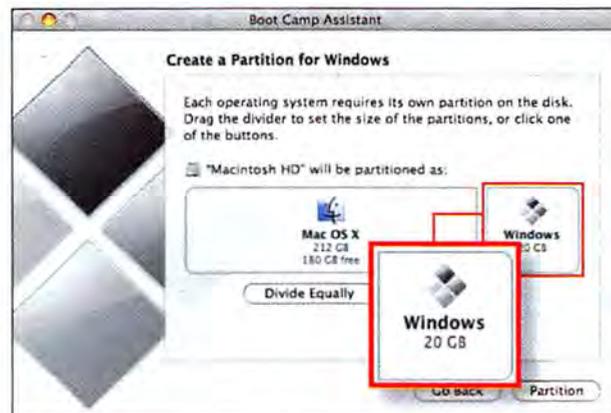
Multibooting on a Mac

Q. *Can I install Vista to dual-boot with Leopard on my Mac?*

Yes. OS X 10.5 includes the Boot Camp multiboot

utility. To begin, launch *Boot Camp Assistant* in Leopard's *Utilities* folder. You'll see an option to print an installation guide before starting—it's 25 pages long, but you should definitely print it out. Boot Camp Assistant defaults to creating a new 5GB Windows partition, which is too small for Vista. Two buttons located under the partition graphic let you choose whether to divide the hard disk equally between Mac OS X and Windows or to create a 32GB Windows partition.

If you aren't concerned about disk space on the Mac side and you don't need to have more than a few gigabytes of extra space on the Windows side, click *32GB*. To maximize your Mac OS storage but still give Windows Vista room to breathe, drag the divider between the two partitions to the left until the Windows partition is roughly 20GB (see the screen at left). Click *Partition* to continue the installation.



GIVE WINDOWS a minimum of 20GB of your Mac's hard-drive space.

—Scott Spanbauer

Enhance Your iPod With Easy Tweaks

APART FROM BEING available in a handful of different case colors, iPods look as much alike as a collection of iPeas. And despite its ongoing evolution, iTunes continues to lack some important features that discerning music lovers long for. But you don't have to accept these limitations. Here are a couple of simple modifica-

designated folders, and then it adds any newly discovered music to your iTunes library.

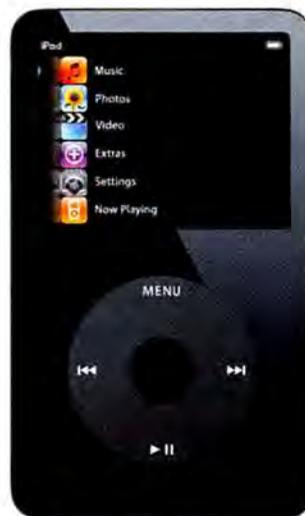
After installing the software, run it by clicking *Start iTunes Folder Watch iTunes Folder Watch (Background Monitoring)*. This series of commands will launch iTunes, create an iTFW New Tracks playlist, and add a new icon to your System Tray. Right-

generation iPod sport Classic- or Touch-style menus.

Classic Hack (find.pcworld.com/60037) brings the iPod Classic's split-screen interface to the Video iPod, with menu selections on the left and a mini Now Playing pane on the right. It also updates the main Now Playing screen to mimic the Classic's interface. Touch Hack 2.0 (find.pcworld.com/60038) introduces even more-dramatic changes: a lovely Touch-style Now Playing screen and menu icons. You don't get Cover Flow from either hack, but you do get a cool (and easily reversible) interface overhaul (see the image above right).

To install Touch Hack 2.0 (both hacks use similar processes), first modify your iPod's menu settings so only the following options appear: Music, Photos, Videos, Extras, and Settings. To ensure that iTunes isn't running, eject your iPod in iTunes but leave the cable connected.

Download and unzip the hack, and then download the free iPodWizard utility (find.pcworld.com/60036), for loading third-party firmware onto your iPod. Run the program, change the Edit Mode to *Firmware File*, click *Open Firmware*, and navigate to the 5G iPod Touch firm-



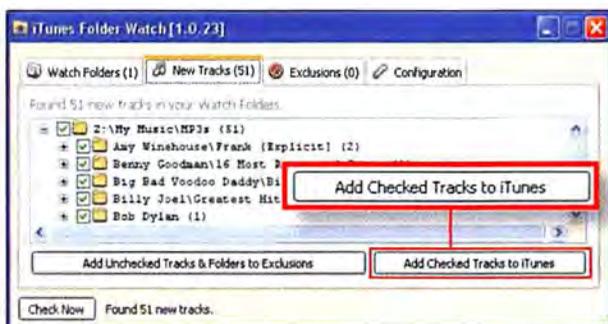
GIVE YOUR AGING iPod Touch a stylish menu makeover with the Touch Hack firmware update.

ware file you downloaded. Confirm that your plugged-in iPod is listed in the iPodWizard Essentials area to the right. If the list shows only an "unmounted" iPod, click the *Mount* button and wait until the proper iPod name appears there.

Now click the *Write to iPod* button, wait a few seconds for the process to finish, and click the *Eject* button; your iPod should reboot itself. Wait for the computer to redetect it; then click *Eject* again. Unplug the iPod, and you should be good to go.

If things go wrong or you don't like the new interface, simply return to iPodWizard and click the *Downgrade Firmware* button (see the screen shot below) to restore your iPod's original firmware.

—Rick Broida



CLICK THE BUTTON marked 'Add Checked Tracks to iTunes' to send your newly updated track list to your iTunes Music Library instantly.

tions that will customize the look and functionality of your otherwise standard-issue iPod and iTunes.

Monitor Your Music Folders Automatically

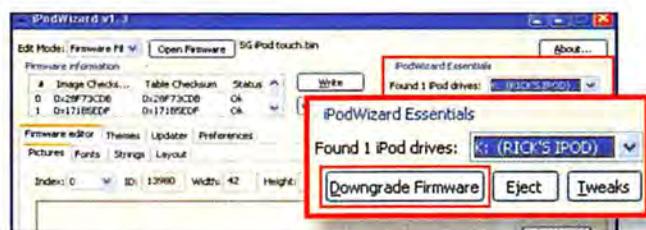
Here we are, seven versions into iTunes, and the program still doesn't know how to monitor music folders for new tunes. Sure, it will update your library with songs purchased from the iTunes Store or ripped from CDs, but what if you want to add music from other sources? iTunes lacks the smarts found in just about every other music manager, forcing you to add files manually.

Well, not anymore. iTunes Folder Watch (find.pcworld.com/60035), a free beta utility for Windows, monitors

click the System Tray, click *Open*, and add one or more folders to watch for new tunes. Click the *Check Now* button, and iTFW will scan for tracks not already in your iTunes library. If it finds any, you'll see them listed in the New Tracks tab. One more click will whisk the songs straight into iTunes (see the screen shot above), where you can easily copy them from the aforementioned New Tracks playlist to whatever playlists you want.

Give Your Video iPod a Touch of iPod Touch

If you love your now-aging Video iPod but covet a slick new iPod Classic or Touch interface, give your iPod a menu makeover. Two firmware hacks let your fifth-

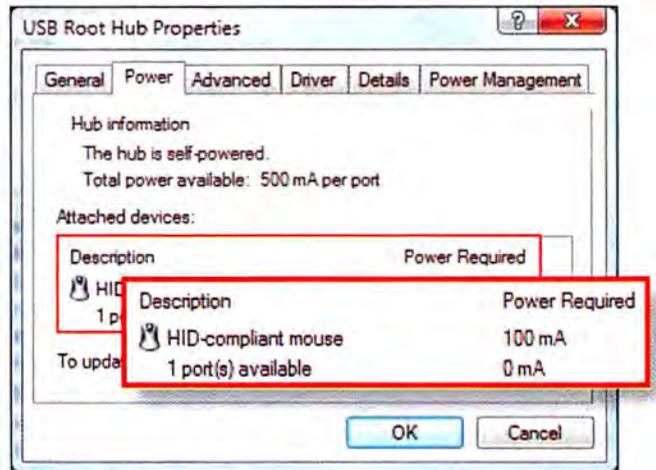


IF YOU DECIDE you don't like the new look that iPodWizard applies to your iPod's menus, you can always click 'Downgrade Firmware'.

Avoid Underpowering Your USB Devices

IF YOUR PC'S USB ports are filled up with USB hubs that are packed with yet more USB devices, make sure that all of those gadgets are getting the power they need to run properly. A single USB root hub, which typically supports two USB ports on your PC's motherboard, delivers a maximum of 500 milliamps of electricity to its attached devices. If the power demands of your system's connected USB devices exceed that number, the whole USB bus can shut down.

Check your power needs in Windows by opening Device Manager. In XP click *Start*, right-click *My Computer*, and select *Manage*. In Vista click *Start*, right-click *Computer*, and select *Manage*. In the Computer Management window, select *Device Manager* from the left pane. In the right pane, double-click each instance of *USB Root Hub* listed under Universal Serial Bus Controllers, and open the *Power* tab for each one (see the screen shot above right). On that tab you'll see a list-



THE MOUSE ON this USB port draws 100 milliamps of power. Add the totals for all devices to confirm that you have enough power.

ing of how much power each USB port or attached USB device uses. If you would like to identify a USB device on your system, use NirSoft's USBDeview (find.pcworld.com)

60045). This handy, free utility provides names, serial numbers, USB ports, and other useful data for keeping track of all your connected gadgets.

—Kirk Steers

ANSWER LINE

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How do I share a printer over a network?

Irving Waldorf, San Francisco

I KNOW OF three ways to do this. Let's start with the free one:

You can easily attach the printer to one PC and share it with others at no extra cost. But there's a flaw: You can't print from any of the more distant computers unless the directly attached PC is left on.

If you don't have a problem with that requirement, follow the printer's documentation to install it on your chosen computer. Then, in Control Panel's 'Printers and Faxes' applet, right-click the printer, select *Sharing*, confirm that 'Share this printer' is checked, and click *OK* to accept the default sharing settings for your printer.

On each of the other PCs, open Control Panel's 'Printers and Faxes' applet and click *Add a printer*. In the wizard, select the network option. It should find the printer and walk you through the setup (see the screen shot at right).

If you dislike the idea of leaving the connected PC on all the time, consider buying a mini print server. Priced at \$60 or less, a mini print server is a little box with a parallel or USB port at one end and Wi-Fi or ethernet at the other. You plug it into the printer and the network, install a driver on all of your PCs, and everyone can print.

That's the theory, at least—and with a parallel print server, it's pretty much

the reality. Any parallel print server should work with any parallel printer. For more about these devices, see "Ease Small-Office Growing Pains with a Mini Print Server" (find.pcworld.com/59983).

Things aren't so simple with USB. If your printer lacks a parallel interface, you must find a USB print server that supports your specific printer. Try looking for your printer model by name, along with the text string **print server**, using your favorite search engine. Or check with the printer vendor and see which server it recommends.

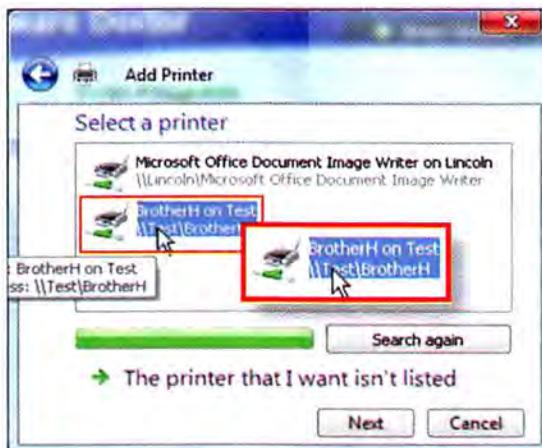
Using a print server creates two other problems: It introduces another juice-wasting, always-on electronic device; and it leaves you with one more wall wart taking up surge-protector space.

If those problems turn you off, or if your printer lacks a parallel

port and you can't find a compatible USB server, you can either leave the connected PC on at all times or turn to the most expensive option: buying a network-capable printer.

A printer equipped with ethernet or Wi-Fi is the simplest and most versatile option, but it makes economic sense only if you need a new printer anyway. Just keep networking capabilities in mind the next time you go shopping for a new printer. Network-capable printers are available in all price ranges.

—Lincoln Spector



WINDOWS SHOULD automatically find any shared printers on your network. Highlight the one you want and click 'Next'.

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Manage Your Messages Masterfully in Gmail

MOST E-MAIL users dream of an empty inbox—evidence that we've read and deleted (or filed) all incoming messages, and are now free to take the rest of the day off. Because Gmail offers more than 6GB of storage, the only messages you need to delete are those you never want to see again. To banish messages from your inbox but keep them handy, add a check mark beside them

under *Select* on the left side of the screen, and then click *Archive*. This hides messages without expunging them.

To make your archived messages easier to find later, use labels to categorize them by topic, project, or other criterion. Most mail apps let you sort mail into folders, but Gmail's labels improve on folders in one powerful way: Instead of requiring mail to go into one folder at a time,



TO MAKE YOUR labels easier to spot, add color by clicking the hard-to-see white box next to a label and then selecting another color.

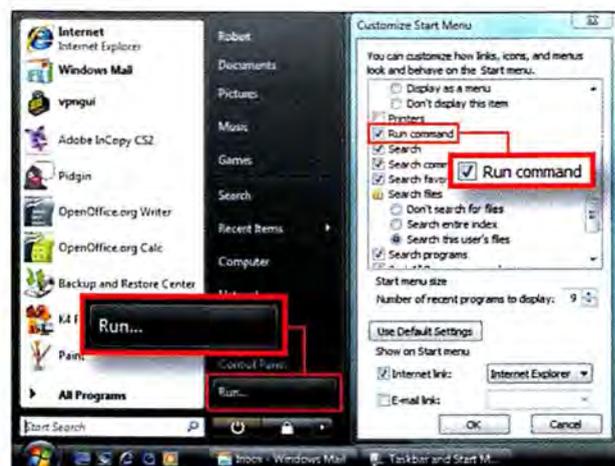
Restore the Run Command to Vista's Start Menu

FEELING DISORIENTED in Windows Vista without the trusty Run command you loved in Windows XP? Here is a quick fix for the omission of this important option.

If you use the default Start menu in Vista (as opposed to the Classic Start menu), the Run command doesn't appear. To change that situation, right-click the *Start*

button and choose *Properties*. With the *Start Menu* tab active, click the *Customize* button in the upper right. Scroll through the list of options and check *Run command* (see the screen shot below). Click *OK* twice. The Run command will now appear in the lower-right corner of the Start menu.

—Scott Dunn



CHECKING THE 'RUN command' option in the Customize Start Menu window gives you one-click access to the Run command from now on.

they let you assign messages to multiple categories simultaneously. For example, one message that pertains to both Project A and Project B can appear among messages labeled 'Project A' as well as in the 'Project B' group.

To categorize a message, open it and select one of the labels on the More Actions menu, or check one or more messages in one of the message list views, and choose the label from the More Actions menu. You can create new labels on the fly by picking *New label* from the menu.

To modify your labels, select *Settings > Labels* in the upper right-hand portion of the screen; this will open a page where you can rename or remove labels, view a list of messages tagged with each label, or create a new label (see the screen shot above). Unlike deleting a folder in a standard e-mail app, deleting a label doesn't kill the messages tagged with that label, so you should feel free to delete labels you don't need.

You can also remove labels from messages without deleting the labels. First, open a message or check multiple messages in the mail list;

then choose *More Actions*. Scroll to and select the unwanted label under the 'Remove label' heading. To find messages that are no longer tagged with a label, click *All Mail*, and you'll see all your messages listed together.

Tag Restoration

Gmail's inbox is simply another tag that incoming messages receive by default. If you mistakenly archive a message (which strips it of its 'Inbox' tag), you can return it to your inbox by clicking *All Mail*, selecting the message, and clicking *Move to Inbox*. A similar method enables you to retrieve messages that you inadvertently send to the Trash folder.

Gmail's habit of grouping conversations into message threads means that messages you've archived will pop back into your mailbox when someone sends a response to an earlier message in the thread. If you no longer have any interest in the conversation, you can prevent it from reappearing in your inbox by checking it and then choosing *Mute* from the More Actions menu.

—Scott Spanbauer

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STEVE BASS'S HASSLE-FREE PC

Bass-Certified: Seven Free Geek Tools—and a Quick Tip

Fix PC lock-ups, jump-start your cable modem, and diagnose problems with your router.

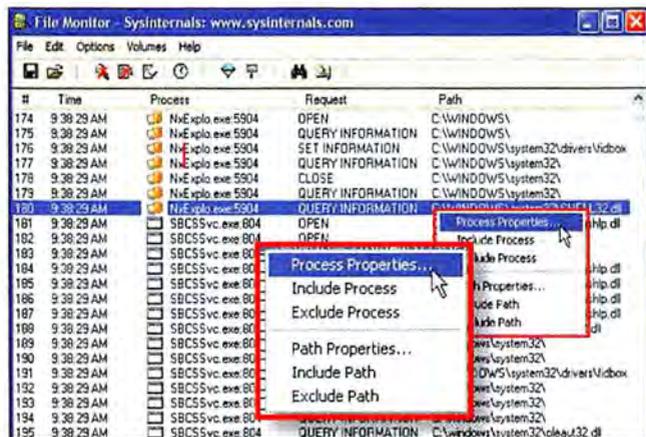
YOU LIKE MESSING around with your PC, right? The deeper you can drill into its insides, the better. And the right tools can dig into the far reaches of the Registry or uncover obscure portions of the file system, improving performance and avoiding trouble. I can tell you all about some of those tools—and they're free—so read on...

Pull Your PC Out of Its Trance

The Hassle: My system boots, but immediately after the icons appear in the System tray, the machine completely jams up. For exactly 4 minutes, only the mouse works—and then the PC snaps out of its trance and behaves normally. Any ideas?

The Fix: To troubleshoot a quirky system, you have to investigate what's going on behind the scenes—what files are loading, say, or what applications are modifying the Registry. For insight, you need the triplets: Filemon, Regmon, and Process Explorer, all from Microsoft's Sysinternals.com. Filemon reports on every file that opens, closes, or gets accessed; and it records and time-stamps each action that an application takes. When troubleshooting, watch a particular program's behavior just before a freeze. Filemon's report is usually enormous—an amazing number of files open and close—but you can set a filter to watch specific filenames or documents. Regmon handles similar duties to Filemon's, except that it monitors the Registry, watching for new Registry entries. Regmon is immensely useful if you're trying to track down spyware or malware and need to see the Registry location where it's hiding. The last tool, Process Explorer, resembles Windows Task Manager, but with muscles. It tracks everything that's running, including programs, services, and process trees. Pick up all three free tools from our Downloads library (find.pcworld.com/59898).

But wait—when you're troubleshooting, even three sleuthing util-



IS YOUR PC stuck in the doldrums? Filemon will help you find out exactly what files are running when the slowdown occurs.

ities might not be enough to track down the problem afflicting your system. Enter XP's File System Utility. You'll need administrator rights and a love of Windows esoterica to use this Command line tool, also known as Fsutil. It collects tons of data on your FAT and NTFS file system tasks. Fsutil is already loaded on your PC; access it from a CMD box. But first, scroll to a couple of enlightening pages from Microsoft TechNet (find.pcworld.com/59899) and ITzero (find.pcworld.com/59900) for lots of tips on how best to use the utility.

Kick Start Your Internet Connection

The Hassle: My router is ancient, and I often have to unplug it to reset it. Should I just bite the bullet and replace it?

The Fix: When equipment starts getting a little long in the tooth, you can't always tell if the time has come to give it the heave-ho. To help you decide whether to replace your router, use Microsoft's Internet Connectivity Evaluation Tool (find.pcworld.com/59901), a freebie that tests router capabilities. Among other things, the tool tests for Internet connectivity, NAT capabilities, traffic congestion, TCP high performance, and multiple simultaneous connections.

Oh, and if you do decide to get a new router, here's a tool that'll help if you ever lose your router's wireless network keys—the WEP or WPA codes. (We've all been there, right?) NirSoft's free Wireless-KeyView (find.pcworld.com/59902) lets you recover them all, saving everything to a file or right onto your clipboard.

Quick tip: The old trick for kick-starting a stalled cable modem is to unplug it from power for 5 minutes. But that gambit doesn't work on newer modems—the kind that handle phone, data, and TV transmissions, such as with Comcast's Triple Play service—because they have a battery inside to keep phone service working during a power outage. To get these devices back on track, you have to power off the modem, remove the battery (check the manual for instructions), and wait 5 minutes before reinserting it. ●

TIP OF THE MONTH

Beep Throat: Understand Your PC's Coded Messages

HAVE A DOA system? I'll bet that you hear a few beeps when you try to boot it. These Power-On Self Test codes (aka POST codes) offer a wealth of information about your PC. For instance, one long and one short beep indicates a problem with your system board. One long and three short beeps could mean that a memory chip isn't seated properly. But many of the codes need to be matched to a specific BIOS. That's where BiosCentral.com comes in: It lists tons of BIOS manufacturers' POST codes.

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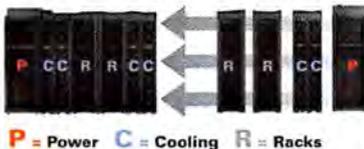
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- Wide range of input and output connections from single-phase to 3-phase.



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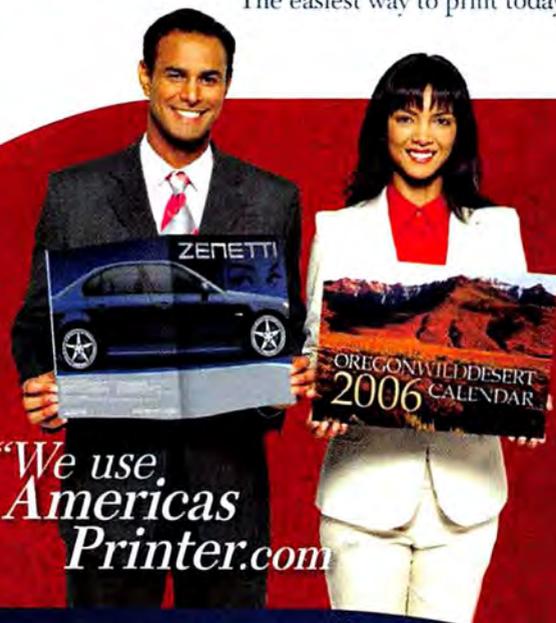
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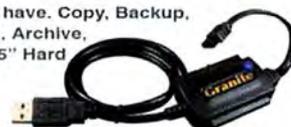


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General characteristics

Performance:

- Supersonic frame per second speed on LAN
- 10 frames per second or more on modem
- Powerplant: DirectScreenTransfer™
- Weight: 18Mb
- Ferry range: unlimited
- Wingspan: variable-geometry, desktop-sized

Trivia:

- No competition, industry break-through:
- Vista OS Support
- Supersonic FPS ratio
- Lowest processor use
- Minimum traffic consumption
- Ultimate security standards
- Price range

Military-grade security:

- Fully OS-integrated NT security system with
- NTLMv2 support
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- Server password protection
- Advanced 256 bit AES encryption for all sending and receiving data
- Authentication based on Diffie-Hellman exchange with 2048 bit key size
- Kerberos support
- Code-testing defense mechanism that prevents the program's code from being altered
- Smart protection from password guessing
- Incorrect Server configurations prevention
- Generation of unique private keys for each connection

Armament:

- Secure voice and text chat features
- File (cargo) transfer
- Telnet and other useful tools

Supersonic vehicle specifications:

- Type: Multirole Supersonic Remote Control
- Manufacturer: Famatech
- Designed by: Dmitry Znosko
- Maiden flight: March, 1999
- V.3.0 introduced: June, 2006
- Status: active service
- Number built: millions
- Primary user: up-to-date business all over the world
- Unit cost: US\$49 (squadron discounts available)

Operational history:

- 40% companies of Fortune-100 list with wide geographic spread
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- South America
- Europe
- Australia and Oceania
- Asia
- Africa

Typical combat use:

- Corporate
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- Helpdesk providers
- Telecommuting
- Educational
- Home



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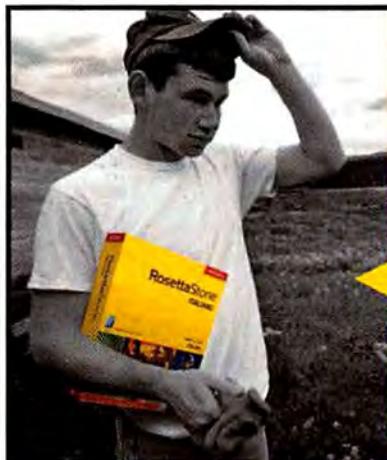
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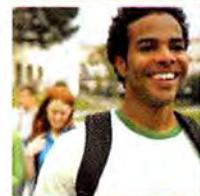


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About to Buy a Tech Product? Do the Math!

I'M WORKING ON a book. I've recorded dozens of hours of interviews, with many hours more to come. Since there's no way to convert those recordings into text automatically with any kind of accuracy, should I cough up thousands of dollars to pay someone to transcribe them, or should I spend hundreds of hours of my own time doing it?

Right answer: Neither. In the old days of analog tape, when you had to fast-forward and reverse endlessly to find a particular remark in a lengthy interview, transcribing was virtually mandatory. But now, thanks to my digital voice recorder, files replace tapes, and playback software lets me jump around randomly—or even listen at high speed without hearing voices that resemble Alvin and the Chipmunks.

Nor will I spend much up-front time organizing my notes. Thanks to X1's Desktop Search software (see find.pcworld.com/60087), I know that I can quickly retrieve and review data that is as messy as my desk. Like avoiding transcriptions, using indexing software exemplifies Manes's Third Law: Never commit to spending a bucketful of time or money now in return for possibly saving mere thimblefuls of time or money later.

But my law really pays off when you use it to avoid technology, not to adopt it. The classic example is the business card scanner. The effort needed to scan hundreds of cards and to proofread the results for inevitable errors is certain to take hours. Simply flipping through your stack of business cards on the rare occasion when you need an address from one is likely to take you just a few minutes.

Likewise, GPS navigation devices force you to pay a whole lot now for not much later. Get one and you have to learn how to use it—and waste time waiting for it to find its satellites. The benefit? You

avoid the rare situation of being lost and having to phone somebody for directions. And you might end up getting lost in any case: On one occasion, my GPS-loving editor punched the name of my nearby San Francisco hotel into his car's system, but the best the gadget could come up with was a place bearing a similar name but located hundreds of miles away.

Ripping a large CD collection to a format like MP3 that will someday become obsolete is another great example of undue up-front effort for a dubious reward—unless the satisfaction of knowing that you can play "Chewy Chewy" wherever you go, even though you haven't listened to it in years, is worth more to you than the time you took to rip it.

This effort-reward calculation goes triple for pricey home media servers. How much will you end up paying in dollars and upgrade time when you later want a higher-definition format than your current equipment can manage? And exactly how lazy do you have to be to want to avoid carrying a CD or DVD from one room to another anyhow?

Manes's Third Law also applies when you're considering making a switch from one product to another. How much time will it take to move all your data and software? And how much time will you spend learning the ins and outs of the new

system? Those penalties are a sure thing, but your hot new product carries no guarantees about the time that it is actually going to save you.

Start looking at the world of tech this way, and you'll end up craving products and services that are simple and highly automated and whose benefits are extremely useful—like the ability to back up your data automatically to a safe place online without your having to do much of anything.

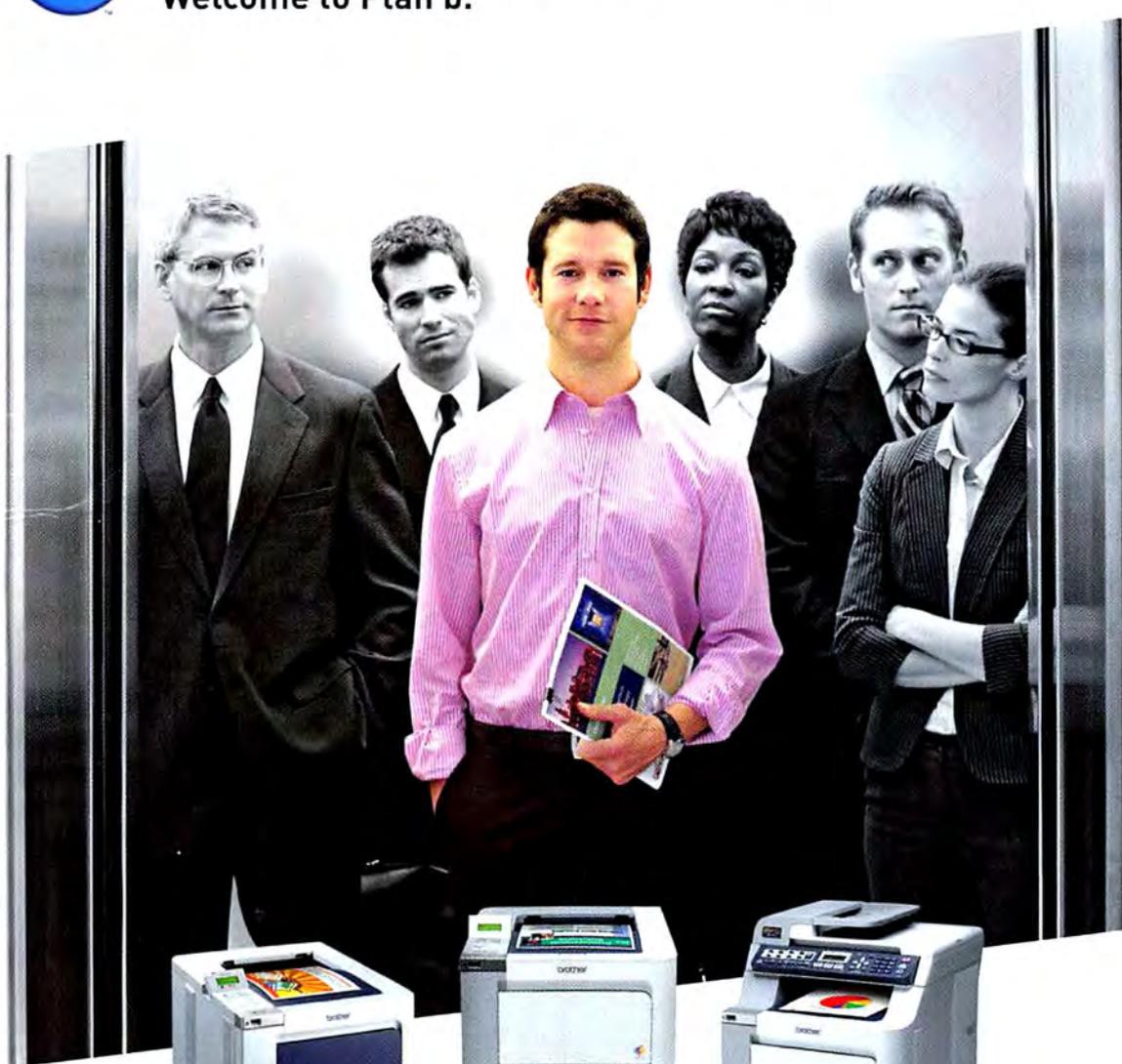
After all, isn't the whole point of technology to save you time and money, not to suck them out of you? ●



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One of the first notebooks to feature SmartLogon face recognition technology: The U6S recognizes the face of its owner to grant access to the computer after a positive scan.

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ASUS 360 is a premium service package that includes a 2-year limited global warranty and a 30-day zero bright dot warranty. ASUS also offers free two-way standard overnight shipping and 24/7 tech support for notebooks. See usa.asus.com for a full explanation of the program.

ASUS Accidental Damage Warranty - a \$150 Value

ASUS Accidental Damage Warranty (ADW) protects ASUS notebook computers from accidental damage incurred from electrical surges, fire, drops and spills. It covers the notebook itself and any built-in or onto-the-base accessories - Free of charge. It is a one-year warranty, extending for one year from the date of purchase. For more information visit usa.asus.com

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