

# PCWorld

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Laptops That Beat  
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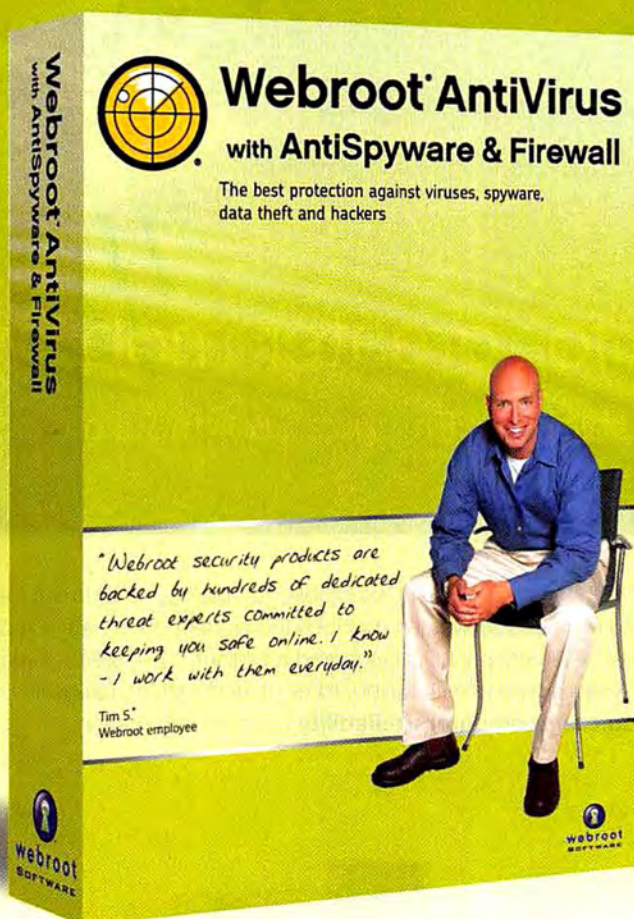
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## Free—But Hardly Free From Gotchas

WHEN PC WORLD published its first report on free stuff back in 1997, the Web was still young—and the very notion of a digital universe bulging with freebies seemed like crazy talk. (It had not been much earlier, after all, that folks cheerfully shelled out 10 bucks an hour to dial in to CompuServe.) Eleven years later, we take it for granted that *free* is the Internet's default state. But the sheer quantity and quality of no-charge services and downloads remain delightfully mind boggling.

That's good news for freebie lovers and great fodder for "The Web's Best Free Stuff" (page 84), the latest in our series of almost-annual roundups of online freebies. Reading it, I'm struck by how the Net has shattered any correlation between a service or download's cost and its usefulness. Choose your free tools wisely, and you could be just as happy and productive as people who pay hundreds of dollars for traditional software. Maybe more so.

Free stuff, in other words, is changing the world. And it's changing how we work here at PCW. More and more of our planning for the magazine and the

*I couldn't live without today's top online freebies. Which is not to say that there aren't times when I have trouble living with them.*

site happens in the Google Apps service rather than in not-at-all-free software such as Microsoft Office and Lotus Notes. Unlike Word and Excel, Google's word processor and spreadsheet make collaborating on documents so effortless that you almost forget you're doing it. And its calendar is so slick that I look forward to using it...which is a far cry from the joyless gnashing of teeth that I associate with Notes.

I did mention that we haven't spent a nickel for all this goodness, right? Google Apps is also available in a Premier version with an annual fee of \$50 per user; the basic edition is so good that we've had no reason to fork over any money. For us, free beats fee.

### Caveat Freeloader

But the more you come to depend on free services, the more you discover that...well, you can't. At least not always. I was reminded of this at a recent staff meeting, when Kim Brinson, our managing editor, commented that

Google Apps' calendar has an annoying tendency to be unavailable just when you need it—and revealed that she had been keeping a backup copy of our schedule in Excel as a hedge.

Google, of course, isn't just any Web service provider. Yet it hasn't figured out how to make Google apps super-dependable. (Its for-pay Premier Edition does come with a 99.9 percent uptime guarantee, but only for e-mail.) Smaller companies struggle even more: The Twitter microblogging service, for instance, has developed a reputation for mysterious, extended outages.

Downtime isn't the only downside of free. The moment you store information on a Web service that you aren't paying for, you give up some degree of control. For example, the Facebook social network has quickly become a more important repository of data about hundreds of people in my life than any traditional address book I own. But can I bring my list of Facebook pals into, say, Gmail? Nope. Facebook offers no export function—and its terms of service forbid users from employing any automated means of extracting info. The company has zero incentive to unlock my data, whereas hoarding it ensures that my eyeballs will see the advertising that pays for the service.

Despite everything, I love life in the free world. And I'd love to hear your thoughts—whether you're a compulsive freeloader or a skeptic who thinks that you get what you pay for. Drop me a line at [harry\\_mccracken@pcworld.com](mailto:harry_mccracken@pcworld.com) or stop by our [PCWorld.com](http://PCWorld.com) forums to continue the conversation. ●

*Read Editor in Chief Harry McCracken's blog at [blogs.pcworld.com/techlog](http://blogs.pcworld.com/techlog).*

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As usual, we'll select a hundred items on our own. But we're also opening up voting to you, via an online survey that invites you to choose your favorites from among 350 nominees in categories such as PCs, peripherals, software, and sites. We'll publish an additional list of 100 top products based on this poll.

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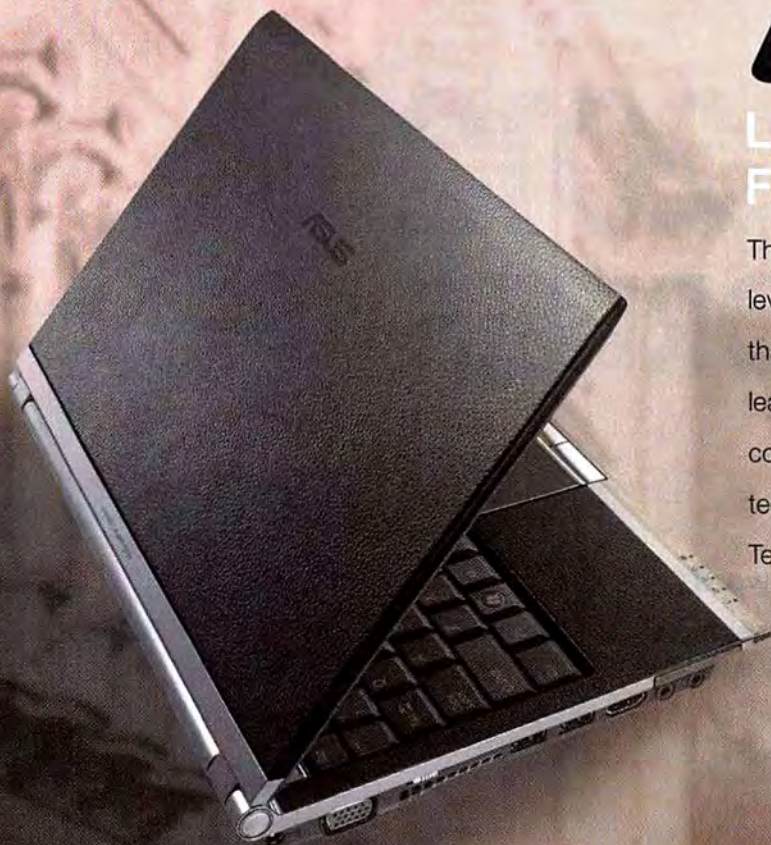
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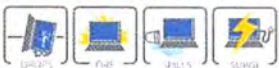
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# PCW Forum



The high-def format war is over, and Blu-ray Disc stands victorious. Some people are happy it's over, some wish Sony hadn't won, some say who won doesn't matter, and others think discs aren't really the product of the future anyway. Share your thoughts with us and the community at [find.pcworld.com/60389](http://find.pcworld.com/60389).

## End of the High-Def War

It's about time Toshiba stopped wasting shareholders' money [[find.pcworld.com/60353](http://find.pcworld.com/60353)]. Its HD DVD format never really stood a chance. Now, the early adopters that wouldn't listen have a mini-museum in their living rooms.

*emJay, from the PC World forums*

I am happy that the war is over. I was an HD DVD supporter from the start, even before it was officially released to the market. I am sad that I will not be able to afford a Blu-ray player anytime soon. The rivalry between formats was driving prices down. Such conflicts help bring prices to a reasonable level.

*Juwegic, from the PC World forums*

Sony will try to pull off another rootkit scheme now that Blu-ray Disc has won. I'm glad the "war" is over...but why did it have to be Sony?

*Kitrax, from the PC World forums*

I think truly it was the sales and rental figures of the high-definition movies themselves that propelled the key decisions of companies such as Blockbuster, Netflix, Wal-Mart, and Warner Bros.—and thus led to Blu-ray winning.

*Mpheadley, from the PC World forums*

The pessimism about Blu-ray player prices is unfounded [[find.pcworld.com/60354](http://find.pcworld.com/60354)]. Now that the format war is over, lesser-known brands will start licensing to produce Blu-ray Disc players, confident they won't be wasting the investment on a dead format.

*Gossecyn, from the PC World forums*

Both HD DVD and Blu-ray have missed the boat. Who wants a high-def player with DRM restrictions on the ability to play the disc? Who says that five years down the road you'll still be allowed to play your HD or DVD movies? I believe that legal downloaded movies will become far more popular.

*Tone, from the PC World forums*

For the middle-class (or poorer) families who happen to be the mainstay of our consumer base, this high-def format war is as a joke. It's like trying to decide whether you should sell ice in blocks or ice in cubes to a consumer base that has no freezer to put them in.

*AlecWest, from the PC World forums*

Wal-Mart shoppers wouldn't understand Linux [[see next page](#)].  
*Kilme, from the PC World forums*

## 25th Anniversary Issue

I enjoyed your 25th anniversary issue [March]. I beat you by a year, as I got my first computer in 1981. What I did find amusing was the article "The Next 25 Years." What would you have predicted happening now, back when you started? I'll bet nothing you could have envisioned would be around today.

*Geoff Orton, Carefree, Arizona*

The key to making predictions about future technologies is to try to confine the discussion to ideas that really are visionary, yet of practical value and commercial worth. Commercial appeal and technology are both required for a vision to be realized. On that basis, there is not much vision in your forecast about "The Next 25 Years."

*Jerry Butler, Hollis, New Hampshire*

## Reliable, and Obsolete

As an undisguised computer illiterate who is just beginning to venture into cyberspace, I found Stephen Manes's "It's Reliable! It's Also Obsolete!" [Full

The HD DVD player has decent processing power inside. Toshiba should open the player source code to the hacker community for creative reuse of the hardware.

*Jreuter, from the PC World forums*

Disclosure, February] a scary introduction. His list of breakdowns and malfunctions was indeed scary, to use his appropriate word again. His observation on obsolescence being baked right in is the crowning touch. I like Manes's forthrightness in giving his readers the facts. Clearly all is not well in computerland. It is good to know what some computer salespeople don't mention. Thank you for the "full disclosure."

*Tom Jenkins, Centennial, Colorado >>*



Jim Curtis just stopped a vicious  
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# PCW Forum

## Linux Systems a Bargain?

You have totally flamed two reasonably priced PCs [sold at Wal-Mart and Sears] and Linux all at once [[find.pcworld.com/60355](http://find.pcworld.com/60355)]! You disdain the PC hardware and cases, but you never knock Dell or other machines for how they appear. Writers are too anxious to denigrate Linux or any other operating system that might be as useful and as easy to use as Windows. Set someone who has used only XP in front of a Vista PC with Office 2007, and watch them flounder! You criticize Linux for the command line, but Windows has it, too. The command line and shells are for people who need them and know what they are for.

I am really distressed at the tone of your article. You had a chance to say that there is more than Microsoft around—that other OSs can browse the Web, burn CDs, play music, and even be a digital video recorder, all with associated free software. You have done a major disservice to countless people who could have enjoyed so much for just a minor outlay in money.

*John E. Carte, Pittsburgh*

**Editors' note:** At press time, Wal-Mart stopped selling the Everex TC2502 gPC in its stores ([find.pcworld.com/60387](http://find.pcworld.com/60387)).

I'm sick of Linux freaks who go on about how it beats Windows. I've experimented with various flavors of Linux over the past 15 years, and finally realized that its software is inferior and its utilities are *not* user-friendly. I appreciate that Linux is open-source and relatively free. But the fact is, Windows is a much better OS, and I can get *more* done, play *more* games, and do things *much* more easily with Windows. All the Windows-bashing is getting a little old.

*Mark M. Abels, Tinley Park, Illinois*

## Internet Radio

As a small Internet broadcaster, I was disheartened to read your "how to steal" item on using a stream-ripping tool like Radiotracker ["Record Music From Internet Radio," *Here's How*, page 124,

March]. You explained how easy it is to get perfect digital quality audio using this program, which in essence supports the recording industry's contention that Internet radio exists as an alternative to purchasing music by legal means. The fees I pay for broadcast rights are calculated in part by measuring total listening hours. I would prefer that my expensive bandwidth be used by legitimate listeners and not those looking to build their iTunes library on my dime.

*Bill Cooper, RoosterRadio.Net*

## Annoying Online Ads

Regarding the *Consumer Watch* piece on annoying Web ads [March]: Do the advertisers realize that an ad is supposed to incite favorable action, namely a purchase? An ad that annoys me will not find me a likely customer, and similarly for most others, I would guess.

*Peter R. Lantos, Erdenheim, Pennsylvania*

## Packing Batteries

I have an idea on how to defeat the new rule that you can't pack spare lithium ion batteries in your luggage [page 45, March]. The rule says that you can carry the batteries if they are installed in a "device." A battery manufacturer needs to make a small container that holds one or two spare batteries and has a switch and an LED bulb on the top. Yes, the "device" is a flashlight.

*Dick Byrd, Mirror Lake, New Hampshire*

PC World welcomes your feedback. We reserve the right to edit for length and clarity. Share your thoughts in the Comments area under each story on our Web site, or visit our Forums ([find.pcworld.com/55165](http://find.pcworld.com/55165)). Send e-mail to [letters@pcworld.com](mailto:letters@pcworld.com). ●

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# Forward

## Get Ready for a Crackdown on Broadband

BY TOM SPRING

CONSUMERS ARMED with a burgeoning array of broadband services, including movie downloads, video games, on-line backup, and streaming audio and video, are flooding the nation's broadband pipes with data. It could cost them.

Consumer advocates say that it's only a matter of time before service providers begin punishing users who are fond of engaging in such high-bandwidth activities.

Craig Aaron, spokesperson for SaveTheInternet.com, worries that Internet users soon either may have to pay extra for taking what their ISP considers too much bandwidth or may be cut off from using some bandwidth-hungry software applications.

Bandwidth demands in the United States have been doubling each year for some time, according to Tom Donnelly, cofounder of Sandvine, a network management firm. As pressure builds on ISPs and as applications such as file-sharing software and streaming mul-

As Internet traffic increases, ISPs may start charging by the gigabyte, limiting use of some services, and snooping on the data traversing their networks.



timedia content grow more common, Donnelly says, ISPs have an ever-increasing incentive to clamp down on heavy bandwidth users.

Major broadband ISPs

shrug off criticism that their networks can't handle the increased demand for bandwidth. "We've been successfully delivering broadband services to our customers

for ten years, and that's not going to change anytime soon," says Mitch Bowling of Comcast's high-speed Internet group. Other ISPs, including Charter Communications, Time Warner, and Cox Communications, echo those sentiments. "Our network is extremely robust and [bandwidth] issues aren't a problem for us," says Jim Mailla, spokesperson for Optimum Online, a Charter company.

Service providers are reluctant to admit that there is a problem, says Stan Schatt, vice president at ABI Research, because "no investor likes to hear the phrase 'upcoming capital expenditures.'"

"ISPs don't want to spend money to upgrade their networks, so they have to limit the amount of bandwidth a customer can use," says Mike McGuire, an analyst with research firm Gartner.

### Applying the Brakes

Some service providers are already trying to restrain excessive bandwidth users. Others are experimenting with payment plans (such as



tiered pricing) that pass the cost of bandwidth use along to individual consumers.

For instance, Comcast has been tinkering with the way file-sharing software works on its network, slowing data transfer speeds for applications such as BitTorrent. In addition, Comcast has been giving the heave-ho to customers who use the Internet most heavily, explaining that certain individual downloaders use as much bandwidth as some of the service's business customers.

Comcast spokesperson Charlie Douglas explains that individual customers who use disproportionately more bandwidth than their neighbors can slow down the Internet for everyone else on the block. Comcast has caused an uproar among users by manipulating the way file-sharing programs work and by introducing bandwidth caps on individual accounts without identifying what those caps are.

### Pay per Gigabyte

Time Warner Cable is experimenting with managing bandwidth by billing its customers not at a flat monthly rate, but on the basis of how much bandwidth each customer uses. The cable company plans to roll out a trial version of a consumption-based billing system in Texas later this year. "We have more than enough bandwidth, but we are looking to the future," says Alex Dudley, spokesperson for Time Warner Cable.

Under the service's new billing scheme, customers who exceed their monthly

bandwidth allotment risk incurring an overage charge. A spokesperson says that the billing scheme isn't in place yet, so the company doesn't have any hard numbers available regarding these charges.

### Consumption Caps

Cox Communications says that it now imposes "monthly consumption caps" on its customers and that it reserves the right to "suspend" account holders who use more than their allotted bandwidth. The company's policies are on its Web site.

If Cox users consistently exceed their bandwidth limits, Cox either sends them an e-mail or calls to urge them to reduce bandwidth consumption or upgrade to a higher tier of service, says Cox spokesperson David Deliman. Cox wouldn't say whether the company has ever ousted a customer.

AT&T's CEO Randall Stephenson has said publicly that he has considered blocking pirated content from the AT&T network. Big Champagne, a market research firm that tracks file-sharing sites, estimates that peer-to-peer traffic accounts for more than half of all Internet traffic.

Bandwidth issues will move toward center stage in the months ahead as Congress considers a new Net neutrality bill introduced by U.S. Representative Ed Markey (D-Massachusetts). ("Net neutrality" refers to the principle that all Internet traffic be treated equally.) Meanwhile, the Federal Communications Commission has stepped up its

investigation into complaints that Comcast secretly took steps to slow file sharing by its customers.

The debate over the issue of Net neutrality—between those who believe in unfettered access to the Internet and the ISPs that manage the Internet's on-ramps—is getting louder quickly. ISPs say that it's time for the FCC to reexamine its longstanding policy prohibiting ISPs from "blocking" specific applications. The FCC does permit "reasonable network management," a phrase that ISPs interpret in one way and advocates of

Net neutrality in another.

"Without some type of management of the Internet by ISPs, the Internet would become unstable," says Jay Rolls, vice president of technology for Cox Communications. Like virtually every ISP contacted for this story, Cox acknowledges that it engages in various forms of Internet traffic management (not blocking) known in the industry as "traffic shaping" and "traffic prioritization."

For example, according to Rolls, Cox gives priority on its network to applications such as Voice over Internet protocol (VoIP) that re- ➤

## PLUGGED IN EDWARD N. ALBRO



**"VISTA CAPABLE" LAWSUIT:** Court papers show that even Microsoft execs couldn't get the new OS to work. Nope, that's not the sound of us laughing.



**IPHONE GOES CORPORATE:** Please tell me that Apple isn't planning to put the silhouettes of wildly gyrating senior vice presidents on billboards everywhere.



**SERIOUS SMS OVERLOAD:** Filipinos alone send a billion text messages a day. How do you text "OMG my thumbs are killing me!" in Tagalog?



**UNLIMITED CELL PHONE PLANS:** Great! Now Mr. Loudmouth on the bus has no motivation to hang up. Time for noise-canceling headphones.



**LOGITECH SPURNS MICROSOFT:** First Yahoo, and now the mice guys reject Redmond's advances. Perhaps only eHarmony can find the giant a suitable mate.



**COMCAST HIRES SEAT-WARMERS:** The plot was exposed when some of them dozed off during the hearing. I thought only Comcast techs fell asleep on the job.





quire a consistent and reliable Internet connection, subordinating applications such as e-mail that don't.

Proponents of Net neutrality agree that network management is necessary. But managing a network too stringently comes dangerously close to violating the principles underlying Net neutrality, they say.

Privacy advocates worry that, in order to make sense of Internet traffic, an ISP must look at it to determine whether data is Web browsing content, a file transfer, or VoIP communication. That "look" is tantamount to snooping, they say, because it involves not only seeing what kind of content is being downloaded in general, but also observing what the precise content is. If an ISP plans to identify data packets that belong to e-mail, music file downloads, or VoIP, privacy advocates say, what's to stop it from peek-

ing at the content, reading the e-mail, identifying the downloaded song, or noting who says what during a VoIP call? It would be like a postal worker opening every letter and scanning the contents to see whether the item is junk mail, a bill, a love letter, or something else.

## Bandwidth Hogs

From the ISPs' point of view, the chief culprits in cases of bandwidth hogging are applications for multimedia file sharing such as BitTorrent. "These programs are like perfectly designed robots that are programmed to eat as much as they can at an all-you-can-eat buffet," says Sandvine's Donnelly.

Even though consumers' online habits have not changed much in the past few years, in Donnelly's view, the sites and services

they use are causing demand for broadband service to grow rapidly. The more consumers take advantage of such bandwidth-hungry services as Apple TV Take Two (which allows you to down-

load high-definition movies), for example, the greater the challenge will be for ISPs.

## Not Ready for Future

If legally downloading high-definition movies, streaming TV shows from sites such as Hulu.com, and backing up PCs online become as commonplace for consumers as many Silicon Valley companies hope they will, service providers could be in big trouble. ISPs need to spend a lot more money now to beef up their networks' bandwidth capacity for the future, according to ABI's Schatt. Gartner's McGuire says that both the quality of service and the value for customers are likely to get a lot worse before they get better.

According to Keynote Systems, a network monitoring firm, broadband users rarely feel the impact of bandwidth bottlenecks today unless a big media event causes Web use to spike or unless a major

component of the Internet infrastructure suffers damage unexpectedly. Keynote describes these Internet slowdowns as virtually imperceptible brownouts. None of the analysts consulted for this story would forecast when the Internet, left in its current state, might start slowing because of bandwidth traffic congestion. Schatt says that he wouldn't be surprised if ISPs, hoping to push customers to higher tiers of service, let the less expensive tiers of broadband service deteriorate.

Sandvine's Donnelly anticipates a day when ISPs will charge a premium to customers for access to better-managed networks, as opposed to higher-speed networks. For example, an ISP might offer you access to a tier of service in which bandwidth for peer-to-peer applications isn't artificially slowed and where VoIP traffic is prioritized—for a price.

Rob Enderle, principal analyst with the Enderle Group, emphasizes that ISPs have a lot of bandwidth capacity on the back end. The real challenge for ISPs, he says, is to improve their networks' so-called last mile to the home. "The [profit] margins just aren't there for ISPs to justify expensive network upgrades," Enderle says.

Enderle believes that, when given the option of raising bandwidth capacity versus raising monthly broadband fees, ISPs will choose the latter every time.



## Readers' Rage: Comments on Broadband Crackdown

FROM THE  
**PCW**  
FORUMS

READERS IN PCWORLD.COM'S community forums had strong feelings about the prospect of limits on broadband use. As you might imagine, few expressed sympathy for ISPs.

"WHAT A LOAD of crap! Comcast advertises specifically to people who download movies, music, and large files; and now they want to punish people who sign up for just that reason?"

*rkinn01*

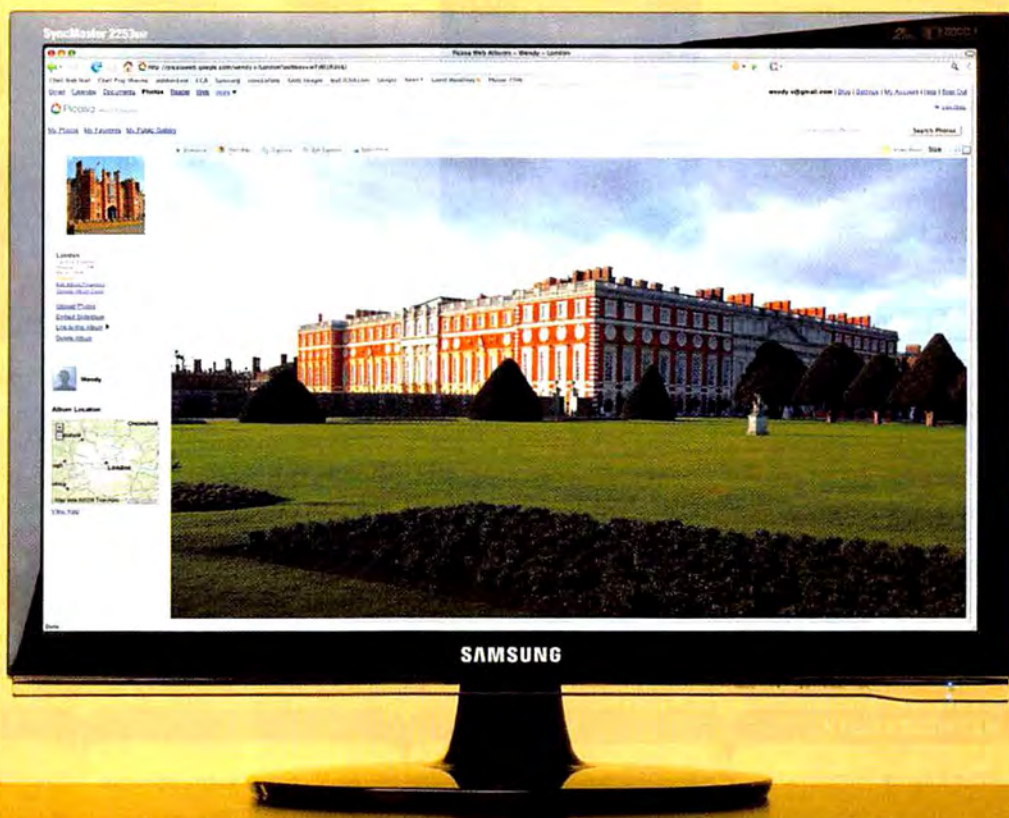
"WE HAVE A market economy—let the carriers set the price. If it's excessive, people will vote with their wallets."

*JGFuller*

"ARE YOU KIDDING me? In other parts of the world the price is lower and the speed is faster! This is all about poor infrastructure on the parts of the cable companies."

*Yert*





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## Where the Candidates Stand on Technology

From broadband speeds to electronic privacy issues, here's your guide to the remaining Democratic and Republican 2008 presidential candidates' views on today's most controversial technology-related questions.



**Clinton**



**Obama**



**McCain**

### BROADBAND ACCESS

AS THE NET becomes ever more integral to our daily lives, the United States is slipping behind other developed nations in the speed and ubiquity of broadband access—to 14th place, according to the Organisation for Economic Cooperation and Development.

Proposes a "Connect America" plan that would use federal tax incentives to encourage broadband deployment in underserved areas. The plan also proposes financial support for state and local broadband initiatives. Would push the FCC for a more accurate assessment of broadband deployment.

Promises to treat broadband as an essential, universal service: "We have ensured that every American has access to telephone service and electricity, regardless of economic status, and [Obama] will do likewise for broadband Internet access," according to a statement on the candidate's site.

Acknowledges a "growing gap between the haves and the have-nots in America" with regard to Internet access. "There's lots of ways that you can encourage corporations"—such as with tax benefits and other credits—to act out of self-interest to improve access, McCain said in a debate.

### NET NEUTRALITY

SEVERAL OF THE large companies that control the Internet are considering giving priority to some types of data over other types, in some cases charging extra for preferential treatment.

Says a neutral Net "is the embodiment of the [country's] fundamental democratic principles," and cosponsored Senate legislation that would "require all broadband providers to treat all Internet traffic equally."

"Strongly supports the principle of network neutrality," according to his site. "Network providers should not be allowed to charge fees to privilege the content or applications of some web sites ... over others."

Opposes government regulations to enforce Net neutrality. At the All Things Digital technology conference, he remarked, "When you control the pipe, you should be able to get profit from your investment."

### PRIVACY AND SECURITY

SOME THREATS TO privacy are indisputable: Nobody supports identity thieves or companies that handle private data sloppily. But the situation isn't as clear-cut when the issue is the government's monitoring of communications—at times without a judicial warrant, as the Bush Administration has done—in an attempt to find terrorists.

Opposes the Bush administration's use of warrantless wiretaps and e-mail and phone record collection in pursuit of potential terrorists. In one 2006 speech she said, "At all levels, the privacy protections for ordinary citizens are broken, inadequate, and out of date.... If we want to protect our safety and our privacy, we need clear guidelines and we need to get smart about technologies."

Opposes Homeland Security wiretapping, and "would adhere to FISA [Foreign Intelligence Surveillance Act] rules for the surveillance of any Internet and telephone communications, and would establish strict procedures for the use of any [USA] PATRIOT Act powers, especially national security letters," an Obama spokesperson told the *National Journal's* Technology Daily page.

Strongly supports combating terrorism, but says that "When companies provide private records of Americans to the government without proper legal subpoena, warrants, or other legal orders, their heart may be in the right place, but their actions undermine our respect for the law." In 2000, he cosponsored the Consumer Internet Privacy Enhancement Act to improve consumer privacy online.

Information comes from the candidates' policy statements, Web sites, and interviews.





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## XP's Service Pack 3 Adds Very Little

THREE-AND-A-HALF years after Service Pack 2 for Windows XP delivered a slew of fixes for the OS, Microsoft is about to release its final XP service pack. I installed the latest release candidate of SP3. My reaction: Yawn.

Typical users are unlikely to notice the few new features delivered in SP3 (it's available for download at [find.pcworld.com/60347](http://find.pcworld.com/60347)).

If you aren't an IT manager and you have been installing Windows XP updates each week, XP SP3 offers only two noteworthy features—one good (though easy to overlook), the other dubious.

On the good side, Service Pack 3 updates the menu text in the security options control panel to describe the options more extensively.

Iffier is the Windows Product Activation update, which makes XP installation more Vista-like. With this update, you won't have to input your Windows product activation key if you're installing XP (you must do so within 30 days, however, or your OS will stop working). But afterward, Windows XP will track your hardware configuration much as Vista does, and it may disable your PC if you replace a component such as the motherboard.

All in all, Windows XP Service Pack 3 is fairly anticlimactic: It won't blow up your computer, but it won't make it much better, either.

—Robert Strohmeier

## GEEKTECH TOM MAINELLI



### Get More Done With These Five Upgrades

I'M CONSTANTLY SEEKING out new hardware that can help me spend less time at my desk. Here are my top five recommendations.

**1. Buy a new keyboard and mouse.** Many tech-savvy people spend top dollar for a new processor while continuing to live with a frustratingly inefficient (and ancient) roller-ball mouse and old-school keyboard. This is just silly.

They should consider upgrading to my long-time favorite: Microsoft's Natural Ergonomic Keyboard 4000 (see [find.pcworld.com/60177](http://find.pcworld.com/60177) for our review). The \$60 corded keyboard offers solid tactile feedback and numerous programmable keys, but its real draw is its ultracomfy raised-edge, V-split keyboard, which keeps my wrists feeling good during long bouts of typing. Alongside the 4000, I use Logitech's ugly but awesome G5 corded gaming mouse. The \$60 rodent's plethora of programmable buttons, customizable weight and sensitivity, and oh-so-sweet tilting scroll wheel make it possibly the perfect Excel tool.

**2. Add a second monitor.** Years ago I wrote a column about the massive productivity benefits I gained by adding a second 17-inch LCD monitor to my PC. That seems quaint now that I have two 22-inch units on my desk, but the argument remains the same (just writ larger).

I lived with a mismatched pair of 22-inch monitors for some time, but recently sprang for a second Acer display and an Ergotron dual-monitor stand. The \$230 Acer AL2216W, a no-frills DVI-equipped monitor, is excellent for typical office chores. Initially the \$209 Ergotron DS100 was harder to justify, but besides allowing me to align my two monitors precisely, its single base freed up valuable desk space.

**3. Pick up a card scanner.** Consolidating valuable contact data from business cards into one file can be a real time saver. Instead of typing

card content into my files, I use the CardScan Personal Package to digitize the content. The \$160 bundle consists of a CardScan 60 USB-based scanner and CardScan software. The software is adept at sorting each card's text details, and the online backup service allows

me to access my contacts from any Internet-connected computer.

**4. Attach a KVM (key-board, video, mouse) switch.** When working

at home, I rely on my speedy home-office desktop for actual work and use my sluggish company laptop to deal with my dreaded Lotus Notes e-mail and calendar. For ages, I kept my laptop open on my desk for Notes access—an inefficient use of space and effort. Today I use Belkin's \$150 Flip DVI KVM

switch to share my secondary monitor, as well as my keyboard and mouse, between my desktop and my docked laptop. (Visit [find.pcworld.com/60179](http://find.pcworld.com/60179) to watch this setup in action.) To switch between the two PCs, I push the wired Flip pod, wait a second for the transition (preceded by the familiar "doink" of a PC recognizing a USB peripheral), and start typing.

**5. Get a multifunction printer.** Today's MFPs work better than ever. My aging HP PSC 2110 is invaluable when I need a paper copy of an insurance form or rebate receipt, because I no longer have to wait until I'm back in the office or passing a Kinko's. And when I run across a hard-copy document or photo I'd like to save and file for future reference, I digitize it on the scanner bed. Oh, and it's darn handy for printing Mapquest directions, too. Since my HP unit is long out of production, I refer you to *PC World's* current favorite among multifunction inkjets: the \$200 Canon Pixma MX700 (visit [find.pcworld.com/60180](http://find.pcworld.com/60180) to read the full review).

Next time: Software and online services that help you complete tasks more quickly.

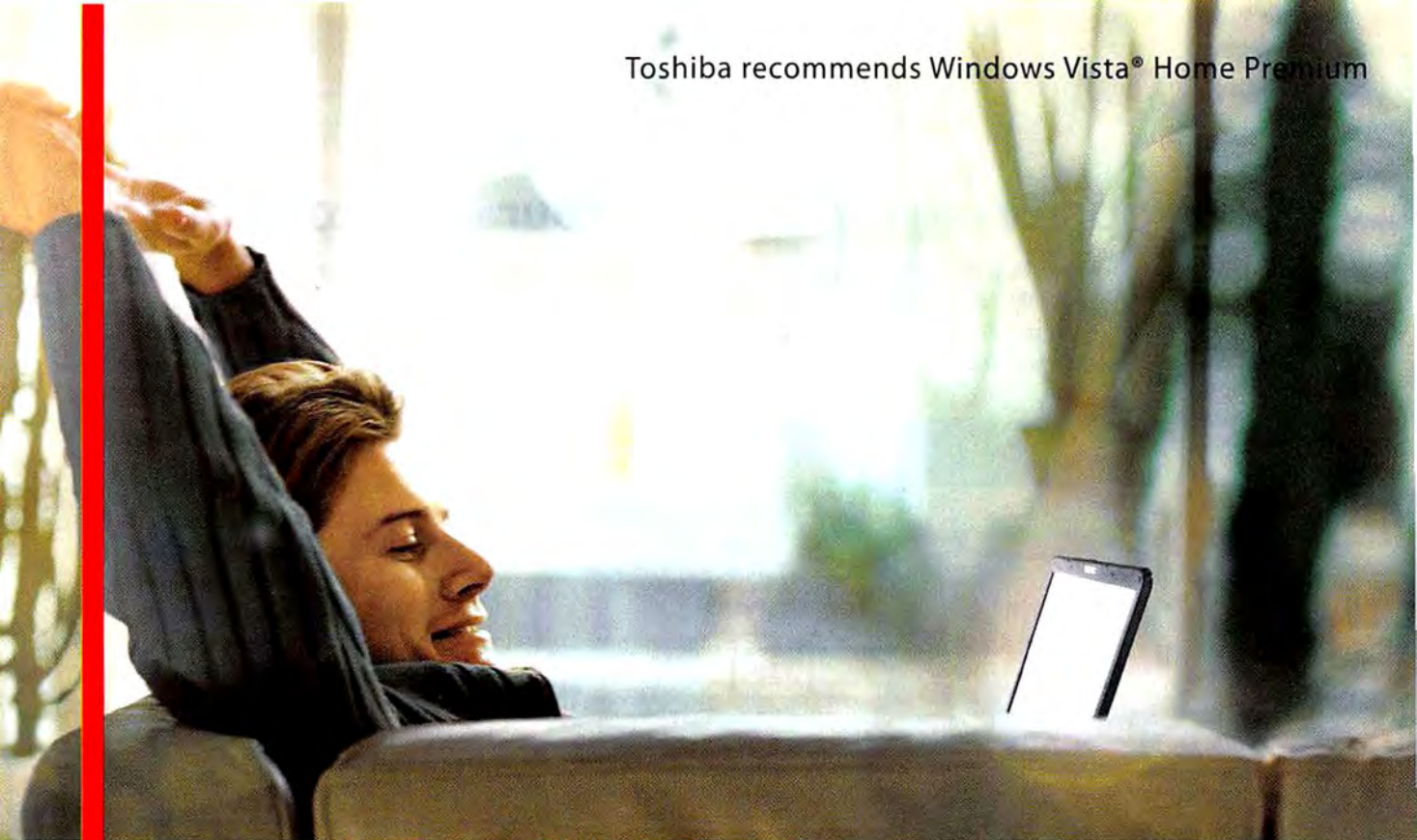
Add any of these hardware beauties to your home office, and I predict that you'll enjoy a nice productivity boost.

**ERGOTRON'S \$209 DS100 dual-monitor stand lets you align your LCDs precisely.**





Toshiba recommends Windows Vista® Home Premium



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With hundreds of laptops to choose from, we'll help find the one that's right for you. After all, we spend as much time figuring out how people use their laptops as we do building them. Take the sleek Satellite® A305, for example. It comes packed with illuminating feather-touch buttons, super-clear TruBrite® widescreen, a stylish Fusion™ finish and built-in Harman Kardon® speakers. Plus its blazing Intel® Centrino® processor technology and genuine Windows Vista® Home Premium can keep up with almost anything you throw its way. But if that's not your cup of tea, let's find you one that is. [www.toshiba.com/pcworld](http://www.toshiba.com/pcworld)



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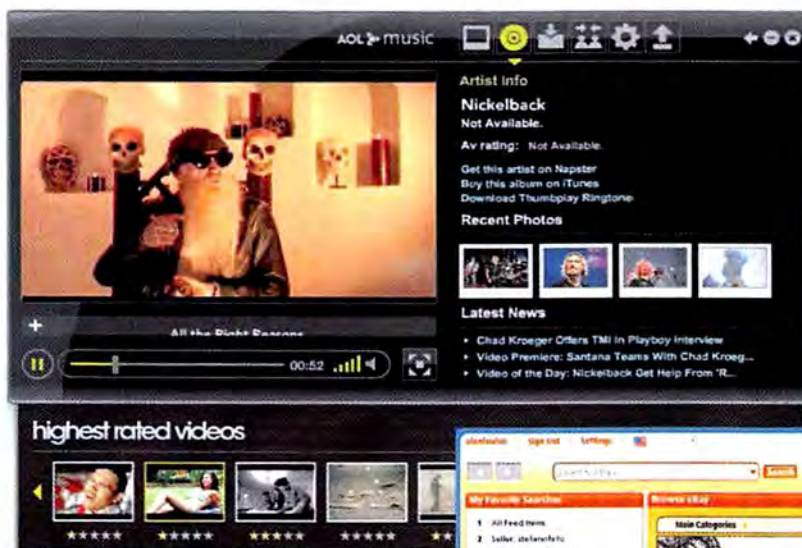
## AIR Apps Bring the Web to Your Desktop

AS IF THE line between desktop applications and Web services weren't fuzzy enough already, Adobe has introduced a technology called Adobe Integrated Runtime (AIR) that promises to blur the difference further—for the good. The technology

enables Web site owners to build services—anything from a media player to a backup service to an auction watchdog—that Web surfers can access easily and quickly, whether online, offline, or via a cell phone or other mobile device.

### Video Viewer

AOL hopes to make browsing and viewing videos easier with a free AIR application called AOL Top 100 Music Videos. This convenient add-on lets you browse and play popular music videos. And taking advantage of local system resources, the software can integrate features such as bookmarking favorite videos, personalizing content with feedback, and sharing videos with other AOL Top 100 Music Videos users.



### Auction Watch

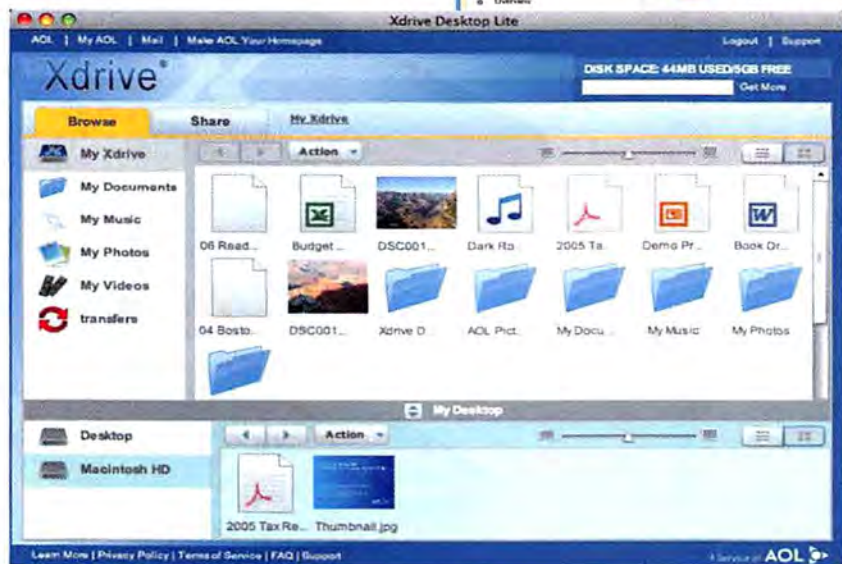
EBay Desktop is a free Adobe AIR app that allows you to keep tabs on your eBay auctions or to browse new gear without having to launch a Web browser. EBay Desktop can send you product availability notifications and auction updates in real time, too, according to eBay.



### Backup Buddy

Xdrive, a long-standing online storage service, has undergone a major Adobe AIR face-lift. The results of the make-over are visible in the free Xdrive Desktop Lite beta (reviewed on page 77). Once you've set up the program and got it running, AOL says, you'll find that grabbing data from your Xdrive account on the Web is as easy as grabbing it from your computer's local C: drive.

—Tom Spring





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**Total Protection Security**

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Ever feel like you're being watched? Right now spyware on your computer could be watching your every digital move. Unless you have McAfee. More than just anti-virus protection, McAfee offers continuous security from spyware, hackers, and other threats to you and your family. Learn about our complete range of total protection solutions at [McAfee.com](http://McAfee.com)

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With 1&1's all inclusive pricing, you always know exactly what you are going to pay, and you will always find the best price. We don't waste money on high overhead costs or on tasteless commercials.



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We treat you fairly: The price we advertise is the price you pay for a domain registration. No set up fee and no additional costs. Ever.



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Your 1&1 domain belongs to you as long as you're with us. You can use it to set up an e-mail account or for your website. You can even use a different web host without any restrictions. Reserve your name now and get started on the web when you're ready.



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Protect your contact information from spammers! Your privacy is important. That's why, unlike other domain companies, we offer Private Domain Registration free of charge.



### Switch and save!

You already have a domain? 1&1 does not charge transfer costs and you can save immediately with the industry's best prices. If you want to save more, upgrade your domain to a hosting package and take advantage of our great prices. (See next page!)



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## of-your-choice.com

	<b>1&amp;1</b>	<b>Yahoo</b>	<b>Go Daddy</b>
<b>.com</b> .net .org  .us .info .name	\$6.99	\$9.95	From \$9.99
Private Domain Registration*	FREE	\$9.00	\$6.99
ICANN Fee	Included	Included	\$0.20
E-mail Account	FREE 2,000 MB Mailbox	No Mailbox included	FREE 100 MB Mailbox Size
Total Annual Cost		<b>\$18<sup>95</sup></b>	<b>\$17<sup>18</sup></b>

**\$6.99**

### Free with all 1&1 domain accounts:

- ✓ Private Registration\*
- ✓ Search Engine Tools
- ✓ Domain Forwarding
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- ✓ 2,000 MB E-Mail Account
- ✓ 24/7 Support
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\* .us Domains are not eligible for private registration

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### 1&1 – One stop for your Domain and Hosting Needs

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If you already have a 1&1 domain and choose to upgrade to a web hosting package you will no longer be billed for your domain. Sign up for one of our Web Hosting packages and receive up to 5 domain names FREE!



#### It's easy to get on the web!

A website is the easiest and most affordable way to communicate your ideas, products and information. When combined with your domain name, your website becomes a business card for the virtual world or a full-color brochure.



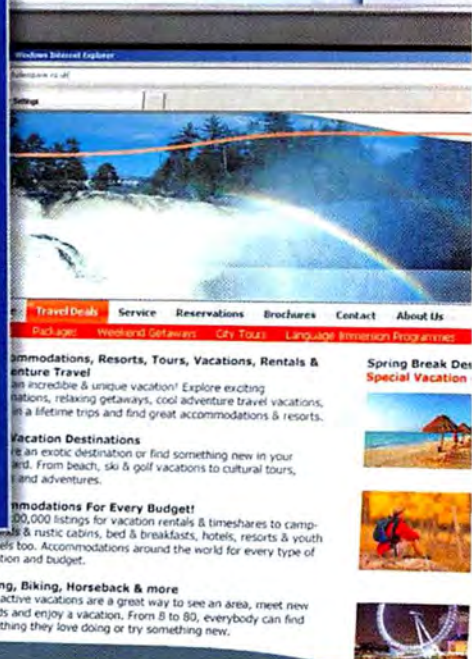
#### 1&1 WebsiteBuilder

Included with all web hosting plans, 1&1 WebsiteBuilder lets you design a professional-looking website with no HTML knowledge! Using simple point-and-click prompts and a built-in text editor, your site can be online in minutes. Creating your website has never been easier.



#### All Inclusive for All Levels!

1&1 gives you a choice between Linux or Microsoft web hosting at unbeatable prices! Our hosting packages are easy enough for any beginner, yet powerful enough for the most demanding developer.



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# Websites

**1&1 Home Package**  
**3 months**  
**FREE!\***

**1&1**

**Web.com Hostway**

	Home	DIY	GOLD
Included Domains	<b>2</b>	1	—
Web Space	120 GB	5 GB	12 GB
Monthly Transfer Volume	1,200 GB	20 GB	250 GB
E-mail Accounts	1,200 IMAP or POP3	30 POP3	250 POP3
Mailbox Size	2,000 MB	300 MB	79 MB
Search Engine Submission	✓	Extra charge applies	✓
Website Builder	12 Pages	✓	✓
Photo Gallery	✓	✓	✓
RSS Feed Creator	✓	✓	—
Ad-free Blog	✓	✓	✓
Dynamic Web Content	✓	✓	—
Web Statistics	✓	✓	✓
Starter Software Suite	✓	—	—
90-Day Money Back Guarantee	✓	—	—
Support	24/7 Toll-free Phone, E-mail	24/7 Toll-free Phone, E-mail	24/7 Toll-free Phone, E-mail
Monthly Cost	<b>\$4.99</b>	<b>\$11<sup>95</sup></b>	<b>\$13<sup>95</sup></b>

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**\$4.99**

**First 3 months FREE!**

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## Internet Explorer 8 Beta: Underwhelming

MICROSOFT HAS released a public beta version of the next Internet Explorer—but don't download it expecting either a stable browser or stunning innovation.

Its developers say IE 8 (available at [find.pcworld.com/60350](http://find.pcworld.com/60350)) better supports Web standards, can automatically recover from a crash, and includes new features. One of these is Activities, plug-ins that eliminate some tedious cutting and pasting. Highlight a street address,

and you can automatically bring up a map of that location. Another new feature, called Web Slices, lets you track changes to a portion of a Web site—for instance, a specific eBay auction.

The beta is clearly buggy: Senior Editor Melissa Perenson's installation crashed often and seemed to conflict with multiple apps on her system. (Read more at [find.pcworld.com/60349](http://find.pcworld.com/60349).)

The Web Slices feature seems already to trail Safa-



**WITH INTERNET EXPLORER 8's Activities, you can run a Web search or get a definition or a map based on terms you highlight on a Web page.**

ri's Web Clips technology, which lets you transform a piece of any Web page into an automatically updating widget on an OS X desktop. IE 8's version works only if the site's developer enables

it. And because the slices live in an IE toolbar, you still have to open your browser in order to see new activity.

Microsoft hasn't specified when IE 8 will be final.

—PC World staff

## BETA WATCH

EDWARD N. ALBRO



### SugarSync: Automatic Sharing

Everyone has a few PCs they use regularly, and keeping the latest versions of important files current on all of them can be a major hassle. SugarSync, a paid service scheduled to debut by the time you read this, makes syncing your files automatic. You download SugarSync's desktop app to each PC that you want to keep up-to-date, choose the folders you're interested in, and let SugarSync handle the rest. The SugarSync app will upload the revised version of a document on your work desktop to SugarSync's server, which then pushes a copy of the new file version down to your home PC. Conversely, if you change a word on your home PC, the edit shows up on your work desktop within seconds. You can also access files from your mobile phone or from any other PC through SugarSync's site. The service costs \$5 per month for 10GB of storage, with larger storage tiers available at higher rates. [sugarsync.com](http://sugarsync.com)

### Capzles: Super Slide Shows

If the typical online slide show—a series of pictures with captions—fails to capture the magic of your wedding (or your product) adequately, try Capzles, a free site that was still in private beta at press time. This beautifully designed, Flash-based site enables you to upload photos, videos, or music files, and enter text to create a multimedia time line. You can choose a prepackaged background or design your own. After you've finished, visitors can step through your creation or browse thumbnails to select the sections they're most interested in. Your musical choice will play in the background, fading to silence when a visitor plays a video. [capzles.com](http://capzles.com)



**UPLOAD YOUR PHOTOS or videos to Capzles, and the Flash-based site will create a rich time line, including backgrounds and music.**

### Shifd: Info Nuggets at Your Fingertips

Shifd is a free service designed to help you collect and return to snippets of online content. A simple Shifd dashboard displays your data nuggets in three categories: notes, places, and links. You can download an Adobe AIR desktop app to drag information from other apps into a small window. Shifd will figure out what kind of info it is and automatically categorize it. You can add data through a browser plug-in, and you can access it on your mobile phone. One neat feature: Drag in an address and Shifd automatically supplies links to a Google or Yahoo map of the location. [shifd.com](http://shifd.com)





Alternative Thinking About Reliability:

# KEEP DOWNTIME WHERE IT BELONGS: OUTSIDE THE OFFICE.

The HP ProLiant DL380 G5 server comes with Systems Insight Manager (SIM) software. HP SIM has shown an average reduction in server downtime<sup>1</sup> of 77%, by monitoring your system and alerting you of potential server problems before they occur.

Technology for better business outcomes.



## HP ProLiant DL380 G5 **\$2249 (Save \$958)**

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Check hp.com for the most up-to-date pricing

**Smart Buy** (PN: 470064-511)

- Quad-Core Intel® Xeon® Processor
- 2GB PC2-5300 memory
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**Smart Buy** Add 2GB additional memory,  
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## HP StorageWorks Ultrium 448 Tape Drive SAS Bundle<sup>2</sup> **\$1649**

Lease for as low as \$41/mo<sup>3</sup> for 48 months

**Smart Buy** (PN: AG739A)

- 400GB compressed capacity in half-height form factor
- Ships with Data Protector Express Software, One Button Disaster Recovery, a 1U Rackmount Kit, and a Host Bus Adapter

Get the full story in the IDC white paper at [www.hp.com/go/sim3](http://www.hp.com/go/sim3)  
or call 1-866-545-0298



1. IDC White Paper sponsored by HP, Gaining Business Value and ROI with HP Systems Insight Manager, Doc #206761, May 2007. 2. Prices shown are HP Direct prices; reseller and retail prices may vary. Prices shown are subject to change and do not include applicable state and local taxes or shipping to recipient's address. Offers cannot be combined with any other offer or discount and are good while supplies last. All featured offers available in U.S. only. Savings based on HP published list price of configure-to-order equivalent (\$3207 - \$958 instant savings = SmartBuy price \$2249). 3. Financing available through Hewlett-Packard Financial Services Company (HPFS) to qualified commercial customers in the U.S. and subject to credit approval and execution of standard HPFS documentation. Prices shown are based on a lease 48 months in term with a fair market value purchase option at the end of the term. Rates based on an original transaction size between \$3,000 and \$25,000. Other rates apply for other terms and transaction sizes. Financing available on transactions greater than \$349 through April 30, 2008. HPFS reserves the right to change or cancel these programs at any time without notice. Intel, the Intel Logo, Xeon and Xeon Inside are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. © 2008 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice.



## The Rise of Big, Free Games

THE NET has had free casual games for years. But to play sophisticated games that deliver great effects and complicated action—titles such as *World of Warcraft* or *Quake*—you've had to pay.

That's changing rapidly. These days you can get retail-quality games for free from influential game-makers. The plan: make money by showing advertisements within the game or by convincing players to pay for upgrades.

MapleStory ([maplestory.nexon.net](http://maplestory.nexon.net)), a free game developed by Nexon, has more U.S. players than *World of Warcraft*. You pay only for extras, like fancy clothes.



**MAPLESTORY is free, but plastic surgery for your avatar isn't.**

Id Software will bring an ad-supported online version of its *Quake III* to a computer near you, gratis. The only cost of entry: putting up with in-game ad billboards.

Gaming giant Electronic Arts recently announced *Battlefield Heroes*, a game financed by ads shown before matches and by players' paying to accumulate experience points more quickly.

—Darren Gladstone

## GADGET FREAK DAN TYNAN



## The Really Big Show on My Wall Every Night

YOU CAN HAVE your plasmas and LCDs, your CRTs and rear-projection DLPs. When it comes to watching a really big picture on the wall, I'll take a front-projector TV, thanks. Dollar for dollar and inch for inch, these models are the cheapest big-screen televisions you can buy.

In fact, we never go to the movies anymore. Instead, we park ourselves on the couch, eating real buttered popcorn and basking in the welcoming glow of our 100-inch monster screen.

But happy as we are with ours, front projectors aren't for everyone, and there are certain things you need to know before taking the plunge.

**Resolution rock:** When you expect to dedicate a fair number of hours every week to staring at a 100-inch picture, you want as much resolution as you can afford. My Sony Bravia VPL-AW10 tosses up a perfectly fine 720p image for less than \$1200 list. (It also upscales DVDs to its native resolution, making the video look far better.) Epson's Powerlite Home Cinema 1080 UB produces an attractive 1080p picture for \$3000; that's about as inexpensive as you'll find for a full high-definition projector. If money's no object, you can drop \$15,000 on the Marantz VP-11S2, which offers more-sophisticated image processing and higher-quality optics.

**The dark side:** Like burglars and barn owls, front projectors operate best in near total darkness, so you'll need a room with minimal ambient light (or really thick curtains). As a result these projectors often are a better fit for dedicated home theaters than for living rooms.

**Business or pleasure?** A lot of projectors are advertised as being dual-purpose: They show your PowerPoints during the day and your movies at night. But most business projectors lack higher-resolution video inputs such as composite and HDMI, and some display only in an as-

pect ratio of 4:3, not a high-def wide screen's 16:9 or a cinematic 2.35:1. Ignore the blizzard-in-Buffalo sales pitch; instead look closely at the projector's ports and display options.

**Size and sound:** Because they rely on fans to cool the bulb, projectors can be noisy—some

are loud enough to drown out the movie sound track. Smaller, more-portable models tend to be noisier because they have fewer materials inside to baffle the sound. The Sony and the Epson are slightly bulky but also whisper-quiet. Be sure to give the projector a listen as well as a look.



EPSON'S \$3000 POWERLITE Home Cinema 1080 UB.

**Dim bulbs:** The biggest hidden cost of projectors involves the bulb. Depending on how frequently and how heavily you use the projector and depending on what the bulb's life rating is, you'll need to buy a new bulb every one to four years. At \$300 to \$500 apiece, that adds up—so factor it into your cost analysis.

**Eyes on the prize:** "It doesn't matter if you're spending \$2000, \$5000, or \$15,000. You need to look at picture quality first, and not just specs on paper," says Kevin Zarow, vice president of marketing and product development at Marantz.

Unfortunately, to see a projector in action, you'll probably have to visit a pricey electronics boutique. Many big-box retailers don't carry front-projector models, and even fewer are willing to plug them in and show you the goods. My secret? I order units from stores that have generous return policies, try them out for a few days, and then send back the ones I don't like. (Shhh, don't tell anyone.)

The vast majority of projectors are business machines, says Stephen Baker, vice president of industry analysis for NPD Group. That makes good home-theater units harder to find and a little pricier than data projectors. But they're worth it. Just don't overdo it with the buttered popcorn—that stuff will kill you. ●



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Acer recommends Windows Vista® Ultimate.

April/May 2008



## Ferrari 1100 Unique Innovation



Ferrari 1100-5457

**\$1,999**

(LX.FR90U.071)

- AMD Turion™ 64 X2 Dual-Core Mobile Technology Gold Edition TL-66
- Genuine Windows Vista® Ultimate
- Microsoft® Office Professional 2007 (60-day trial)
- 4GB DDR2 667 SDRAM
- 250GB<sup>1</sup> hard drive
- Integrated slot-loaded Super-Multi drive (DVD+R, DVD-R, DVD-RAM)
- 5-in-1 card reader
- 12.1" WXGA (1280 x 800) TFT display, Acer CrystalBrite Technology
- ATI Radeon™ Xpress 1270 graphics
- Integrated Acer OrbiCam camera
- Dolby® Home Theater™
- 802.11n WLAN, gigabit LAN, V.92 modem, Bluetooth®, Bluetooth® VoIP phone
- Wireless optical mouse
- Fingerprint reader
- One-year limited warranty<sup>2</sup>

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

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## Acer® Aspire® 5520

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- Genuine Windows Vista® Home Premium
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Acer Aspire 5520-5908

**\$579**

AMD Athlon™ 64 X2 Dual-Core Processor for Notebooks TK-55  
Genuine Windows Vista® Home Premium  
(LX.AJ70X.027)

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Acer X263Wbi

- 25.5" wide-screen TFT LCD
- 1920 x 1200 maximum resolution
- 3000:1 dynamic contrast ratio
- 170° horizontal viewing angle
- 160° vertical viewing angle
- VGA, HDMI (HDCP) signal connectors
- 350 cd/m<sup>2</sup> brightness
- 5ms gray-to-gray response time
- Internal power adapter

**\$499**

(ET.GX3WP.001)



Acer AL2416WBsd

- 24" wide-screen TFT LCD
- 1920 x 1200 maximum resolution
- 1000:1 contrast ratio
- 160° horizontal viewing angle
- 160° vertical viewing angle
- VGA, DVI (HDCP) signal connectors
- 400 cd/m<sup>2</sup> brightness
- 5ms response time
- Internal power adapter

**\$379**

(ET.F16WP.B02)





## Acer® Aspire® 7520

- AMD Turion™ 64 X2 Dual-Core Mobile Technology
- Genuine Windows Vista® Home Premium
- 2GB DDR2 667 SDRAM
- 250GB<sup>1</sup> 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 warranty<sup>2</sup>



### 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

Easy-to-use software designed to automatically split the screen in up to four separate windows and make the most of available screen space.



### Acer CrystalEye

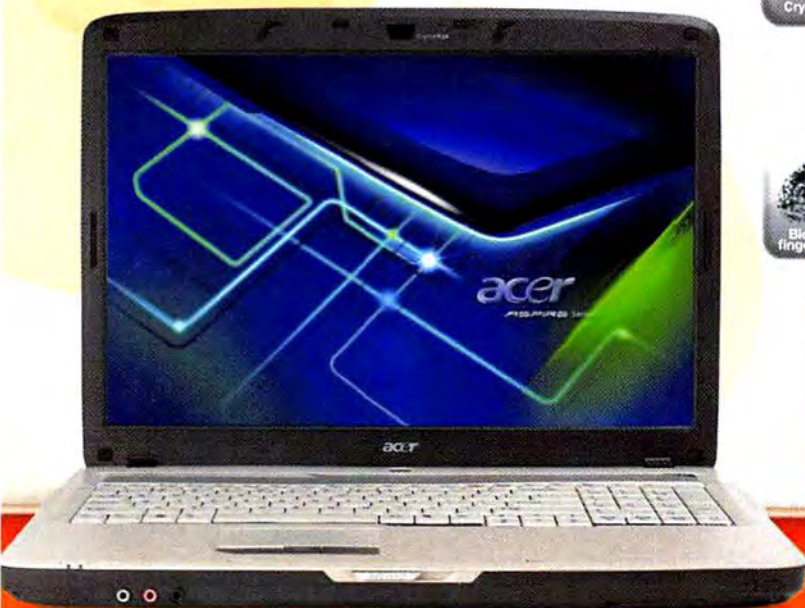
Enjoy all the potential of video conferencing with the integrated Acer CrystalEye, simple to use and compatible with internet-based video and voice communication services.



### 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.

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



Acer Aspire 7520-5823

**\$949**

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

acer



## Acer® LCDs



### Acer AL2216WbD

- 22" wide-screen TFT LCD
- 1680 x 1050 maximum resolution
- 700:1 contrast ratio
- 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 maximum 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 maximum 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 maximum 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.C17WP.A04)



### Acer AL1916 Cb

- 19" TFT LCD
- 1280 x 1024 maximum 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 maximum 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 maximum 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 maximum 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® Aspire® 7520

- AMD Turion™ 64 X2 Dual-Core Mobile Technology
- Genuine Windows Vista® Home Premium
- 2GB DDR2 667 SDRAM
- 160GB<sup>1</sup> 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®, gigabit LAN, V.92 modem, integrated webcam
- One-year limited warranty<sup>2</sup>



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

Found on select models, Acer QuickCharge technology enables the notebook's battery to be 80 percent fully charged in just one hour.



### Acer DASP

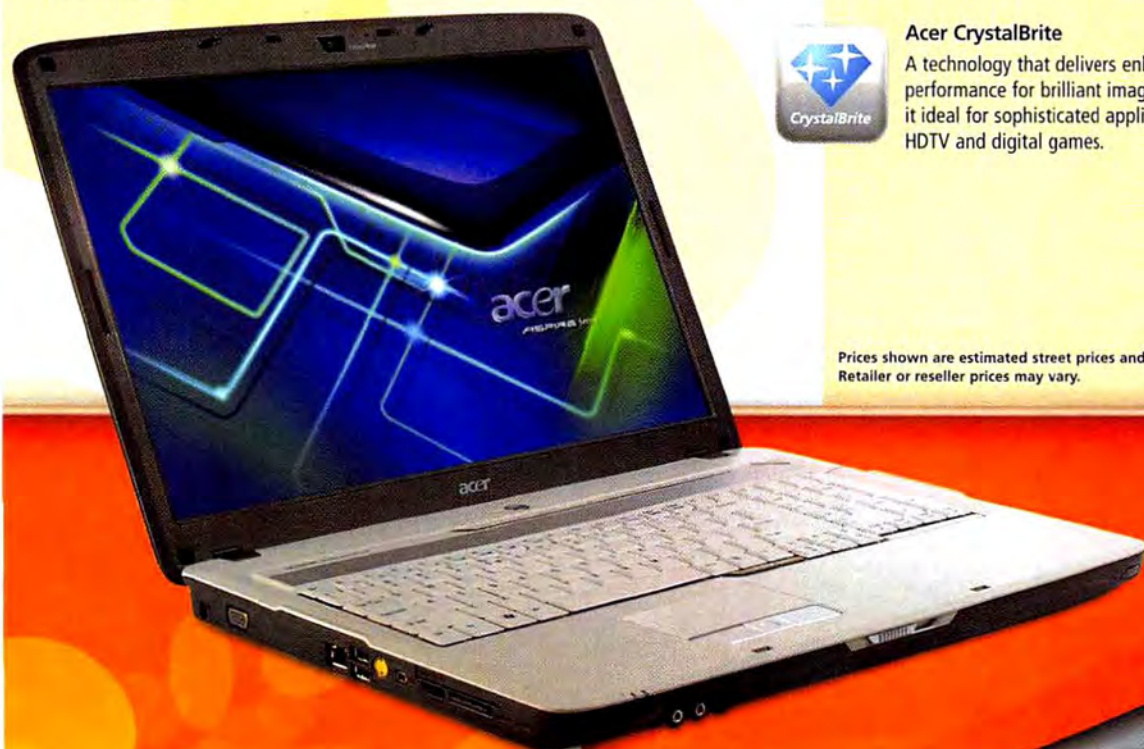
Disk Anti-Shock Protection is a technology that safeguards the hard disk against knocks and provides an unmatched level of protection.



### Acer CrystalBrite

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

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



**acer**



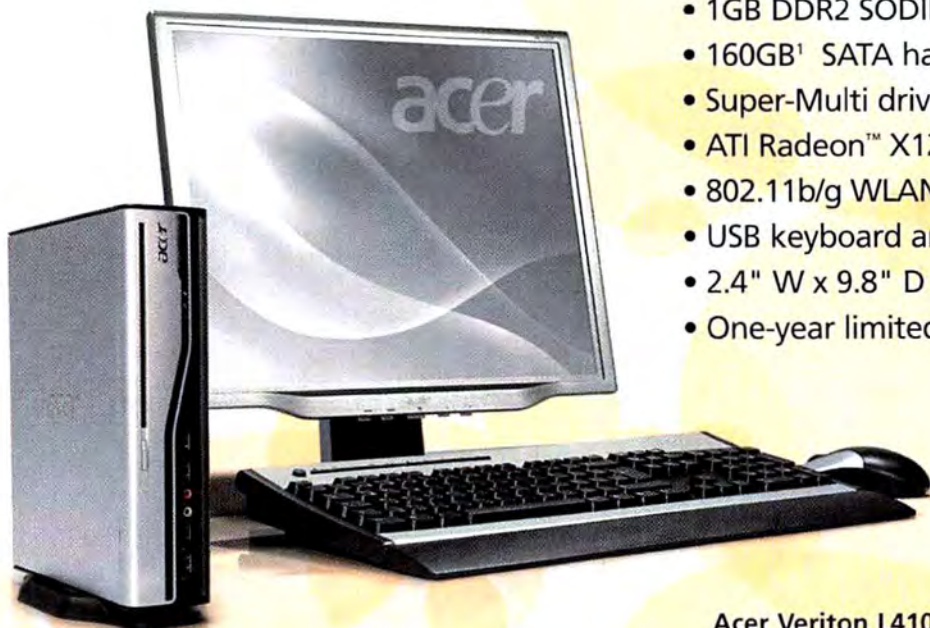


For the name of a reseller near you or further information,  
please call Acer or visit our Web site:


800-571-2237 - [acer.com/us](http://acer.com/us)

## Acer® Veriton® L410

Display sold separately.



- AMD Athlon™ X2 processor
- Genuine Windows Vista® Business or  
- Genuine Windows® XP Professional
- 1GB DDR2 SODIMM
- 160GB<sup>1</sup> SATA hard drive
- Super-Multi drive (DVD+R, DVD-R, DVD-RAM)
- ATI Radeon™ X1250 graphics solution
- 802.11b/g WLAN, gigabit LAN
- USB keyboard and mouse
- 2.4" W x 9.8" D x 7.9" H
- One-year limited warranty<sup>2</sup>

 *empowering technology*

### Acer Veriton L410

**\$499**

AMD Athlon™ X2 4200+ dual-core processor  
Genuine Windows Vista® Business  
Microsoft® Office Professional 2007 (60-day trial)<sup>3</sup> and  
CD with Genuine Windows® XP Professional<sup>4</sup>  
(VL410-UD4201C) or  
Genuine Windows® XP Professional  
Microsoft® Office Professional 2007 (60-day trial)  
(VL410-UD4201P)

### Acer AL1716 Fb

- 17" TFT LCD
- 1280 x 1024 maximum resolution
- 800:1 contrast ratio
- 160° horizontal viewing angle
- 160° vertical viewing angle
- VGA signal connector
- 300 cd/m<sup>2</sup> brightness
- 5ms response time
- Internal power adapter

**\$185**

(ET.B16RP.F02)



### Acer AL1516 Ab

- 15" TFT LCD
- 1024 x 768 maximum resolution
- 600:1 contrast ratio
- 130° horizontal viewing angle
- 100° vertical viewing angle
- VGA signal connector
- 250 cd/m<sup>2</sup> brightness
- 12ms response time
- Internal power adapter

**\$169**

(ET.1516B.000)







# Acer® Veriton® M410

Display sold separately.



- AMD Phenom™ X4 processor
- Genuine Windows® XP Professional
- Microsoft® Office Professional 2007 (60-day trial)
- Super-Multi drive (DVD+R, DVD-R, DVD-RAM)
- ATI Radeon™ X1200 graphics solution
- Gigabit LAN
- Keyboard and mouse
- One-year limited warranty<sup>2</sup>

## Acer Veriton M410

**\$799**

AMD Phenom™ X4 9600 quad-core processor  
Genuine Windows® XP Professional  
3GB DDR2 SDRAM and 320GB<sup>1</sup> SATA hard drive  
(VM410-UF9600P)

## Acer Veriton M410

**\$699**

AMD Phenom™ X4 9500 quad-core processor  
Genuine Windows® XP Professional  
2GB DDR2 SDRAM and 250GB<sup>1</sup> SATA hard drive  
(VM410-UF9500P)

## 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.

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

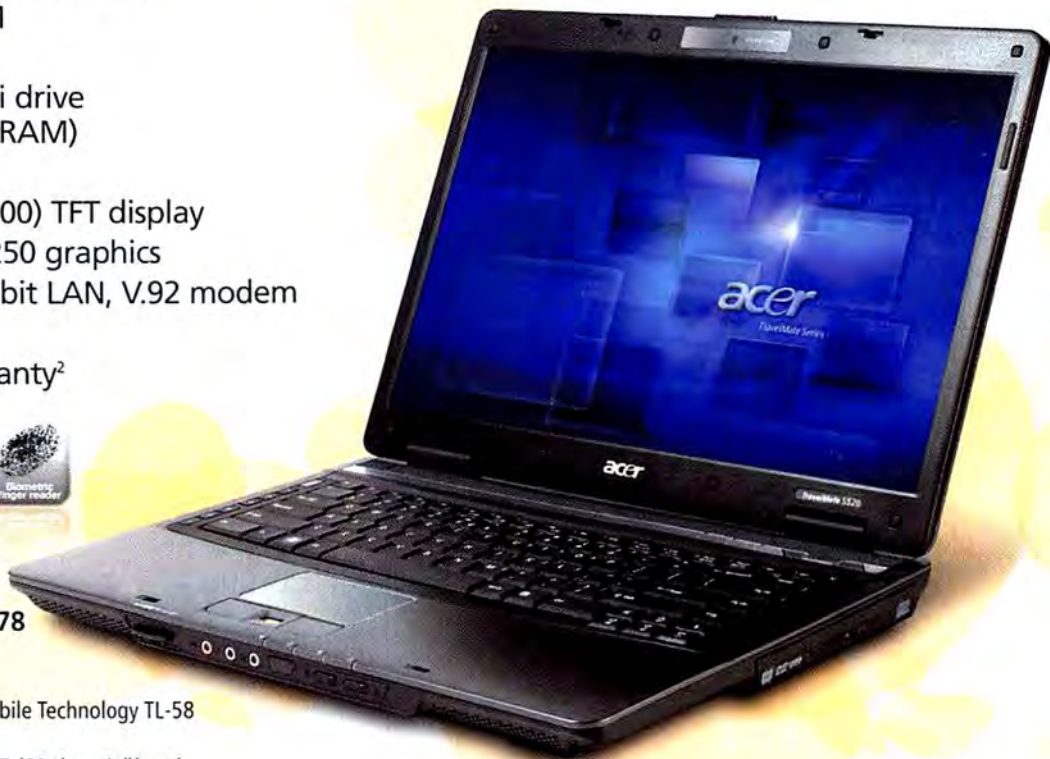
acer





## Acer® TravelMate® 5520

- AMD Turion™ 64 X2 Dual-Core Mobile Technology
- Genuine Windows Vista® Business
- 1GB DDR2 667 SDRAM
- 120GB<sup>1</sup> 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
- ATI Radeon™ Xpress 1250 graphics
- 802.11b/g WLAN, gigabit LAN, V.92 modem
- Fingerprint reader
- One-year limited warranty<sup>2</sup>



Acer TravelMate 5520-5678

**\$699**

AMD Turion™ 64 X2 Dual-Core Mobile Technology TL-58  
Genuine Windows Vista® Business  
Microsoft® Office Professional 2007 (60-day trial)<sup>3</sup> and  
CD with Genuine Windows® XP Professional<sup>4</sup>  
(LX.TKU02.003)

**e**mpowering technology

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

### Choose an Acer Notebook Service Upgrade for Added Protection

Quality is built into every notebook Acer makes, and each comes with a one-year standard limited warranty.<sup>2</sup> It includes hardware technical support via toll-free phone plus a concurrent International Traveler's Warranty for travel outside the U.S. and Canada. Extra protection is available with one of these upgrades:

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

**\$99**

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

It's a tough world out there, and accidents do happen—sticky spills, dangerous drops, nasty knocks—which is why you should consider the Total Protection Upgrade. It runs concurrently with the limited warranty<sup>2</sup> 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.

<sup>1</sup> 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.

<sup>2</sup> 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 76703.

<sup>3</sup> The 60-day trial of Microsoft® Office Professional 2007 is available with Genuine Windows Vista® Business only, not with Genuine Windows® XP Professional.

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

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# Consumer Watch

## How to Buy and Sell on eBay Scam-Free

BY BECKY WARING

ASK EBAY USERS about auction fraud and payment scams, and the replies will boil down to this: While eBay can be a great marketplace, both buyers and sellers need to beware.

The FBI's Internet Crime Complaint Center reports that more than half of all online fraud complaints relate to auctions. Fortunately, overall complaints have declined significantly in the last few years—perhaps because of better policing by eBay or more customer awareness of fraud.

The company has a free antifraud toolbar (downloadable at [find.pcworld.com/60047](http://find.pcworld.com/60047)) that is supposed to identify phishers, and an electronic device, the \$5 PayPal Security Key, which works with a PC to safeguard member IDs ([find.pcworld.com/60048](http://find.pcworld.com/60048)).

eBay no longer lets sellers leave negative feedback on buyers, thereby eliminating the fear of retaliation that had kept many buyers from reporting bad transactions.

Sellers who offer high-risk products such as computers, or who don't meet certain feedback standards, are now required to accept payments either through PayPal or a credit card. PayPal will even withhold payments to some sellers entirely until the buyer has left positive feedback or 21 days have passed without a claim.

Even with all those safeguards, however, risks remain. Most eBay fraud falls into one of three broad categories: account hijackings, in which phishers who gain access to legitimate accounts use them to defraud other sellers or buyers; selling of counterfeit or misrepresented goods; and payment fraud. Here are steps you can take to avoid being victimized.

Don't give up on the biggest auction site for fear of fraud. Just use it with prudence.



**Never reply to (or click on links within) e-mail purportedly from eBay:** This applies even when you are expecting it. Instead, log in to My eBay, where all genuine messages, auction activity, and your account information are directly accessible.

**Monitor your My eBay page regularly:** Report unauthorized transactions immediately to the eBay Security Center.

**Never click on user-created links within auction listings:** They can be phishing links that lead to phony eBay log-in pages.

**Don't let your browser automatically log you in:** Enter eBay and PayPal manually, and use different passwords for them. Try using the eBay Toolbar.

**Use antivirus and antispyware:** They can prevent infection by password-capturing Trojan horses and DNS hijacking.

**Leave feedback only after you are satisfied:** Once you leave feedback, you lose leverage with the other party.

**Buyers, vet sellers carefully:** Check feedback. Beware of short (one- or three-day) auctions, sellers or items that are overseas, and sellers who are suddenly moving goods they haven't sold before. Labels like PowerSeller or SquareTrade are not guarantees.

**Know your merchandise:** If you are not an expert on the items you're considering, recognizing fakes can be impossible. Google, or any other search engine, is your research friend.

**Ask questions:** Don't bid until you know the answers. Assume nothing. Implications are just that, not promises. Ask for detailed photos, condition reports, return policies, and shipping costs. And read every word in the listing.

**Always pay for your purchase with a credit card:** Doing so will let you ask for a chargeback (or charge reversal) on fakes.

**Don't use a bank debit card with PayPal:** The protections that >>

Even savvy sellers aren't immune to scams. Read contributor James A. Martin's account of how he narrowly escaped being ripped off by an eBay buyer at [find.pcworld.com/60057](http://find.pcworld.com/60057).





## SKEPTICAL SHOPPER YARDENA ARAR

you receive for credit cards are stronger and easier to use than PayPal's.

**Avoid sending a check:** If the seller does not accept payment through PayPal, think twice about bidding, especially for big-ticket items. Never use Western Union or other wire-transfer services.

**Consider conventional e-tailers:** Though auction scammers can advertise on shopping engines as well, you can get some peace of mind by doing business with a large company you trust. Shipping prices, which are often inflated on eBay, may be lower, too.

**Bid late:** Using auction-sniping services such as AuctionStealer.com to place your maximum bid in the last seconds of the auction can prevent you from being victimized by shill bidding.

**Accept second-chance offers only through My eBay:** Others may be scams.

**As a seller, don't allow returns:** Unless you make your living selling on eBay and can develop safeguards, permitting returns can set you up for trouble. Make your policy clear in your listings.

**Wait a day or two before shipping your merchandise:** PayPal may need to reverse the buyer's payment, or eBay might have to cancel the auction.

**Wait for the buyer's check to clear:** It's okay to accept checks and money orders for goods you are selling, but do this only if you are prepared to wait a full two weeks before shipping the item. Be sure to make that waiting period clear in your listings, too.

**Send items only to verified addresses:** PayPal's address-confirmation system provides reassurance that your item is going to the account owner, rather than to a hijacker.

Finally, if you are scammed, report it not only to eBay but also to the Federal Trade Commission, the Internet Crime Complaint Center, the Better Business Bureau, the National Consumers League, the U.S. Postal Service (if a product was sent or paid for via the USPS), and PayPal (if it was used). The more reports you make, the greater the likelihood that someone will do something to address your problem.

## Last-Minute Travel Planning Can Pay Off

I'M NOT THE world's most organized person, but I always thought it paid off to plan travel well in advance.

After a recent European trip booked on short notice, however, I've come to appreciate the virtues of last-minute planning. Among other things, I got the best deal of my life for air travel: a short-hop flight within Spain for \$18.24.

I also found airfares to and from San Francisco—purchased less than three weeks before I left—lower than any I'd researched months earlier. And on only three days' notice my traveling companion, Contributing Editor Grace Aquino, located great accommodations in a tourist destination (Barcelona) that was packed for a tech-industry trade show.

The sub-\$20 fare (found on Orbitz, for a Spanair flight from Malaga to Madrid) resulted from a database glitch, an Orbitz official said. But more and more people are making their travel plans later and later. Clem Bason, a travel expert at Hotwire—a site that specializes in last-minute travel deals—says the average hotel stay used to be booked about 20 days in advance; now, that figure has dropped to 14 days, and hotels attempt to offer their cheapest rates when most people are booking. Airlines no longer reward advance planners with the best fares, either: "They try to start filling that airplane as you get closer and closer to that trip," Bason explains.

### Be a Flexible Flyer

My trip taught me a few things about eleventh-hour planning. First and foremost, traveling during the off-season helped—probably a lot. Most of the flights were far from full. Similarly, you're more likely to find deals if you're willing to trav-

**A cornucopia of planning and booking sites frequently reward Web-savvy spur-of-the-moment travelers.**

el Monday through Thursday instead of during the popular weekend days.

Try all the angles. Travel-aggregation sites such as Farecast and Kayak, which search multiple booking flights (such as from the airlines, Expedia, Orbitz, and Travelocity), make viewing all your options easy. We originally investigated a multi-city fare for our flights from Barcelona to

Malaga and from Malaga to Madrid, but did better when we searched for separate one-way fares.

Hotwire, Priceline, and other sites can find deals if you are willing to book based on generic attributes as opposed to specific brands (a flight route but not a preferred carrier, for example). These

sites allow airlines and hotels to offer big discounts without making it obvious that they aren't at full capacity, Bason says.

Consider a rental apartment, even if you'll be there for only a few days. Grace found us a modern furnished apartment in a fashionable part of town through Craigslist's Barcelona site. Not only did we save money, but we also had separate bedrooms, free DSL, and a kitchen.

Craigslist has sites (in English) for all major European cities. Check vacation rental listings, many of which have photos, for nightly and weekly rates. Don't be shy about asking questions (does the building have an elevator, for instance).

I still believe in planning ahead when there's reason to believe that plane tickets or lodgings may be in short supply. But in the future I'll be a lot more willing to plan late: I'm pretty sure I won't see an \$18.24 plane ticket to anywhere if I buy six months in advance.





# A New Breed of Color Performance



26" (25.5" viewable)  
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• 20" model: VP2050b  
• 22" model: VP2250wb  
• 24" model: VP2450wb  
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Features vary by model. Stated contrast ratio is typical. Corporate names and trademarks stated herein are the property of their respective companies. Copyright © 2008 ViewSonic Corporation. All rights reserved. [13948-00E-03/08]

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## Consumer Watch

### ON YOUR SIDE

AMBER BOUMAN



**MY MADDOG MULTIMEDIA** graphics card came with a lifetime warranty, so when the card's fan malfunctioned a few months ago, I e-mailed the customer service department. Following some correspondence, I received a return merchandise authorization number and sent the card in for repair. After several weeks went by, I called tech support, and two different people said that they were sending the card back. Another few weeks later, however, they told me that they could not locate the card I'd sent, but that they would ship out a replacement. No one did, and my card was never returned. I've continued to call, to no avail. What else can I do?

*Stephen Petrovich, Burlington, Massachusetts*

**OYS Responds:** After we contacted Mad-Dog Multimedia, the company shipped Petrovich a replacement. He received this new card, but it malfunctioned after a week. After both Petrovich and *PC World* followed up about the second card, Petrovich eventually got a third board—which also malfunctioned.

Contacting MadDog has been difficult; the company frequently has taken several days to respond to our inquiries. No one at MadDog has been able to say what caused the cards to malfunction, or to explain why the company has not tried to troubleshoot these repeated failures.

We have since learned that MadDog has an unsatisfactory rating with the Better Business Bureau due to unanswered complaints; those complaints commonly involve refund or exchange issues.

At this writing we're still trying to help Petrovich. As we've often recommended, we advise that you check out unfamiliar companies' BBB records before buying.



### Magellan GPS Navigation Device Support Gets Lost

T.K. Tung of Irvine, California, was one of several readers who wrote us about problems with Magellan customer support. When Tung sent in his RoadMate 2200T GPS device for repairs, he was told the work would take about three weeks. Tung received different information in subsequent calls: First, he heard that the unit was ready to be shipped; then, that no further information was available; and later, that the device was being processed. After we contacted Magellan, the company sent Tung a replacement model. A Magellan spokesperson acknowledges that customers have experienced problems; he attributes the issues to the brand's transition from one support company to another. The spokesperson says customers can contact the company in two ways: by submitting a message at [www.magellangps.com/contact](http://www.magellangps.com/contact) (the company pledges to respond within 24 hours) or by e-mailing [customercare@magellangps.com](mailto:customercare@magellangps.com).

### D-Link Router Recall

Early adopters who purchased the first units of D-Link's DIR-855 dual-band draft-n routers online should contact the company to arrange for a replacement. The company says routers in the initial shipment do not perform as advertised because they have miswired cables. The affected routers have serial numbers ranging from F30A17C000019 to F30A17C000118. If you have one of these units, call D-Link customer service at 800/326-1688 to arrange for prepaid shipping of the defective product back to D-Link for replacement or repair.



## Class Action Suit Targets Vista Marketing

A FEDERAL JUDGE has granted class action status to a lawsuit accusing Microsoft of deceptive marketing in connection with the company's "Windows Vista Capable" logo program.

The suit, filed last year by Dianne Kelley and Kenneth Hanson, claims that many PCs stickered with the Windows Vista Capable logo can run only Vista Home Basic, which lacks the Aero graphical environment and other touted features of the new operating system.

The plaintiffs contend that Microsoft knowingly set low standards for the awarding of the logo in order to boost sales of PCs during the holiday season before Windows Vista shipped to consumers in late January 2007.

The request for class action status also sought to include PC buyers who



participated in the Express Upgrade program, which promised free or inexpensive Windows Vista upgrades for people who bought Windows XP PCs just before Vista's release. Program participants were damaged, the suit claimed, because those upgrades got them only Vista Home Basic, not the Aero-capable Business, Premium, or Ultimate versions of the OS.

Judge Marsha J. Pechman of the U.S. District Court in the Western District of Washington denied class action status to Express Upgrade participants because the original plaintiffs did not sign up for that program. But she indicated that she would reconsider if a program participant joined the suit.

Internal Microsoft e-mail unsealed by the judge showed that some company executives were concerned that not all Windows Vista Capable PCs would be able to run Aero; the messages also indicated that disagreements existed within the company over the logo program.

—Yardena Arar ●

# Cast Your Vote Today!

## You Could Win an iPod Touch.

The time has come once again to select the 100 best tech products available now. But why leave it up to a bunch of nerdy journalists to pick them all? Go to [find.pcworld.com/60361](http://find.pcworld.com/60361) and cast your vote today for all your favorite tech products—hardware, software, online services, or Web sites—and tell us why you think they belong in our Top 100. And just to thank you for taking our poll, we'll enter your name in a drawing to win an iPod Touch, courtesy of your friends at PC World! So act now—your tech magazine needs you! Votes must be entered by April 14.

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**of 2008**

This drawing is open to residents of the U.S. (excluding Puerto Rico) and Canada (excluding Quebec) who are at least 18 years of age. The contest begins at 12:00 a.m. Pacific Time (PT) on March 10, 2008, and ends at 11:59 p.m. PT on April 14, 2008. No fee or purchase of any kind is required to enter or win. Participants may enter the contest only by submitting a product vote, via the Top 100 Products Survey for PC World's 2008 "The 100 Best Products of the Year" story. The winner will receive an Apple iPod Touch with an approximate retail value of \$299. For complete official drawing rules, go to [find.pcworld.com/60359](http://find.pcworld.com/60359).





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  - Intel® Wireless WiFi Link 4965AGN
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- DVD±RW drive
- 14.1" WXGA display
- Windows Vista® Business Edition



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- 19" widescreen LCD with 1000:1 contrast ratio
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- Three-year limited parts, labor and backlight warranty

**\$209.99** CDW 1329948



HP SMART BUY

#### HP Docking Station

- Ethernet and modem pass-through
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- Two PS/2 ports for mouse and keyboard
- Serial and parallel connectors

**\$159.99** CDW 982618



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# Business Center

## 'Office Live' Services Aim to Boost Your Online Sales

BY RICHARD MOROCHOVE

IF YOU'RE LOOKING to establish a business presence online, Microsoft's improved Office Live Small Business ([smallbusiness.officelive.com](http://smallbusiness.officelive.com)) offers a fast and easy way to get started. Office Live concentrates on helping a small business find new online customers and sell more to its existing ones.

A few services are free, including enough storage (500MB) to host a decent-size Web site. But the cost of the many extras can quickly add up. You'll need to pull out your calculator to determine if Office Live is a good value for your business.

### New Pricing

Previously, Office Live came in three editions, each featuring a different bundle of subscription services. Now it's a single base package, called Office Live Small Business, with a number of optional add-ons that are for pay.

The free, ad-supported Office Live core service includes the aforementioned Web hosting with 500MB of storage, site design tools, e-mail (up to 100 accounts with 5GB of storage each), a subdomain (say, 'repairs.yourcompany.com' if your business does repairs as well as sales), and 50MB of storage for business documents, contact lists, and other files that up to five users can share. The ads that pay for the service

Web-site design, e-mail marketing, and an online shopping cart head a list of à la carte Office Live services from Microsoft.

appear to you and to others who access the business account, but not to the public visiting your Web site.

You can add many other services, such as a custom domain (free for the first year, then \$15 per year), extra Web-site and business storage (\$5 per month and up), ad-free e-mail (\$20 per year), support for more (beyond the first five) business-application users

ing service, to help promote your site.

Most businesses will likely prefer this menu-based pricing to the former subscription bundles, since you pay only for those options that you believe offer value to your organization.

Among the base services, the most improved is Web-site design. Most small businesses will use the standard design templates to create a site quickly and

easily. The service also offers advanced design options such as CSS (Cascading Style Sheets) and page layout, but those tools are probably too complicated for the average nontechie. Consider contacting a professional Web designer if you desire a more elaborate, custom site look.

### Share Info With Others

It's easy to share contacts—customers and prospects—with colleagues you add as users to your Office Live service. You can enter the contact details directly online or synchronize them with Outlook contacts and e-mail already on your PC.

Similarly, you can share important documents, such as customer contracts, with other Office Live users by uploading the files from your PC, and you can add other shared apps, available at extra cost from third-party vendors at the Office Live Marketplace. >>



PEOPLE NEW TO Web-site design will appreciate using the templates in Office Live to build a professional-looking business site.

(ten users for \$15 per month), and an e-commerce-store app that can list products on both your own site and eBay (\$40 per month). An e-mail list service in free beta test lets you send up to 200 messages, such as electronic newsletters, to your customers. You can also sign up for AdManager, a pay-per-click (PPC) search engine advertis-

For more information on hosted services and online applications designed for small businesses, visit the 'Software and Services' area at PCW's online Business Center ([find.pcworld.com/60329](http://find.pcworld.com/60329)).



If your business sells products, the new Store Manager, which offers a shopping cart, could be the most valuable of the new services. But its setup, while easy, can be time-consuming if you offer many products.

Besides the \$40 monthly fee for Store Manager, you'll also incur PayPal charges for accepting electronic payments, including major credit cards. You face no extra charges if you accept payment by check, money order, or cash, but those forms of payment aren't as convenient for online shoppers and will require extra work for your business to track. eBay fees also apply if you list your products on that auction site.

## Is It Right for Your Business?

The appropriateness of Office Live for your business depends on your size, and on your mix of online and offline sales. You can purchase the equivalent of most Office Live services from almost any good Web hosting service for businesses. The key exception is AdManager, which delivers one-stop shopping for search engine advertising.

While AdManager sounds great, it places pay-per-click (PPC) advertising only on a few, relatively minor search engines, including those run by Microsoft and Ask. Those engines account for less than 15 percent of U.S. search queries (according to the Web research firm comScore). The leading PPC ad service, Google AdWords, reaches roughly four times as many U.S. search engine queries as AdManager.

Office Live certainly delivers a valuable bundle of freebies that can help a small business—even a new one with little cash to spare—establish its first Web site. The extras can become expensive, though. Compare the total cost of those you require with the cost of similar services from a high-quality business Web host to determine if Office Live will be cost-effective for you.

Office Live Small Business is currently available in the United States and the United Kingdom, and is now in beta-testing in France, Germany, and Japan.

## NET WORK RICHARD MOROCHOVE



### Cartfly Well Suited to Small Web Retailers

MOST E-COMMERCE businesses begin by setting up a storefront on a Web site, and then devel-

op a strategy for driving visitors to that site. But a new online service called Cartfly encourages businesses to create virtual store entrances in places where visitors already hang out, by adding code to blogs and popular social networking destinations such as Blogger and MySpace.

If you have collected a significant number of "friends" at such sites, Cartfly ([www.cartfly.com](http://www.cartfly.com)) can help you tap into their buying power.

Additionally, Cartfly costs nothing to set up—your only investment is some of your time—and it should provide an interesting alternative to eBay for small online sellers.

**Cartfly is a Web service that lets you create virtual doorways to your online store on a wide variety of Web sites.**



## Simple Setup

Setting up a Cartfly store is fairly straightforward, but it could be even easier. Midway through registration, the service asks for a 400-pixel store logo, and it doesn't allow you to proceed without one. A better process would let you complete registration and add a logo later.

Once you've set up your store, you add merchandise manually, which makes Cartfly most suitable for stores selling no more than a few dozen different items. You can, however, associate options with the items you're selling—for example, options for T-shirts in different sizes.

You can also tinker with the look of your template-based store to a limited extent, such as by changing colors.

What distinguishes Cartfly from most entry-level shopping-cart services is how easily you can use it to put a miniature version of your storefront at other popular sites merely by copying and pasting a few lines of code. Cartfly says it has successfully tested the code on such social

networking and blogging sites as Blogger, Friendster, Hi5, MySpace, PerfSpot, Piczo, Tagworld, TypePad, and Xanga.

## Cartfly Costs

Cartfly provides a relatively easy-to-use introduction to e-commerce. Rather than

imposing a large up-front setup fee, the service charges 3 percent of every sale made at a store using Cartfly. The company also recommends that merchants accept payment via PayPal, which charges its usual fees. The combined

Cartfly and PayPal fees probably won't seem excessive to small stores with monthly sales of \$1000 or so. If your sales increase to more than \$20,000 per month, you're better off using a more traditional shopping-cart service and a merchant credit-card account that together take a smaller slice of every sale.

Cartfly's reporting capabilities are limited: It won't track inventory, nor will it integrate with a small-business accounting app such as QuickBooks. And while security for a store's administrative functions is effective, Cartfly pops up a non-secure Web browser window when you check for online orders, which means someone using a Web sniffer may be able to read the unprotected order information.

Cartfly will most help businesses that already have amassed a substantial number of online connections—friends or fans who are willing to add the store's widget code to their blogs, MySpace profiles, or Web sites. And because the service's charges are a percentage of sales, you don't risk losing a large investment in shopping-cart software if your online sales fail to meet your rosy projections.





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**8:07am**  
Set call access to  
available.

**10:03am**  
Forwarded client calls  
to job site.

**2:14pm**  
Forwarded office calls  
to mobile phone.

**3:36pm**  
Checked call log online  
at client conference.

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## PC Postage Saves Time, Money, and Headaches

SMALL BUSINESSES TEND to do a lot of mailing and shipping. And "PC postage" services are a huge advance over the hassle of standing in line at the post office or using a postage meter.

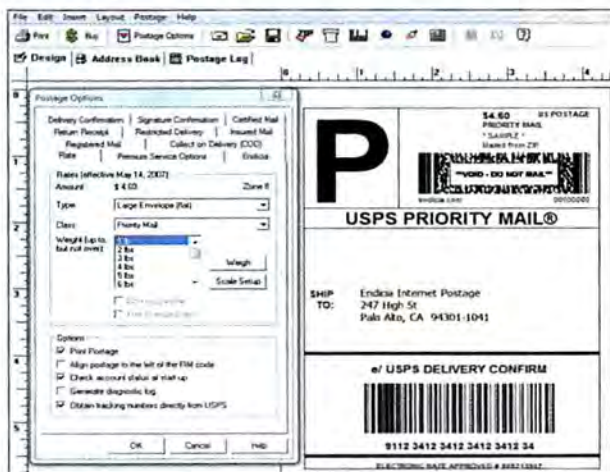
Both Endicia.com and Stamps.com let you prepare and print stamped labels and envelopes on your computer; both also offer a host of time-saving features such as integration with your contacts database and real-time address verification, e-mail shipping and receipt notifications for both you and your recipient, scale integration, electronic generation of customs forms, pickup scheduling, supply ordering, and usage reports. Each provides deeply discounted third-party insurance and free delivery confirmation for Priority Mail.

I tried out both products, and found the Stamps.com Pro software much slicker and more intuitive than Endicia's DAZZle. With DAZZle, you must choose various options from menus

and dialog boxes for every label, while Stamps.com Pro puts all key information in one window. Select a contact from your address book, check off a few boxes, click to weigh your item with the integrated scale (a scale for up to 5 pounds comes free with sign-up), and you're done.

I also liked the Stamps.com Pro Cost Code feature, which simplifies client billing and departmental accounting. On the other hand, Endicia's DAZZle shows a useful full-size preview of your envelope or label in the main window.

Both Endicia and Stamps.com can generate most classes of postage,



**STAMPS.COM PRO OFFERS** quick one-screen labeling and integration with Word and Outlook for mail merges and printing.

including standard first-class mail.

Even with their monthly fees (Endicia starts at \$10, and Stamps.com at \$16), you'll likely save real money if your business does a lot of snail-mailing.

—Becky Waring

## Buffalo Drive Takes the Sting Out of Backing Up Data

THE 1-TERABYTE Buffalo LinkStation Pro Duo is a capable network-attached storage device (or NAS) for small offices, and it comes with very good software and configuration tools inherited from its larger-capacity siblings in the LinkStation line.

The Duo sports a gigabit ethernet interface and RAID 0 or 1 support (for either best performance or redundancy). In my own usability tests (not lab tests), performance was on a par with that of other dual-disk NAS drives in this class, and the Duo has jumbo frame ethernet support for faster network file transfers. Regrettably, it has only one USB port (on the back) for copying or expansion; most rivals have two. Also unlike some peers, the Duo does not have hot-swappable drives.

Installing the Buffalo device on my network was easy. The installer puts a utility in your taskbar that can call up



your network shares or access the Web configuration tool. Network shares can also be mapped to drive letters for automatic mounting. The Web configuration tool was comprehensive, easy to navigate, and more responsive than others. When setting up a shared area,

**THE SUB-\$500 BUFFALO LinkStation Pro Duo** backs up and moves large files easily.

the utility presented a detailed list of users and groups to which I could grant read and/or write access.

The Duo also has Windows Active Directory support, which means it can automatically take user and group names and passwords from your central directory. It supports UPS connectivity, too, so you can set it to shut down safely in the event of a power failure. And the excellent Memeo AutoBackup package is included for backing up local drives to the Duo over the network.

—Becky Waring



**LinkStation Pro Duo | Buffalo**  
Not best-in-class, but performs well; the software is solid, too.  
List: \$449

[find.pcworld.com/60185](http://find.pcworld.com/60185)



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# Are Your Employees Caught in the Web?

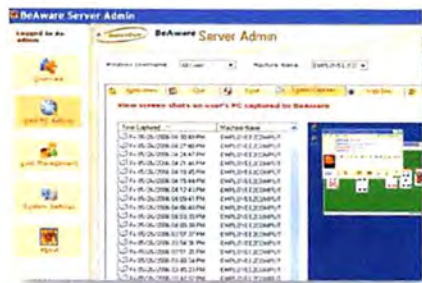
[Find out by monitoring all PC and Internet activity]

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BeAware helps identify problem areas, offenders and frequency so you can coach employees, reduce company risk and help teams reclaim lost productivity.



BeAware allows you to view activity by user, department or enterprise.

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***"BeAware showed me exactly what my team was doing so I could coach & motivate them toward our goals."***

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# Security Alert

## Sites' Personal Questions May Pose Security Risk

PAUL F. ROBERTS

WHAT DID YOUR maternal grandfather do for a living? What was your high school mascot's name? Your first pet's name?

If you have an online account at a retailer like Amazon.com, you've probably run into such questions when opening an account or when trying to recover one of the dozens of passwords you juggle in your head. Online businesses everywhere have embraced the technique, which is called knowledge-based authentication.

Theoretically, the answers to these questions are so personal and obscure that knowing them proves you are you. Experts say, however, that the technology could end up helping hackers compromise your online accounts more easily.

Knowledge-based authentication doesn't replace user names and passwords; it's an extra layer of security on top of such schemes, since hackers who stumble across your log-in credentials won't easily figure out the name of your high-school sweetheart. Collecting log-in information and answers to secret questions from your computer requires keylogging software, making it harder for malicious hackers to triumph.

### Phishers Get Close to Home

Jon Fisher, whose firm, Bharosa (acquired by Oracle last year), develops questions for companies to use, says knowledge-based authentication adds a step for account access. "Phishing both those pieces of information is fairly sophisticated."

But scammers have adapted, adding secret questions to their decoy pages, says Lance James, CTO of fraud research

company Secure Science. Bank phishing sites may include their own fraudulent drop-down lists that capture people's answers, which bad guys can then use to hack real accounts.

Even when hackers don't resort to subterfuge, these nuggets of information can be easier targets than passwords. Mark

Burnett, author of *Hacking the Code*, has observed that seemingly random questions such as "What was the make of your first car?" have a narrow list of answers—in the case of autos, 38 major makers—that hackers can use to try to break into an account, versus a vast multitude of password combinations.

### Stump the Hacker

Companies have realized the approach's weakness, and most have broadened their lists of questions. But devising questions that are general enough for everyone to answer yet specific enough to be easy to recall is a formidable task. Most people can name a favorite movie, but their answer to that question might change over time.

So getting the answer right requires recalling such details as when you answered the question—which increases your chance of making an error. On the other hand, factoids such as the city of your birth, your mother's maiden name, or even your social security number may be public information.

"You need a question [that is] discernible if a million people see it for the first time," says Fisher. But some questions have become esoteric, he believes. "I see it as a situation in which banks have sacrificed some usability for better security."

"[Questions are] definitely getting weird," says James. "I just had one that was 'What was the name of your first pet?' but I had two dogs growing up, so I don't know." »

Asking about your mother's home town is supposed to help legitimate sites protect your online accounts—but experts say hackers know more about you than you might think.

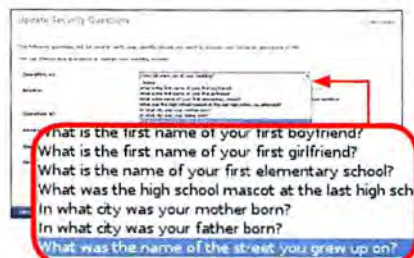


**PayPal has some advice for people using Apple's default browser, Safari: Stop. The warning comes because Safari (which is the only iPhone browser) has no phishing filter. See [find.pcworld.com/60183](http://find.pcworld.com/60183).**



Meanwhile, online social networks provide a wealth of information about individuals—including dates of birth, addresses, education histories, and personal tastes in books, movies, and the like—that crooks could tap.

Amir Orad of antifraud company Actimize doesn't expect that people will cease sharing personal information any time soon. "I think this trend is unstoppable. You're not going to change the behavior of 200 million Facebook and



**WHEN YOU SET up questions to safeguard access to your account, choose them wisely.**

MySpace users." Orad thinks that banks and merchants must instead develop systems to detect fraudulent practices behind the scenes, much as credit companies today have devised ways to spot suspect purchases and notify customers.

## Keep It Simple, Not Stupid

Simple steps can go a long way toward thwarting authentication fraud. Orad recommends that people not resort to using any information about their personal life that might be available online. "Anything you say can and will be used against you," he warns.

Also, you should steer online transactions toward businesses that offer more than just passwords and secret questions as protection. For example, PayPal offers a device that generates one-time passwords that you can use for secure log-ins (see page 41), and Bank of America recently introduced a program that sends required PINs to customers' mobile phones via SMS.

*Paul F. Roberts is a freelance writer and senior security analyst at The 451 Group, an independent technology industry analysis company.*

## BUGS & FIXES

STUART J. JOHNSTON



### Vista Service Pack 1: 573 Fixes in Limbo

SERVICE PACK 1 for Windows Vista is (almost) ready for prime time. SP1 contains a

whopping 573 bug fixes and patches that have accumulated since Vista first shipped in early 2007, plus some performance improvements. I advise you to get it—but only after the wrinkles are ironed out.

Microsoft says a few programs, including The New York Times Reader and Zone Alarm 7.1 security suite, can't start or work properly with Vista SP1. Most affected companies now have updates to fix the problem (see [find.pcworld.com/60165](http://find.pcworld.com/60165)).

However, an update you have to install before installing SP1 has a glitch in it that causes some PCs to restart endlessly. Microsoft says the problem affects only "a small number" of the more than 100 million Vista users. At press time, the update had been suspended (see [find.pcworld.com/60166](http://find.pcworld.com/60166)).

The faulty update, numbered 937287, was part of Microsoft's mid-February Patch Tuesday downloads. If you have automatic updating turned on and your Vista PC is behaving normally, the update likely installed just fine on your machine.

If it didn't, you'd know by now. Microsoft offers help at 866/727-2338 to users whose PCs react badly; a fix at Windows Update ([find.pcworld.com/60172](http://find.pcworld.com/60172)) should be available by the time you read this.

### Office, IE in the Fix Mix

As part of its February patch extravaganza, Microsoft also released six security-related patches to fix critical bugs in Win-

**Plus: Patch IE, update Reader and Skype, and crush Yahoo Jukebox bugs.**

dows, Internet Explorer, and Office. Three of the problems affect Windows Vista, either directly or through holes in IE (see [find.pcworld.com/60167](http://find.pcworld.com/60167)).

### Avert Adobe Acrobat Attacks

If you have Adobe Acrobat or Reader on your PC (and who doesn't?), you need to patch a half-dozen "critical" holes recently discovered in both products. Opening a rigged PDF (Portable Document Format)

file is the only prerequisite for being attacked. Adobe warns that versions 8.1.1 and earlier of both Acrobat and Reader are at risk for the problem. Security firm Secunia rates the flaws as "highly critical," which is its second highest severity ranking. No

attacks have occurred yet, but gremlins have already posted proof-of-concept exploits on the Web. Get the 8.1.2 updates at [find.pcworld.com/60169](http://find.pcworld.com/60169).

### Skype Video Bug

Skype has patched a hole in its Windows client software. The exploit uses an IE feature to display HTML pages, but sets the browser's security at the lowest level, leaving you vulnerable. Click a booby-trapped video file and the evildoers could hijack your PC. A working exploit exists; the fix is at [find.pcworld.com/60171](http://find.pcworld.com/60171).

### Yahoo Jukebox Jiggers

Yahoo has updated its jukebox software to patch multiple security holes in the free player. Yahoo Music Jukebox versions prior to 2.2.2.058 need the fix. A successful attack could let bad guys take over your PC, Yahoo says. Proof-of-concept exploit code has appeared online. Head to [find.pcworld.com/60170](http://find.pcworld.com/60170) for more information and for the update.



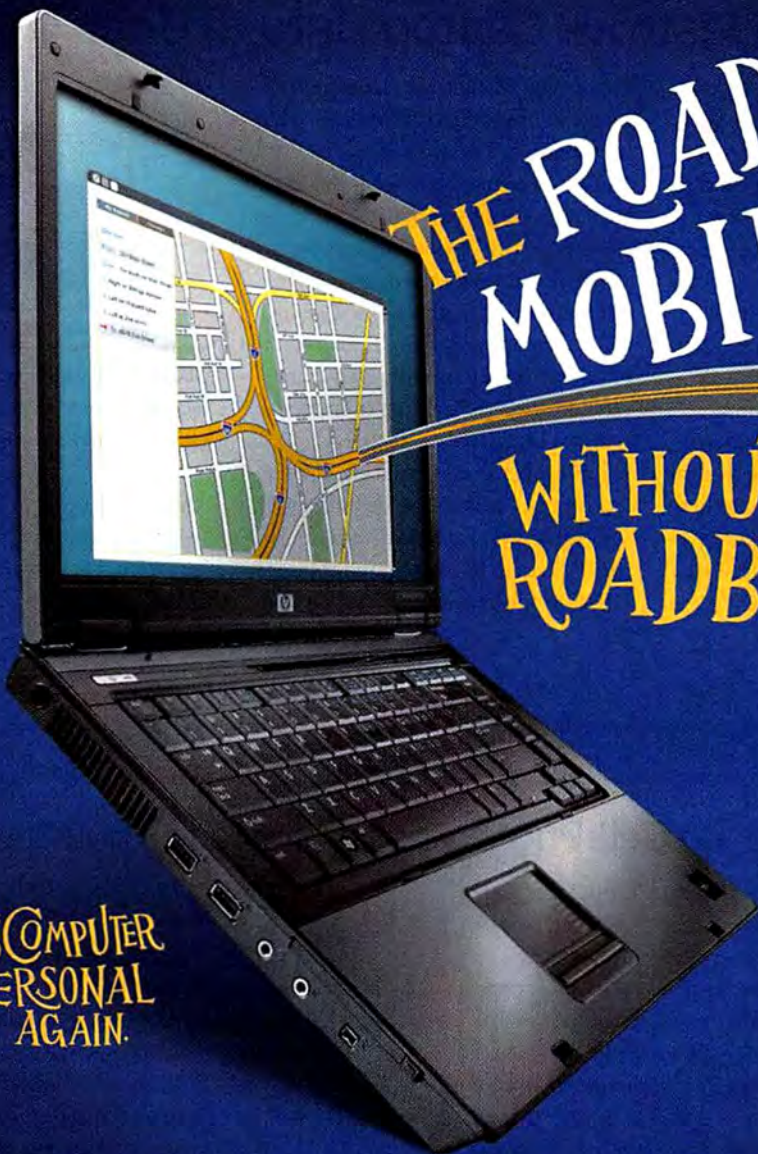
### BUGGED?

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## New Service Destroys Laptop Data to Beat Thieves

WORRIED ABOUT DATA security on your mobile devices? What if your sensitive information could self-destruct before being exposed to prying eyes? A new service will wipe data from your laptop's hard drive if the machine strays.

Typically, people who need to protect sensitive information on a notebook computer use encryption software. But Virtuuty's BackStopp arrives at a time when researchers have raised some doubts about how secure drive encryption really is, by describing how to steal the encryption keys that products such as Windows Vista's BitLocker rely on (for details, see [find.pcworld.com/60187](http://find.pcworld.com/60187)).

The hosted BackStopp service ([find](http://find.pcworld.com/60189).

[pcworld.com/60189](http://find.pcworld.com/60189)) tracks laptops via the Internet, or locally via Wi-Fi and cellular service. If a device's owner reports that it has been stolen—or if the laptop has moved from a designated space—the service will respond by erasing the sensitive information from the drive.

If a protected laptop or its Wi-Fi or cellular connections have been switched off, BackStopp uses radio-frequency identification (RFID) tags to trigger the removal of sensitive data.

Following the erasure, a log of all deletions goes back to the service center.

Virtuuty says that BackStopp can also use a Webcam to photograph thieves.

BackStopp does not reveal to a thief



Last known location: Star Coffee, Albion Street, London

**BACKSTOPP CAN take photos of a data thief via Webcam and upload them to its site with other information, as in this posed mock-up.**

that it is in operation until after it has wiped the sensitive data, making the protection it provides harder to evade.

—John E. Dunn

## PRIVACY WATCH ERIK LARKIN



## First Location-Based Cell Phone Ads Get Privacy Thumbs-Up



UPCOMING ADS routed to CBS Mobile via a company called Loopt will know where you stand—literally. And Loopt will modify those ads based on your physical location.

The privacy implications of using location-based services—which are just now appearing in the United States—are huge, but the companies seem to have made most of the right choices for privacy.

Here's how it will work, says Cyriac Roeding, executive vice president at CBS Mobile: First, you must opt in (sort of) by enabling the use of location-based services for purposes other than just emergency 911 on your phone. What such services will be called and the steps for allowing them will vary by handset and provider, but the setting will be general and won't mention ads.

If your carrier and you agree to use Loopt, the service will obtain location data from the phone, using cell tower triangulation instead of GPS. At first, only Sprint and Boost Mobile customers will get the service, via CBS Sports Mobile and CBS Mobile sites viewed in their phone's browser. Loopt substitutes a location-based advertisement (for a nearby eatery, say) in place of the potentially less-relevant ad that would otherwise appear on those pages.

Now for the privacy measures: Roeding says that the Loopt/CBS Mobile process won't associate phone location data with the user (by sending a phone number or account name with the location, for

**You won't see them unless you opt in, and advertisers won't obtain your personal data.**

instance) and that the service won't save anyone's location data.

These are good moves from a privacy standpoint, as is the decision to substitute only for ads that would already appear. If I have to see an ad anyway, it may as well be one that might turn out to be relevant. So I agree with Ari Schwartz, deputy director for the Center for Democracy and Technology, who says that—though they could do better—the companies are, for the most part, approaching this correctly. Ideally, a phone user should get an indicator, such as a small icon on the phone, to alert them when location data is being used to deliver an ad. And the user should have the option to change that setting on the fly, Schwartz says.

But it certainly could be worse. By coincidence, I received an AT&T ServiceGram while I was researching this column. The letter said that AT&T wanted to share my data on the services I purchase and how I use them (but not my phone number, name, or address) among AT&T companies for marketing purposes. And the kicker: Unless I explicitly said no, by visiting a Web site or by mailing a reply back, AT&T would have its way with my data.

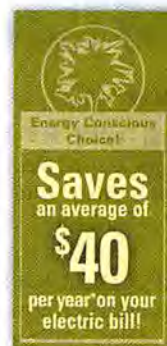
An opt-out (versus opt-in) policy is a lousy way to gain approval for using private data, and frankly it ticks me off. The risk implicit in location-based services is that a company will bring that cavalier, consumer-unfriendly attitude to something as deeply sensitive as where we are each moment of the day. ●



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APC power protection products are available at:



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

- Heather Clancy  
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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.



# *Software Bots:* Keeping your guard up against one of the Internet's worst threats

## Clear and Present Danger

**T**HEY'RE SMALL PROGRAMS ORIGINALLY conceived to be helpful—but like other aspects of Internet technology, they've become better known for more sinister uses.

"Bots" are software robots that automate tasks on a computer. Hundreds of thousands of PC users—or maybe millions, depending on which estimate you're relying on—have unknowingly been infected by such code.

Once infected, they're invisibly linked to "botnets" that typically are mobilized to send out email spam, participate in Denial of Service attacks against web servers, or even harvest an individual user's personal information like credit card numbers and account passwords.

For example, last year the Storm worm consisted of possibly millions of bots that were used for spam, pump and dump schemes, and other illegal activities.

"Modern-day bots have combined remote access tools or trojans with automation," says Randy Abrams, Director of Technical Education with ESET. "So what you have is a program capable of doing anything you can do on your computer, including going to websites, copying and pasting text that you type into something, sending email and more."

With a botnet, says Abrams, "an attacker can control hundreds of thousands of computers through the use of these bots."

Computers can be infected in a variety of ways, says Abrams. A common ploy is a fake electronic greeting card that prompts users to click on a hyperlink and unknowingly execute the action to deploy a bot on their system. Bots can be picked up in "drive-by downloads" when a user visits a website that has been compromised.

Most often these bots are "rented out" to generate millions of spam messages, such as hawking the stock of obscure companies in hopes of pumping up the selling price. Other tactics include mobilizing thousands of computers in a Denial of Service assault aimed at swamping a web server in hopes of extorting money from the website owner.

Without the appropriate tools to detect bots, users may not know they're infected. Perhaps one of the "good guys" who track botnets will find your credit card on a server where a bot has stored it and will send you a notification. More likely is that you'll notice your PC is running sluggishly. In some cases, Internet Services Providers will detect unusual traffic generated by bots and track it back to an individual's computer.

"It's important to have high-quality security software that can scan for these programs and eradicate them," says Abrams. Strong antivirus software can prevent infections, and firewalls can block unauthorized outbound communications or alert the user of the activity.

### Smart Security

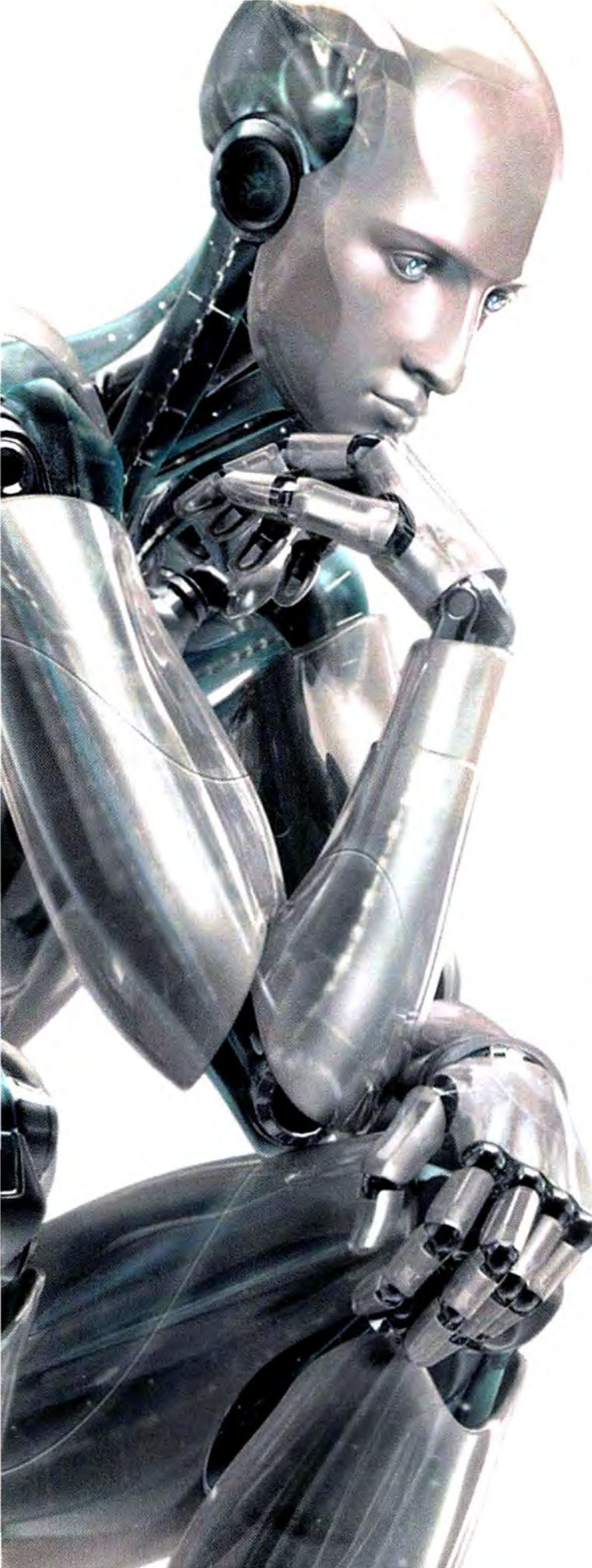
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# Reviews & Rankings

## Small MP3 Players Get Bigger Flash Storage

**PCW Test Center**

POWER USERS HAVE often shunned flash-based portable players in favor of hard-disk-based models with larger capacities, but that may be set to change. Late last year, Creative introduced a 32GB flash-based player—the Zen, our Best Buy. Then, around the time that Apple updated its flash-based iPod Touch line with a \$499, 32GB unit as well as new apps from the iPhone (Mail, Maps, Stocks, Weather, and Notes), Creative dropped the Zen's price from \$350 to a competitive \$300. Apple's software update (\$20 for existing owners) let users rent movies from the iTunes Store, too. A scheduled June update should also give the iPod Touch access to a world of third-party apps.

For its part, memory maker SanDisk introduced its \$350, 32GB Sansa View, which takes eighth place in our flash player rankings. The Sansa View's vibrant 2.4-inch screen and superior sound are offset, unfortunately, by the somewhat high price and quirky menus.

Other notable flash players tested this month—and missing our Top 5—include



New flash-based players from Apple, Creative, and others now finally come with capacities to rival larger hard-disk-based devices.

the \$249, 8GB Samsung YP-P2 (it scored too low despite its gorgeous 3-inch touch screen) and iRiver's \$150, 8GB E100 player. We had expected big things from the E100 (iRiver's excellent, \$240, 8GB Clix Gen 2 is fifth on our chart); but though the new iRiver player handles lots of media types, its playback quality and usability are mediocre.



### APPLE'S IPOD TOUCH

(left) continues to add more apps while Creative's new Zen packs in hardware features.

### Creative Zen

Creative's superslim Zen has an attractive 2.5-inch color display, an FM tuner, a built-in microphone, robust video- and photo-viewing capabilities, and the ability to import contact manage-

ment information—and oh, yeah, it plays music.

The player is about the size and shape of a standard-issue business-card case and comes in capacities ranging from 2GB (\$80) to 32GB (\$300). All models have a built-in SD Card slot for an instant storage upgrade.

Though the Zen's tested signal-to-noise ratio of 77 dB fell well short of the 93 dB that SanDisk's Sansa View achieved, it's still quite good (the higher the number, the cleaner and more hiss-free the signal). The Zen's custom five-band equalizer also helped to bring out the best in a variety of high-bit-rate MP3s.

This jack-of-all-trades can handle most audio formats, too, including unprotected iTunes AAC files. It can't play FLAC or Ogg Vorbis codecs, though.

For video, the Zen works with MPEG-4, DivX4, DivX5, XviD, and WMV files and comes with the simple Video Converter software.

A standard mini-USB jack lets you sync and power the device, which has a 30-hour play time for audio files (5 hours for video).





63 CHUMBY



68 CREATIVE AURVANA X-FI



78 OLYMPUS E3



80 APPLE TV

Navigation is a breeze: A directional pad and four buttons let you quickly drill down through the menus.

The Zen may lack the Wi-Fi capabilities of the iPod Touch, Microsoft Zune, and SanDisk Sansa Connect, but it's a great choice for gadget-teers and audiophiles alike.

### Creative Zen V Plus

Available in 2GB (\$70) and 4GB (\$90) capacities, this compact but aging player's 1.5-inch OLED (organic light-emitting diode) screen displays photos with great clarity (indoors at least).

The V Plus also plays video and has an FM radio tuner. It supports PlaysForSure subscription content and the standard range of MP3, WMA, and Audible files. With a five-band equalizer for tweaking audio, the Zen V Plus also sounded great in listening tests playing a variety of high-bit-rate MP3s.

Though the device includes Creative's Video Converter software, watching anything

## PC WORLD TOP 5 FLASH-BASED MP3 PLAYERS

MODEL	PCW Rating	Performance	Features
1 <b>BEST BUY</b> Creative Zen \$300 <b>NEW</b> <a href="http://find.pcworld.com/60161">find.pcworld.com/60161</a>	<b>83</b> VERY GOOD	<ul style="list-style-type: none"> <li>Overall audio quality: Very Good</li> <li>Signal-to-noise ratio: 77 dB</li> <li>Overall design: Superior</li> </ul>	<ul style="list-style-type: none"> <li>32GB (upgradable via SD Card)</li> <li>2.5-inch (320 by 240) color screen</li> <li>FM, voice recording, photo, video</li> <li>Weight: 2.1 ounces</li> </ul>
BOTTOM LINE: Gadget lover's player lacks Wi-Fi but has lots of other features, supports many formats, and accepts SD Cards.			
2 Creative Zen V Plus \$90 <a href="http://find.pcworld.com/54300">find.pcworld.com/54300</a>	<b>80</b> VERY GOOD	<ul style="list-style-type: none"> <li>Overall audio quality: Very Good</li> <li>Signal-to-noise ratio: 73 dB</li> <li>Overall design: Very Good</li> </ul>	<ul style="list-style-type: none"> <li>4GB</li> <li>1.5-inch (128 by 128) color screen</li> <li>FM, voice recording, photo, video</li> <li>Weight: 1.6 ounces</li> </ul>
BOTTOM LINE: Light, capable audio player delivers high-quality audio and can play videos, though the screen is small.			
3 Apple iPod Nano \$199 <a href="http://find.pcworld.com/58629">find.pcworld.com/58629</a>	<b>79</b> GOOD	<ul style="list-style-type: none"> <li>Overall audio quality: Very Good</li> <li>Signal-to-noise ratio: 81 dB</li> <li>Overall design: Very Good</li> </ul>	<ul style="list-style-type: none"> <li>8GB</li> <li>2-inch (320 by 320) color screen</li> <li>Photo, video</li> <li>Weight: 1.7 ounces</li> </ul>
BOTTOM LINE: Completely redesigned third-generation Nano adds video playback and redefines the portable media player.			
4 Apple iPod Touch \$499 <a href="http://find.pcworld.com/58915">find.pcworld.com/58915</a>	<b>79</b> GOOD	<ul style="list-style-type: none"> <li>Overall audio quality: Very Good</li> <li>Signal-to-noise ratio: 76 dB</li> <li>Overall design: Superior</li> </ul>	<ul style="list-style-type: none"> <li>32GB</li> <li>3.5-inch (480 by 320) color touch screen</li> <li>Wi-Fi, browser, mail, maps, photo, video</li> <li>Weight: 4.2 ounces</li> </ul>
BOTTOM LINE: Beautiful design, useful apps, a touch screen, and built-in Wi-Fi outweigh minor audio-quality issues.			
5 iRiver Clix Gen 2 \$240 <a href="http://find.pcworld.com/60357">find.pcworld.com/60357</a>	<b>78</b> GOOD	<ul style="list-style-type: none"> <li>Overall audio quality: Good</li> <li>Signal-to-noise ratio: 79 dB</li> <li>Overall design: Very Good</li> </ul>	<ul style="list-style-type: none"> <li>8GB</li> <li>2.2-inch (320 by 240) color screen</li> <li>FM, voice recording, photo, video</li> <li>Weight: 1.9 ounces</li> </ul>
BOTTOM LINE: Lightweight, easy-to-use flash-based player has a nice display and fairly good sound.			

CHART NOTES: Prices and rankings are as of 3/7/08.

that runs longer than a minute on the 128-by-128-pixel screen just seems silly.

A small joystick and several hard buttons control most navigation, and the device's extremely responsive interface lets you move around quickly. You can customize menus, build and save playlists on the fly, choose from among several built-in color

schemes, and set a stored photo as your background.

Rated for a respectable 20 hours of audio playback, the Zen V Plus is, overall, a worthy competitor to Apple's pricier iPod Nano.

### Apple iPod Nano

The first things you'll notice about the third-generation Apple iPod Nano are its

video-capable 2-inch display and its revised shape.

The brushed-aluminum design—available in silver (4GB and 8GB), black, red, turquoise, mint green, and pink—fits well into the contour of a hand, making one-handed operation convenient and comfortable. The LED-backlit display is bright and beautiful: Photos >>

## MORE ONLINE

Visit [find.pcworld.com/60317](http://find.pcworld.com/60317) for full reviews, specs, and latest prices for all the flash-based MP3 players we've tested.



and videos looked crisp and brilliant. The larger screen also accommodates Apple's refreshed iPod interface, which introduced right-side content previews and Cover Flow visual album-cover navigation. When you slide your finger around the player's scroll wheel, you flip through albums, organized alphabetically by artist.

The Nano's included earbuds are better than what rivals typically bundle, and *PC World's* tests measured a very high signal-to-noise ratio from the player. Unfortunately, you'll need to buy optional accessories if a built-in microphone or an FM tuner are important.

Apple rates the Nano's battery life at 24 hours for audio and 5 hours for video.

What the Nano lacks in a few features and flexibility, it makes up for with style.

## Apple iPod Touch

The Touch is an amazing piece of technology. Mobile Safari is far from perfect, but it's still the best portable Web browser around; Cover Flow looks fantastic and works great, and the iTunes Wi-Fi Store is extremely slick and easy to use.

The Touch is available in 8GB (\$299), 16GB (\$399), and 32GB (\$499) capacities. At 0.31 inches thick, it's substantially thinner than the iPhone, but it has the same 802.11b/g wireless support. It also has the same 3.5-inch multitouch screen with 480 by 320 resolution.

As mentioned, a recent

update added the Mail, Maps, Stocks, Weather, and Notes apps first seen on the iPhone, and both devices are set to gain access to third-party programs through Apple's Apps Store, slated for June. In hardware, the Touch lacks only the iPhone's phone (including the mic and speakers that go with it), its camera, and the volume buttons and locking switch on the side.

The nonstandard headphone jack, which prevents you from plugging most headsets directly into the iPhone, is gone as well, so you can now plug the connector for a normal set of headphones into the Touch. And the tap, scroll, and pinch gestures that make the iPhone a joy to use work just as well on the Touch.

Also supported: Gorgeous videos at resolutions of up to 640 by 480 pixels (in both H.264 and MPEG-4 format). Apple rates the Touch for 22 hours of audio playback and 5 hours of video.

All in all, it's a beautifully designed, multitasking, incredibly fun-to-use player.

## iRiver Clix Gen 2

The main draws of this small, sleek player (which is also available as a \$190, 4GB model) are its beautiful display and its unique controls.

The 1.9-ounce device plays MP3, OGG, and WMA music files; and it's compatible with the eMusic, Napster, Sony, and Urge online music subscription services. It will also play back WMV- or MPEG-format video files.

Video looks crisp and bright on the unit's 2.2-inch, AMOLED (active-matrix organic light-emitting diode) display. The Clix Gen 2 can play and record FM radio, and it has integrated voice-recording capabilities, too.

The entire front panel functions as a directional pad. By clicking up-down or left-right, you can quickly navigate the menus and make selections.

In *PC World's* audio tests, the Clix fared poorly at handling harmonic distortion and cross-talk; our test of the latter measure assesses whether sound from one channel leaks into the other. Its signal-to-noise ratio measured between that of the iPod Touch and the Nano's.

The Clix Gen 2 is a fine player, with a great display and intuitive controls.

—PC World Staff

## A DIFFERENT SPIN

### Slacker's Portable Internet Radio Player

THIS AMBITIOUS, music-only device features a 4-inch (non-touch) wide screen with intuitive menus, as well as built-in 802.11b/g Wi-Fi. It also works with an excellent Web music service that you can try for free.

The Slacker Web service (see page 88) works similarly to Pandora.com: You enter an artist's name on the Slacker site and create a custom "station" of music from that artist and others similar in sound or genre. You can then sync your custom stations to the player, for free. The result is a pocket full of music that you like, plus the element of surprise as to what's coming up next.

The free Slacker Web service is supported by targeted ads that the Slacker Portable will



run, beginning with tips on how to get more out of the Slacker experience. With the paid version of the service (\$10 per month for three months, \$8.33 per month for six months, or

**THE SLACKER PLAYER and Web service let you enjoy favorites and discover new artists, too.**

\$7.50 per month for a year's subscription), the ads are gone, and the player lets you save songs for playback later.

Windows XP and Vista users can transfer their own MP3 and WMA music files to the player, with some limitations. On the \$200 (15-station-limit) 2GB model, only 500MB of storage space is accessible for nonstation storage; that maximum grows to 1.5GB on the \$250 (25-station-limit) 4GB model, and to 4GB on the \$300 (40-station-limit) 8GB model. Visit [find.pcworld.com/60313](http://find.pcworld.com/60313) for our in-depth review and video.

—Tim Moynihan



# Diminutive Media PC Needs to Pull Into Dock

ASUS ADVERTISES its \$900

**PCW Test Center** Nova P22 as a "multimedia computer,"

a term I associate with 1992 and CD-ROM drives. The PC does have a remote control and Windows Vista with Windows Media Center. But it lacks many features of a true Media Center PC, and its small size leaves little room for internal upgrades.

The petite, attractive Nova P22 weighs 3.9 pounds and comes in white with orange trim or in all-black. Built-in speakers play laptop-quality sound. And touch-sensitive buttons control the power

and an internal DVD drive.

The system's quiet operation helps it fit into a living room setting. Nearly all other Media Center PCs have TV tuners, but the Nova P22 lacks a tuner card and can't accommodate one except via external USB. I couldn't find a way to take the cover off, but the PC is too small to accept an extra card anyway. It has only a DVI connector—no HDMI port. It does, however, come with an optical port for sending high-quality audio to a receiver.

The PC carries a 160GB hard drive—impressive for a



**THE NOVA P22 is about the same size as a hardcover book.**

laptop, but woefully inadequate for a media-centric PC. With its 1.86-GHz Core 2 Duo processor and 1GB of RAM, the Nova P22 managed a PC WorldBench 6 score of 66, close to scores posted by notebooks that we tested for this month's feature, "Super Small Slim Light Laptops" (see page 96). But it relies on integrat-

ed graphics—again, with no upgrade path—so it's not at all suitable for gaming. Integrated Wi-Fi-N and Bluetooth capabilities let you play media files hosted on other PCs in your house.

The Nova P22 comes without a monitor, mouse, or keyboard; the only standard input device is the mediocre white plastic Media Center remote, which, like most Media Center remotes I've seen, feels pretty cheap.

A connector on the bottom is supposed to "allow future capabilities expansion," according to the thin manual. A company rep says that in April Asus will ship docking stations costing about \$100: one for the living room, one for a game room, and one for an office; the rep wouldn't say what features the docks will add.

The Nova P22's size suits it for space-constrained settings. But until I see those docking stations, I'm going to remain unimpressed.

—Alan Stafford

# Chumby: The Internet's in the Bag

UNTIL NOW, most Internet appliances have been too hobbled (3Com's Audrey), too limited (Ambient Weather Beacon), or just too weird (the Nabaztag rabbit). But the Chumby might actually find a home on your bedside table.

The Chumby's 3.5-inch color touch screen is enveloped in a soft leather pouch, making it feel more like a beanbag than like a gizmo that logs onto your Wi-Fi network to deliver Internet



**THE 3.5-INCH touch screen sits inside a soft leather pouch.**

content. Setup is a snap: Log on to Chumby.com on your PC and select the Flash-based feeds ("widgets") that you want it to display. Then connect your Chumby to your home network.

You can view eBay auctions, Craigslist ads, Facebook, MySpace, Flickr photos, YouTube, Webcam shots, news, weather, and traffic

reports, and 400 or so other widgets. Some are games that use the Chumby's built-in motion sensors; to get the Magic 8-Ball widget to cough up an answer, for example, you shake the device.

The Chumby also lets you play an Internet radio station or a podcast over the built-in speakers, or to connect your iPod to one of the Chumby's two USB ports. Most of the information flow, however, is one-way: I could view my Gmail, but I couldn't reply to messages.

Though the \$180 Chumby is primarily a novelty—and not a cheap one—devices driven directly by Net content are likely to become commonplace. The Chumby isn't a bad place to start.

—Dan Tynan

**85**

VERY GOOD

**Chumby** | Chumby Industries

If you love gadgets and the Net, the Chumby is worth a look. List: \$180  
[find.pcworld.com/60173](http://find.pcworld.com/60173)

**74**

GOOD

**Nova P22** | Asus

This media PC offers limited media friendliness—for now. Street: \$900  
[find.pcworld.com/60153](http://find.pcworld.com/60153)



## For the Best Bluetooth, Look to a Jawbone

GIVEN HOW MUCH time your ear is likely to spend glued to a Bluetooth cell-phone headset (especially if you are a car commuter), the device needs to balance audio quality and comfort.

Even if a Bluetooth headset's audio technology is stellar, you won't be able to take advantage of it if the speaker feels uncomfortable in your ear. I have small ears, so I need a small earbud with an earhook to hold it in place. (People with larger ears should be comfortable without the earhook.) Aliph's Jawbone, our Best Buy, had enough earhook and earbud options that I found a good

fit. Plantronics' Voyager 855 Stereo Bluetooth headset, with its form-fitting earbud, helped me hear voice calls clearly without having to jack up the volume. The Voyager 855's unique design lets you attach a second earbud to create stereo earphones, but the music audio quality doesn't match that of high-end stereo earphones. The small circular design of Samsung's WEP500 was the least conspicuous, though it fit me less securely.

Headset manufacturers tout different audio technologies that they say will help



**OUR BEST BUY, Aliph's Jawbone (upper right), and the second-place Plantronics Voyager 855.**

you and your callers hear each other in varied environments. In my subjective testing, the WEP500 did the

best job with call quality. The Jawbone and the Voyager 855 finished close behind, in a virtual tie for second.

Finishing a distant fourth was Jabra's BT8040, which can connect simultaneously to two phones so you don't have to keep resyncing them. With Motorola's über-stylish Motopure H12, I had no trouble hearing people; but they struggled to hear my words, even when I spelled them out (as you would to directory assistance). The unique Callpod Dragon Bluetooth Headset, which missed the chart, delivered the worst call quality. It's a Bluetooth Class 1 headset, so it has a range of around 300 feet, but audio became garbled at about 75 feet (see [find.pcworld.com/60097](http://find.pcworld.com/60097) for a full review).

We couldn't lab-test battery life for this story, but vendor-reported talk times for these models range from 3.5 hours (for Samsung's WEP500) to 8 hours (for Callpod's Dragon). The WEP500 and Dragon headsets and the Jawbone come with convenient USB chargers so you can charge them from a PC. Motorola's Motopure H12 includes a handsome desktop and travel charger.

Check to confirm that the headset you plan to buy supports the phone you own—and be aware that Bluetooth headsets don't support all Bluetooth phones.

—Narasu Rebbapragada

### PC WORLD TOP 5 BLUETOOTH HEADSETS

MODEL	PCW Rating	Performance	Features and specifications
<b>1</b> <b>BEST BUY</b> Aliph Jawbone \$80 <a href="http://find.pcworld.com/60095">find.pcworld.com/60095</a>	<b>88</b> VERY GOOD	<ul style="list-style-type: none"> <li>Talk time: 6 hours</li> <li>Style: Superior</li> <li>Audio quality: Very Good</li> <li>Comfort: Superior</li> </ul>	<ul style="list-style-type: none"> <li>0.67 ounce</li> <li>2.3 by 0.9 by 0.8 inch</li> <li>Included USB adapter</li> <li>Included earhook</li> </ul>
BOTTOM LINE: Slightly bulky headset looks cool, feels comfortable, and sounds great, even in crowded environments.			
<b>2</b> Plantronics Voyager 855 \$76 <a href="http://find.pcworld.com/60071">find.pcworld.com/60071</a>	<b>86</b> VERY GOOD	<ul style="list-style-type: none"> <li>Talk time: 7 hours</li> <li>Style: Fair</li> <li>Audio quality: Very Good</li> <li>Comfort: Superior</li> </ul>	<ul style="list-style-type: none"> <li>0.53 ounce</li> <li>2.3 by 0.6 by 0.5 inch</li> <li>No included USB adapter</li> <li>Included earhook</li> </ul>
BOTTOM LINE: Stereo headset design comes with comfortable earbuds. Sound quality is good for calls, only so-so for music.			
<b>3</b> Samsung WEP500 \$73 <a href="http://find.pcworld.com/60067">find.pcworld.com/60067</a>	<b>85</b> VERY GOOD	<ul style="list-style-type: none"> <li>Talk time: 3.5 hours</li> <li>Style: Very Good</li> <li>Audio quality: Superior</li> <li>Comfort: Good</li> </ul>	<ul style="list-style-type: none"> <li>0.32 ounce</li> <li>1.0 by 0.7 by 0.5 inch</li> <li>No included USB adapter</li> <li>No included earhook</li> </ul>
BOTTOM LINE: Despite having a badly placed call button, this very small device produces outstanding audio quality.			
<b>4</b> Jabra BT8040 \$70 <a href="http://find.pcworld.com/60079">find.pcworld.com/60079</a>	<b>78</b> GOOD	<ul style="list-style-type: none"> <li>Talk time: 6 hours</li> <li>Style: Good</li> <li>Audio quality: Good</li> <li>Comfort: Fair</li> </ul>	<ul style="list-style-type: none"> <li>0.35 ounce</li> <li>1.9 by 0.8 by 0.5 inch</li> <li>Included USB adapter</li> <li>No included earhook</li> </ul>
BOTTOM LINE: This unit has solid audio and can connect to two phones at once so you don't have to resync multiple handsets.			
<b>5</b> Motorola Motopure H12 \$84 <a href="http://find.pcworld.com/60065">find.pcworld.com/60065</a>	<b>78</b> GOOD	<ul style="list-style-type: none"> <li>Talk time: 5.5 hours</li> <li>Style: Superior</li> <li>Audio quality: Fair</li> <li>Comfort: Very Good</li> </ul>	<ul style="list-style-type: none"> <li>0.42 ounce</li> <li>1.6 by 0.7 by 0.5 inch</li> <li>No included USB adapter</li> <li>Included earhook</li> </ul>
BOTTOM LINE: This stylish unit comes with desktop and travel chargers; call recipients had a hard time hearing clearly.			

CHART NOTES: Prices and ratings are as of 3/4/08. Street prices are averaged from three major retailers. We did not test battery talk time; the number listed is the figure reported by the vendor.

**MORE ONLINE** For more information about the features of the Bluetooth headsets reviewed in this chart, go to [find.pcworld.com/60099](http://find.pcworld.com/60099).





Name: Bob Davis

Age: 36

Occupation: Consultant

Phobia: Losing Receipts

Passion: My ScanSnap

## It's a snap with ScanSnap and Rack2-Filer.™



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# FUJITSU

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## Router Has 200-mbps HomePlugAV and Wi-Fi

MOST ROUTERS give you two options for connecting a computer or printer to your network: ethernet and Wi-Fi. Ethernet is fast and dependable, but it isn't practical for going from room to room. Wi-Fi is slower and less reliable than ethernet. Neither is very good for transmitting Internet-based multimedia content from a broadband modem at one end of your house to a TV at the other.

ZyXel's NBG318S offers a third option: HomePlugAV. The standard, three-pronged AC plug that powers the router connects it to other HomePlugAV devices in a building as well. If you don't own any devices equipped with HomePlugAV, you can use an optional adapter with a power plug on one end and an ethernet port on the other. In theory, you can

plug such an adapter into any ethernet-capable PC or peripheral and get a blazing 200-megabits-per-second connection to the router.

When I first plugged ZyXel's \$80 PLA-400 adapter into a computer and connected to the router, it worked hassle-free at what felt like ethernet speed. But when I tried to set up HomePlugAV's built-in AES encryption (needed because the signal may be accessible from other units in your building), I hit a brick wall. The router couldn't give the adapter the information needed to allow them to talk to each other. Nor would the adapter accept that information from me. A firmware



**THE HOMEPLUG adapter (left)** lets you use the router with any ethernet-capable device.

update for the adapter fixed the problem, but this experience shows that the technology is far from hassle-free.

Something else that you should know about: HomePlugAV doesn't work with devices based on the older HomePlug 1.0 specification.

### Wired or Wireless

The NBG318S lacks Wi-Fi Draft-N capabilities, but it doesn't stint on Wi-Fi; it supports 108-mbps Super G (to take advantage of it, a client device must use a Super G chip, too). In fact, this is the only router without Draft-N to reach the far corners of my Wi-Fi-hostile home without a big drop in signal quality.

With devices in the same room, though, the NBG318S falls a tad short. ZyXel gave the router only three LAN ethernet ports (plus the WAN port that connects it to your broadband modem). As a result, you can attach just three devices to the NBG318S without messing with Wi-Fi or HomePlugAV. Most modems have four such ports, and some in the NBG318S's price range have five. There is no USB port, either.

Setting up the NBG318S is pretty easy. Once you've connected everything and browsed to the setup pro-

gram's IP address, a wizard walks you through the setup and can even provide a randomized password.

The wizard doesn't do everything, however. For instance, to encrypt your HomePlug network, you must enter the more intimidating Advanced Setup page. And neither the setup program nor the brief quick-start guide explain everything you may want to know. For example, the wizard page "Bandwidth Management" contains no explanation, and only one option: "Enable BM for all traffic automatically." Luckily, the included CD holds a far more detailed, 286-page PDF user guide that explains bandwidth management.

Does the NBG318S make sense as a way to share multimedia? It isn't any less complicated than Wi-Fi, but it may be a better alternative in some situations.

—Lincoln Spector

**83**

VERY GOOD

**ZyXel NBG318S Router** | ZyXel

HomePlugAV-compatible router offers a useful alternative to ethernet and Wi-Fi. Street: \$105  
[find.pcworld.com/60175](http://find.pcworld.com/60175)

### ASK OUR EXPERTS



## The Perfect Print Server?

I HAVE AN HP PSC-1310 all-in-one, a Samsung CLP-300 color laser printer, and XP and Vista PCs. What type of USB print server should I get that also supports USB storage and scanning?

*Robert Costabile, Hamden, Connecticut*

**Senior Editor Robert Strohmeier responds:** Most wireless USB print servers don't support USB products such as scanners. For your MFP, you'll need a wireless print server that specifically supports printing and scanning. Your color laser printer should work with any wireless USB print server that supports USB 2.0. Two options are the Linksys Wireless-G Print Server WPS54G (which supports MFPs) and the Netgear SGPS606 Wireless Print Server. With any network print server, double-check device compatibility with the manufacturer before you buy.

E-mail your questions to [askourexperthelp@pcworld.com](mailto:askourexperthelp@pcworld.com), or post them online at [forums.pcworld.com](http://forums.pcworld.com).





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## Pricey iPod Speaker System Falls Flat

WHEN YOU SPEND four Benjamins on an iPod speaker system, you expect it to look and sound sublime. Tannoy's i30 certainly looks fine, but its audio quality doesn't befit a high-end device.

Measuring 18 by 5.4 by 5.5 inches, Tannoy's glossy black box is about the size of a classic loaf of Wonder bread, but it weighs 8 pounds. The

unit has no buttons whatsoever; you control everything through a small black remote that has buttons for power, volume, play/pause, forward, back, and mute. Though the buttonless design enhances the sleek look, it prevents you from adjusting the volume if you lose the remote.

For the price, the sound quality is mediocre. The unit pumps out good, thumpin' bass, but it has limited overall range—specifically, a lack of upper-end detail. As a result, the sound isn't particularly crisp, though the unit generates plenty of volume to fill a room during a fiesta.

To ensure a snug fit, the speaker comes with five dock adapters suitable for iPods

**THE i30 WORKS** with all iPod models as far back as the Mini.

as far back as the Mini. The i30 juices your iPod when it's docked, and it features a USB port for syncing the player to your computer (you have to supply your own cable, however). It also has a 3.5mm input on the back, so you can use the included stereo mini-jack cord to plug in a Shuffle, Zen, or Zune. The device's video-out port lets you view movies and TV shows on a television (composite video cable not included), though this feature was not working on the prepro-

duction unit we tested—video from our iPod Classic never popped up on our television. (Video viewing will be functional when the final version ships, Tannoy promises.) A handle on the back makes carrying the device easy, but there's no battery power, so forget about slinging it along on picnics.

If you need a cool iPod speaker for your loft, the i30 definitely looks the part. But stylin' design can't compensate for lackluster sound.

—Cathy Lu

**79**  
GOOD

### i30 | Tannoy

Like a Miss Teen USA contestant, the i30 looks good—but things go downhill once it starts making sounds. List: \$399

[find.pcworld.com/60174](http://find.pcworld.com/60174)



## Creative Headphones Make Music Sound Better

NOISE-CANCELING headphones prevent the roar of jet engines (or PC fans) from marring your listening experience. Creative has now added X-Fi sound card technology to the \$300 Aurvana X-Fi noise-canceling headphones. X-Fi technology promises to restore the original sound quality of music compressed into MP3 files and to convert stereo audio into 3D surround sound. Does it work? Yes and no.

Two AAA batteries fuel the headphones. Flick the power on and select the X-Fi option, and the headphones im-

prove most MP3 files. Both 128-kbps and 196-kbps recordings of Green Day's "Minority" had distinctly heftier sound. In fact, X-Fi gave music a boost in any format, compressed or not.



**CREATIVE'S** solidly constructed headphones fit comfortably.

I wish that X-Fi CMSS-3D, the 3D-sound-simulating component of Creative's X-Fi technology, worked as well as the compressed-music enrichment feature did. Unfortunately, most surround simulators fall flat—and X-Fi CMSS-3D is no exception, sacrificing sound quality just to trick your ears. Unless you enjoy listening to music through six tinny channels, forget about using CMSS-3D.

That gripe aside, I found plenty to love. The solidly constructed cans felt good on my head. And though the noise-canceling technology didn't fully silence ambient sounds, it did reduce the

drone of a commuter bus.

The Aurvana X-Fi is not inexpensive. But the nearest competitor, Bose's QuietComfort 2, costs just as much and offers half the features. Which would you rather have—headphones that merely block noise, or headphones that block noise and improve your music?

The choice is obvious.

—Darren Gladstone

**90**  
SUPERIOR

### Aurvana X-Fi | Creative

Noise-canceling headphones improve audio quality. List: \$300  
[find.pcworld.com/60321](http://find.pcworld.com/60321)



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## New GPS Devices Deliver More Than Just Maps

GREAT GPS systems have two things in common: accuracy and simplicity. You want to be able to enter your destination quickly and easily, and you want your GPS device to deliver clear and precise turn-by-turn directions to get you there. Two new models that I took on the road do both, but they also add features beyond simple navigation.

The \$400 Magellan Maestro 4250 and the \$300 V7 Nav740 have much in common: slim, compact cases; bright, 4.3-inch color touch screens; detailed road maps for the United States; listings and locations for millions of services such as gas, lodgings, and (most crucial of all) coffee fill-up stations; and user interfaces that were fast and generally easy to use.

If you need to get from here to there, both will show you the way nicely, though the Nav740 consistently displayed my destination as being two to three blocks away from where it actually was. It mapped the routes nicely up to that point, however. V7 confirmed that the unit I tested was a production model, and said that such errors had not cropped up with its other review units.

The problem may have been due to my location in the mountains; another *PC World* reviewer tested the product in an urban setting, and he didn't experience the same glitch. On the other hand, the Maestro 4250 guided me flawlessly door-to-door, regardless of my topographical surroundings.



**AT \$400, THE Magellan Maestro 4250 (left) costs \$100 more than the V7 Nav740. Both include big, bright 4.3-inch touch screens, detailed road maps, and plenty of features that go beyond basic navigation.**

Other than that major glitch with the Nav740, I had just one quibble with the navigation capabilities of the two units: During lengthy trips, neither will let you add a pit stop for gas and coffee unless you first cancel (and later reenter) the original destination. Other portable GPS devices support that handy capability.

### Additional Features

Beyond simple navigation, the Maestro and the Nav740 go in different directions. The Maestro lets you issue voice commands, though I found the feature a bit disappointing. You can tell the unit to find the nearest gas or food; scroll through the

results verbally; and command the Maestro to change course to your new destination. However, I couldn't find a way to use voice commands for basic controls, such as changing the map format or zooming in or out.

Another useful Maestro feature is real-time traffic alerts, through a subscription to a traffic service (when you buy the device, you get three months' free service); it's capable of rerouting you around blockages. The Maestro can act as a Bluetooth-attached, hands-free device for your cell phone. My LG phone worked just fine.

V7's Nav740 supports real-time traffic reporting, too, but both the FM antenna and

the subscription cost extra. The Nav740 has several other notable features: It can alert you if you are speeding and warn you when you are approaching a traffic-camera-monitored intersection. It also has a rudimentary ability to run video clips, display photos, and play tunes—but it poses no multimedia threat to an iPod. If you struggle to calculate tips, you'll appreciate the Nav740's built-in calculator. And finally, though it's an odd addition, I have to confess that I really like the device's weights-and-measures conversion mode.

Buying a lesser-known brand like the V7 can be a support and service gamble, but the Nav740 seems like a heck of a deal—as long as the navigation glitch was specific to my review unit alone. Nevertheless, coming from Magellan, a long-time player in the GPS game, the Maestro is the safer (albeit more expensive) bet.

—Tracey Capen



#### Maestro 4250 | Magellan

A bit pricey, but finely designed and well equipped. List: \$400  
[www.magellangps.com](http://www.magellangps.com)



#### Nav740 | V7

Bargain-priced unit includes plenty of features. List: \$300  
[www.v7-world.com](http://www.v7-world.com)



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## Media Center Extender Gets Draft-N Wi-Fi

I LIKE THE concept of Microsoft's Windows Media Center. It presents many forms of media, such as downloadable movies and TV shows, news and entertainment clips, live and recorded TV content, and your own audio, video, and photos. It does all that in one interface that you can navigate on your TV set if you have your PC in the same room—or if you use a third-party Media Center Extender, a device that links to your TV via a standard connection and uses your wireless network to deliver Media Center content to the TV.

Unfortunately, after trying the Linksys Media Center Extender DMA2200, a second-generation extender, I'm losing enthusiasm for the Media Center concept.

If any device should be able to handle Media Center properly, it's the DMA2200. This \$300 unit has draft-802.11n Wi-Fi with three wireless antennas, so it

ought to have enough bandwidth to stream HDTV programming effortlessly. It has an HDMI port, and it can send 1080p video to your TV. An upconverting DVD player is built in, too (another Linksys product, the DMA2100, omits the DVD player and costs \$50 less). As a result, the DMA2200 performs much better than previous Media Center Extenders did, but I still ran into hassles that stem from its being a PC-centric product. (For tips on using an extender, see page 117.)

### Setup Hassles

After I connected the Linksys DMA2200 to a TV in my bedroom, I used its on-screen interface to link it to my wireless network. I then generated an access code to connect it to a PC down the hall running Windows Vista Home Premium (I had to enter the code on the host PC). The Media Center setup changed its firewall settings

THE BOX ITSELF looks good; the remote does not.

automatically, and in a minute or so it was ready to go. However, several times the DMA2200 lost its association with the PC after I shut off the extender. I had to reassociate the device each time. Worse, on each occasion the PC failed to recognize the extender until I had rebooted the latter and generated a new code.

I tried the extender with a Linksys 802.11g router and with a new Linksys WRT310N draft-802.11n router. Though Media Center's built-in network utility indicated that the 11g connection had sufficient bandwidth to stream HD content, the Media Center interface on the connected TV was lethargic. With the 11n router, the interface was much snappier. But when I tried to do two things at once with it—say, watch an Internet TV program in a window while browsing TV listings—it bogged down again.

The horrid remote control that ships along with the DMA2200 doesn't help matters. It has a lot of minuscule, cheap buttons—some of which are not labeled, and many of which

sit in odd locations. Since the Media Center interface is entirely remote-driven, the remote's crappiness significantly detracts from the whole experience.

I was impressed with the video quality of TV programs, though. On the best quality setting, live TV looked a little grainy, but it wasn't bad. Playback never stopped, and I also don't remember seeing any jitter.

If there were an extender that was capable of a reliable, don't-have-to-think-about-it connection, came with a high-quality remote control, and had an interface I could navigate quickly and smoothly, I'd be interested. The DMA2200 provides a better Media Center experience than previous devices did, but my wish-list items are still a long way off.

—Alan Stafford



### TECH TREND

## A Secret HDTV Feature: CEC

THANKS TO AN increasingly common technology called Consumer Electronics Control (CEC), your HDTV's remote can manage up to ten devices that are connected via HDMI (such as Blu-ray Disc players or home theater receivers), no special programming needed. So, for example, you can use your remote to turn on your TV, your player, and your receiver at the same time, and adjust the system volume with one button.

Most major TV manufacturers now support CEC, and an HDTV with HDMI 1.3 will likely have the technology. Manufacturers call it by different names; LG Electronics, for instance, calls its implementation SimpleLink, whereas Toshiba calls its version CE-Link. Interoperability isn't mandatory, so some manufacturers limit control to their own products; Sony, for one, allows only Sony-to-Sony communication. —Greg Adler



### DMA2200 | Linksys

Draft-n Wi-Fi can't compensate for this product's flaws. Street: \$300  
[find.pcworld.com/60181](http://find.pcworld.com/60181)



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## Sub-\$1000 Color Lasers: Faster and Cheaper

LEXMARK'S NEW C780N

**PCW Test Center**

shows how the sub-\$1000 color laser printer market is offering better choices for all kinds of users. Though the C780n debuts in eighth place because it's expensive compared with lower-end models, busy offices will like its fast, great-looking output. The one other drag on its rating is Lexmark's worse-than-average reliability score in our latest Reliability and Service survey. The other two new models on the chart each cost



**BEEFY AND FAST:** Lexmark's C780n is built for busy offices.

less than the Lexmark C780n and have automatic duplexing (which is optional on the Lexmark). Samsung's CLP-660ND suffers from subpar graphics quality; Ricoh's Aficio SP C222DN has better overall print quality than the Samsung, but is slower. Oki's C6100n missed the chart; while it was fast in our tests, it isn't well designed.

—Melissa Riofrio

### MORE ONLINE

For reviews of the color laser printers on this month's chart and details on how we test, see [find.pcworld.com/60351](http://find.pcworld.com/60351).

### PC WORLD TOP 10 COLOR LASER PRINTERS

MODEL	PCW Rating	Performance	Features and specifications
1 <b>BEST BUY</b> Brother HL-4040CN \$400 <a href="http://find.pcworld.com/57915">find.pcworld.com/57915</a>	<b>84</b> VERY GOOD	<ul style="list-style-type: none"> <li>Text quality: Superior</li> <li>Graphics/photo quality: Good/Fair</li> <li>Tested speeds (ppm): 19.3 text/4.2 graphics</li> </ul>	<ul style="list-style-type: none"> <li>21 ppm text</li> <li>21 ppm graphics</li> <li>2400-by-600-dpi maximum resolution</li> </ul>
BOTTOM LINE: This competent printer balances good pricing, speed, and print quality with a sometimes-awkward design.			
2 Dell Color Laser Printer 1320c \$299 <a href="http://find.pcworld.com/57973">find.pcworld.com/57973</a>	<b>82</b> VERY GOOD	<ul style="list-style-type: none"> <li>Text quality: Very Good</li> <li>Graphics/photo quality: Superior/Very Good</li> <li>Tested speeds (ppm): 12.4 text/4.2 graphics</li> </ul>	<ul style="list-style-type: none"> <li>18 ppm text</li> <li>12 ppm graphics</li> <li>600-by-600-dpi maximum resolution</li> </ul>
BOTTOM LINE: A low price and great-looking photo quality help this model stand out, but its toner cartridges are expensive.			
3 Oki Printing Solutions C5500n \$599 <a href="http://find.pcworld.com/56552">find.pcworld.com/56552</a>	<b>80</b> VERY GOOD	<ul style="list-style-type: none"> <li>Text quality: Very Good</li> <li>Graphics/photo quality: Good/Fair</li> <li>Tested speeds (ppm): 23.9 text/5.0 graphics</li> </ul>	<ul style="list-style-type: none"> <li>24 ppm text</li> <li>20 ppm graphics</li> <li>1200-by-600-dpi maximum resolution</li> </ul>
BOTTOM LINE: This midpriced GDI-based printer offers dual paper trays and fast print speeds, especially for graphics.			
4 Oki Printing Solutions C5800Ldn \$799 <a href="http://find.pcworld.com/52626">find.pcworld.com/52626</a>	<b>78</b> GOOD	<ul style="list-style-type: none"> <li>Text quality: Superior</li> <li>Graphics/photo quality: Good/Fair</li> <li>Tested speeds (ppm): 26.3 text/5.5 graphics</li> </ul>	<ul style="list-style-type: none"> <li>28 ppm text</li> <li>24 ppm graphics</li> <li>1200-by-600-dpi maximum resolution</li> </ul>
BOTTOM LINE: GDI-based printer has a built-in duplex; offers the fastest graphics and text performance on our chart.			
5 Lexmark C530dn \$499 <a href="http://find.pcworld.com/56554">find.pcworld.com/56554</a>	<b>77</b> GOOD	<ul style="list-style-type: none"> <li>Text quality: Very Good</li> <li>Graphics/photo quality: Good/Fair</li> <li>Tested speeds (ppm): 20.7 text/3.6 graphics</li> </ul>	<ul style="list-style-type: none"> <li>24 ppm text</li> <li>22 ppm graphics</li> <li>1200-by-1200-dpi maximum resolution</li> </ul>
BOTTOM LINE: This model's price is attractive for a color laser that handles double-sided prints and has two paper trays.			
6 Xerox Phaser 6180/N \$499 <a href="http://find.pcworld.com/56551">find.pcworld.com/56551</a>	<b>76</b> GOOD	<ul style="list-style-type: none"> <li>Text quality: Very Good</li> <li>Graphics/photo quality: Fair/Fair</li> <li>Tested speeds (ppm): 23.7 text/1.9 graphics</li> </ul>	<ul style="list-style-type: none"> <li>26 ppm text</li> <li>20 ppm graphics</li> <li>600-by-600-dpi maximum resolution</li> </ul>
BOTTOM LINE: The Phaser 6180/N prints high-quality text at a good speed, but it finds color images more of a challenge.			
7 Brother HL-2700CN \$500 <a href="http://find.pcworld.com/45958">find.pcworld.com/45958</a>	<b>74</b> GOOD	<ul style="list-style-type: none"> <li>Text quality: Very Good</li> <li>Graphics/photo quality: Fair/Poor</li> <li>Tested speeds (ppm): 24.4 text/2.6 graphics</li> </ul>	<ul style="list-style-type: none"> <li>31 ppm text</li> <li>8 ppm graphics</li> <li>2400-by-600-dpi maximum resolution</li> </ul>
BOTTOM LINE: This model prints text quickly, but letters looked fuzzy and graphics were dark. Limited to letter-size paper.			
8 Lexmark C780n \$899 <b>NEW</b> <a href="http://find.pcworld.com/60051">find.pcworld.com/60051</a>	<b>71</b> GOOD	<ul style="list-style-type: none"> <li>Text quality: Very Good</li> <li>Graphics/photo quality: Very Good/Very Good</li> <li>Tested speeds (ppm): 26.1 text/3.9 graphics</li> </ul>	<ul style="list-style-type: none"> <li>35 ppm text</li> <li>31 ppm graphics</li> <li>1200-by-1200-dpi maximum resolution</li> </ul>
BOTTOM LINE: For busy offices, this unit's fast output and print quality are worth the cost—despite the subpar reliability.			
9 Samsung CLP-660ND \$700 <b>NEW</b> <a href="http://find.pcworld.com/60055">find.pcworld.com/60055</a>	<b>71</b> GOOD	<ul style="list-style-type: none"> <li>Text quality: Superior</li> <li>Graphics/photo quality: Fair/Fair</li> <li>Tested speeds (ppm): 19.8 text/2.9 graphics</li> </ul>	<ul style="list-style-type: none"> <li>25 ppm text</li> <li>25 ppm graphics</li> <li>2400-by-600-dpi maximum resolution</li> </ul>
BOTTOM LINE: The CLP-660ND offers decent speed and design, but its grainy graphics aren't for the art crowd.			
10 Ricoh Aficio SP C222DN \$599 <b>NEW</b> <a href="http://find.pcworld.com/60053">find.pcworld.com/60053</a>	<b>70</b> GOOD	<ul style="list-style-type: none"> <li>Text quality: Superior</li> <li>Graphics/photo quality: Good/Good</li> <li>Tested speeds (ppm): 17.4 text/2.4 graphics</li> </ul>	<ul style="list-style-type: none"> <li>21 ppm text</li> <li>21 ppm graphics</li> <li>2400-by-600-dpi maximum resolution</li> </ul>
BOTTOM LINE: Middling in price, performance, and design, this printer suffers from spotty documentation.			

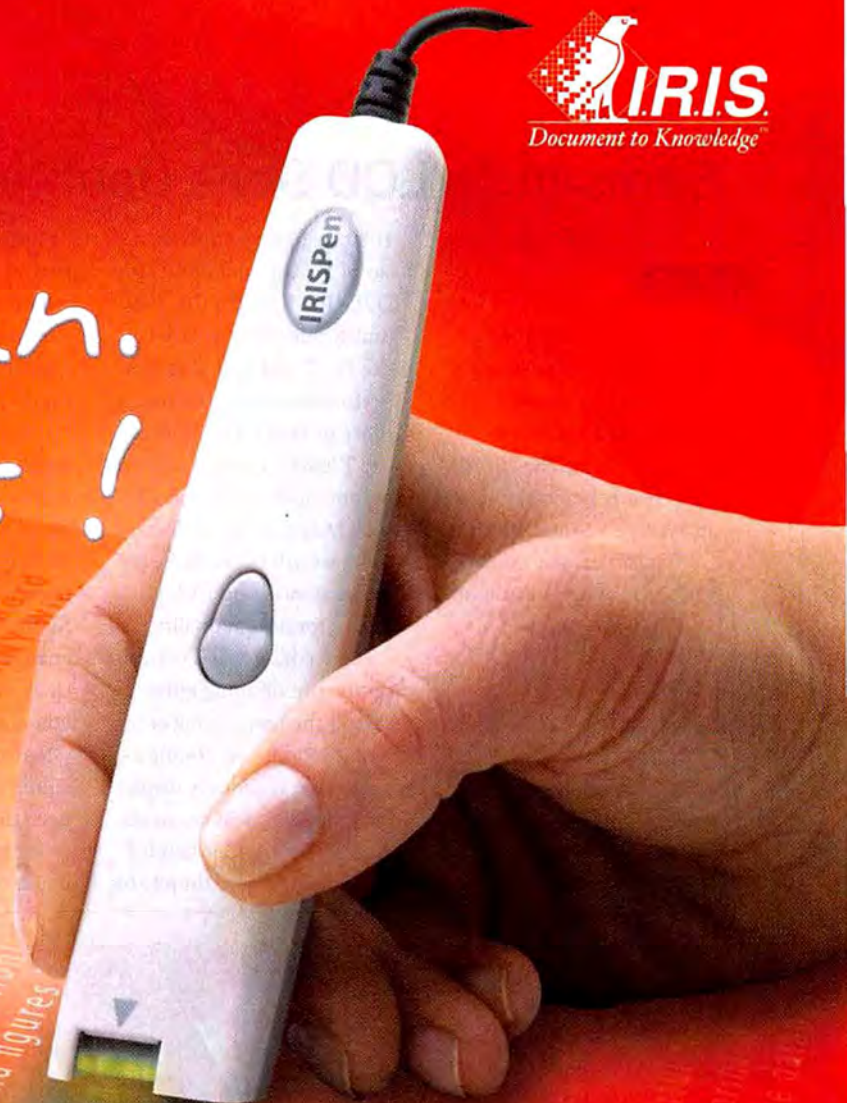
CHART NOTES: Prices and ratings are as of 3/7/08. Speeds are in pages per minute (ppm); resolutions are in dots per inch (dpi).



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## Samsung's LCD Sees Double

**PCW Test Center**

FOR \$550, SAMSUNG'S 2263DX delivers two monitors in one: a 22-inch LCD and a secondary 7-inch display. But this added convenience commands a substantial price premium: The 2263DX costs nearly twice as much as an average 22-inch monitor.

The main display comes with a native resolution of

1680 by 1050, a contrast ratio of 1000:1, and inputs for DVI, HDMI, and VGA. The unit received high marks in the PC World Test Center's performance tests, earning a score of Very Good. Overall, the 2263DX came in second on our chart of 20- and 22-inch LCD monitors, thanks to its wealth of features, its performance, and its high scores for design quality.

The secondary LCD can sit on the top or along either side of the main monitor's casing, and it can double as a portable secondary display for your laptop (it connects via USB). I found it helpful for housing Photoshop tools

or instant messaging windows—and I even used it as a digital photo frame.

But the secondary display has no internal mechanism to tell Windows where you've oriented it, so if you move it, you must use Windows' Display Settings control panel to change the settings. That's time-consuming, though you may not move it often.

Samsung's 2263DX is best suited for consumers who need to declutter their desks, or for graphic designers who could use the added screen



**THE SECONDARY LCD connects to the main display via USB.**

space for their software tools. Most people would be better off purchasing two of Samsung's own 20-inch 205BW monitors for the cost of one 22-inch 2263DX—and they would still have some money left over.

—Greg Adler

**81**

**VERY GOOD**

**2263DX | Samsung**

Display is innovative, but pricey.

List: \$550

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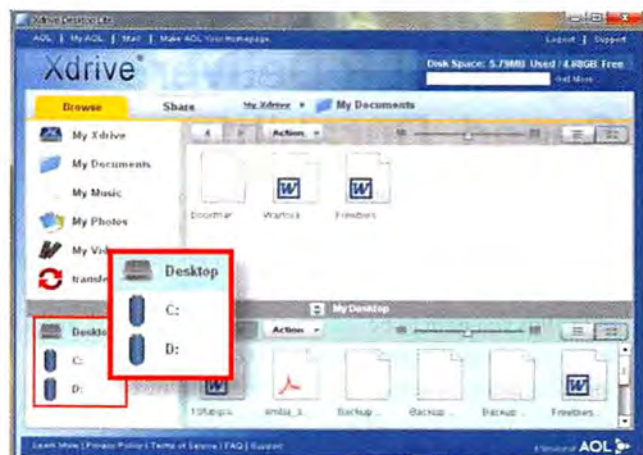
## Xdrive Lite Lacks Heft

AOL'S NEW XDRIVE Desktop Lite application makes accessing your Xdrive online data-storage account even easier. The app, still in beta, has some useful features—such as the ability to preview media files—but it can be confusing to use.

An Xdrive account with 5GB of storage is free (a

500GB account costs \$10 a month). Previously, you could access your storage space via a browser or through the Xdrive Desktop utility, which assigns a drive letter to your virtual Xdrive in Windows Explorer. Lite uses the Adobe AIR platform, which allows Web-based apps to run outside a browser (see page 24).

The Lite program looks similar to that of Windows Explorer. To move files to your Xdrive, you can drag and drop from Windows Explorer or your desktop into the Xdrive folder in the Lite program window, or from the hard-drive section



**XDRIVE DESKTOP LITE** will locate files on any of your PC's drives.

in Lite to the Xdrive section.

The app lets you preview music and videos in a built-in player, and you can also use the program to share files. However, the sharing tabs—Email Share, Embed Code, and Share Status—

lack any explanation and can be baffling to figure out.

Right now, the easier-to-use Desktop utility is more appealing. But upcoming features, such as automatic syncing, will improve Lite.

—Erik Larkin

**81**  
VERY GOOD

**Xdrive Desktop Lite** | AOL

Desktop Lite has some useful features, but it can be confusing.

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## Digital SLR Delivers Speed, Durability

OLYMPUS'S 10.1-megapixel E3 single-lens-reflex camera is an attractive package for both pros and serious amateurs. But you have to be serious about photography—and have plenty of arm strength—because the E3's bulky body alone costs

\$1699 and weighs just under 2 pounds. Add the 12mm-to-60mm (24mm-to-120mm, 35mm equivalent) zoom lens I received, and the total price hits \$2600.

Tested against my aging Canon 30D and the new Nikon D300, the E3 delivered lightning-quick auto-focusing, noticeably faster than with either of the other cameras. The E3 will capture up to five frames per second—not quite up to the Nikon's six-frames-per-second burst-shooting speed, but still quite fast.

When I first started shoot-



THE E3'S BODY feels sturdy and comfortable in the hand.

ing with the E3 I was, to put it mildly, disappointed in the photos: Shots taken under difficult conditions—landscapes with lots of snow, water, and sky—were underexposed. Fortunately, subsequent sessions with more mundane subjects, such as cars, homes, small

still lifes, and dogs, produced far better results.

Overall, I enjoyed using the E3. It feels comfortable in the hand, its magnesium body looks and feels durable, and operating the controls is quick and efficient.

—Tracey Capen

PHOTOGRAPH: MARC SIMON

**86**  
VERY GOOD

### E3 | Olympus

This big, heavy, rugged camera has extensive advanced controls.

List: \$1699 (body only)

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Microsoft

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path to lunch.



# System Mechanic Pro Offers Easy PC Tune-Ups

IOLO'S SYSTEM Mechanic, now in version 7.5, has been garnering positive reviews for ages—for good reason. It offers Windows repair and tune-up features that work well, providing the software equivalent of the “geeky friend” that many users lack. Version 7.5 is more intuitive

and easier to use than previous installments. In its \$50 regular incarnation, the app will back up, repair, and compact the Windows Registry; detect and remove many types of spyware; optimize your startup files and system memory; and tweak your Internet connection settings for best performance. In my tests the Registry and startup optimizations worked well, but my Internet connection seemed no faster. (I did not test the spyware removal.)

My only caveat: Much of what the program's tune-up



**SYSTEM MECHANIC CUTS** system clutter to speed up your PC.

functions do is to automate tasks that an advanced Windows user will already know how to perform using built-in Windows utilities.

The \$70 Pro edition adds secure data-wiping, data recovery, a firewall, and anti-virus protection, though I

didn't test the latter two.

If you're not comfortable delving into Windows utilities, the regular version of System Mechanic 7.5 can easily pay for itself. More-advanced users should spring for the Pro version.

—Jon L. Jacobi

**86**  
VERY GOOD

**System Mechanic Pro 7.5** | Iolo  
Easy-to-use app effectively tunes up your PC. List: \$70  
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## DOWNLOAD THIS LAURA BLACKWELL

### Apple TV: Take Two

IN ADDITION TO providing access to YouTube videos and Flickr and .Mac photo streams, Apple's set-top box now brings video rentals from iTunes to your TV.

The movie selection is worse than that of your local video store, though the prices are similar: New high-definition (1280 by 720 resolution) movie rentals cost \$5, and standard-definition movies cost \$1 less.

Once a movie is downloaded, you have 30 days to begin watching it—and once you've started it, 24 hours to finish it. The HD video



**THE SLEEK APPLE TV looks the same; the software is updated.**

quality didn't compare to what the Dish Network beams to my home, and SD was sub-DVD quality (despite being the same resolution).

The addition of downloadable movie rentals makes this device more compelling. But for now, you may want to keep renting flicks on disc.

—Lincoln Spector

**82**  
VERY GOOD

**Apple TV** Apple

Stylish and easy to use, but content is limited. List: \$229  
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### Save on Ink, Make a Podcast, Be a Chocolatier

IT'S A WONDERFUL world, one worth saving and exploring. This month, I have an earth-friendly printer utility, a podcasting program, and a game of international gastronomy.

#### Print Words, Not Waste

The recycling bin by your printer probably holds discarded sheets with just a few lines of text. GreenPrint World reduces paper and ink waste by previewing your print job with images or even whole pages removed. This freebie saves ink, paper, and money—good for you and for the planet.

GreenPrint World, an ad-supported version of the \$35 GreenPrint Home, is easy to set up. Just install the program, choose a default printer, and select your settings. When you have something to print, choose GreenPrint as your printer; it automatically applies your ink-saving settings (for example, removing blank pages or pages with images only) and also lets you remove additional pages or images.

Using GreenPrint World, I cut a three-page Web article down to one page, and I removed 38 pages of comments following a Web comic. All of those saved pages, pennies, and drops of ink add up over time. Free for home use, ad-supported, [find.pcworld.com/60107](http://find.pcworld.com/60107).

#### Podcast Like a Pro

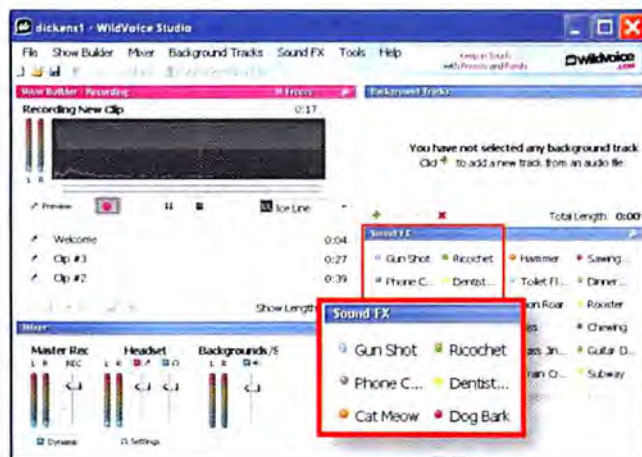
Podcasting can give your words a worldwide audience. All you need is a microphone, a PC, and a free program called WildVoice Studio. I tested WildVoice Studio by reading bits of a Dickens novel aloud, doing each paragraph as one take. While recording, I slapped in a few of WildVoice's provided sound effects, for wind and a train. Building the show was a snap: I just lined up my clips, saved the show in WildVoice, and selected 'Save Show to MP3 and Publish' (you can skip the publish part).

WildVoice Studio maker Equicast Media

allows you to post your podcasts wherever you wish. If you register, you can also upload your podcasts to WildVoice.com, where your adoring fans can listen to, comment on, and Digg your work. Free, [find.pcworld.com/60108](http://find.pcworld.com/60108).

#### A Recipe for Sweet Success

If you dream of traveling the world, building a prosperous business, or creating gourmet chocolates, Chocolatier 2: Secret Ingredients will fuel your fantasies. In this simulation



**WILDVOICE STUDIO HAS a library of drag-and-drop sound effects.**

game, you search the globe for elusive recipes and exotic ingredients that will keep customers clamoring for your treats.

Set 40 years after the first Chocolatier game, PlayFirst's Chocolatier 2 revels in a Roaring Twenties theme, including Art Deco menus and Jazz Age music. As in the original game, you explore historical cities, haggle with vendors, and create chocolates in a minigame involving shooting ingredients at machinery. What's new this time is the Chocolate Tasting Laboratory, which, once unlocked, helps you create unique confections such as Chocolate Covered Ants.

The chocolate business is no cakewalk, though: The quest for secret ingredients—such as those fire ants—requires negotiation, plenty of money, and long trips to remote areas. All in all, Chocolatier 2: Secret Ingredients is nearly as addictive as the food of the gods. Free 1-hour demo (registration required), \$20 for full version, [find.pcworld.com/60109](http://find.pcworld.com/60109). ●





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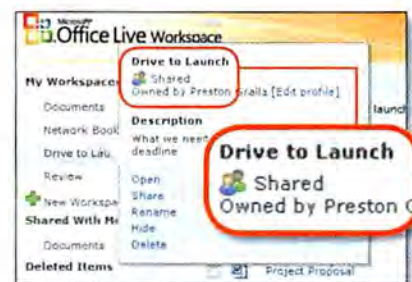
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attempts to identify Trojan horses and other malware based on how they act on your PC. [find.pcworld.com/60116](http://find.pcworld.com/60116)

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use but that can leave Internet Explorer (and your PC) wide open because of an unsafe ActiveX control. PSI provides details on the security holes in old software and tells you where to obtain updates. [find.pcworld.com/60120](http://find.pcworld.com/60120)

**DOWNLOAD SpamfighterPro** Spamfighter harnesses the collective intelligence of 4.5 million e-mailers around the world to block spam with a toolbar in Outlook, Outlook Express, and Windows Mail. [find.pcworld.com/60121](http://find.pcworld.com/60121)

**SERVICE BitDefender Online Scanner** If you suspect that your regular antivirus app missed a malware infection, head to BitDefender's online scanner (requires Internet Explorer) for a second opinion. The Web app scans your system's memory and all files, detecting and removing infections. [find.pcworld.com/60371](http://find.pcworld.com/60371)

**DOWNLOAD McAfee Rootkit Detective** The information you receive from Rootkit Detective's pursuit of malware-hiding rootkits might be too technical to use yourself. The handy Submit button, however, will produce free advice on dealing with the suspicious files it finds. [find.pcworld.com/60122](http://find.pcworld.com/60122)

## Video and Photo

**SERVICE Phrasr** Here's an offbeat Web site for folks who would like to create online photo-collage postcards and share them. When you type in a phrase, the site grabs photos from the Flickr photo-sharing site that it believes match each word, and then builds a Web page/photo gallery based on it.

[find.pcworld.com/60325](http://find.pcworld.com/60325)

**SERVICE Flypaper** With this site (as well as its associated software) you can create Flash-based "stories," in the form of slide shows or multimedia presentations, about anything you want.

You can create a résumé, a presentation for your company or a trade group, training material, or anything else that comes to mind. Prebuilt templates will help you get started. [www.flypaper.net](http://www.flypaper.net)

**DOWNLOAD Miro** This open-source video tool will play every video format under the sun, show HD content, tune in to

video blogs, save YouTube videos, and even download and show video files via BitTorrent. [find.pcworld.com/60372](http://find.pcworld.com/60372)

**DOWNLOAD Photoscape** This do-it-all tool, a must-have application for digital photographers, offers a file viewer, an image editor, a slide-show creator, a batch editor, and a screen-capture program. It can even convert photos in the RAW format used by many digital cameras to the more useful JPEG format. [find.pcworld.com/60373](http://find.pcworld.com/60373)

**DOWNLOAD URL Snooper** Are you frustrated that YouTube and similar sites allow you to view videos online, but not download and save them to your PC? With this free program, you can grab them. [find.pcworld.com/60149](http://find.pcworld.com/60149)

**SERVICE MeeVee** Throw away your print TV listings—this site is approxi-



## Best Web App Slacker Works Hard to Find Music

OVER THE PAST year, music "taste sharing" sites have

increased in visibility and popularity. They're not only a good way to get hip to new music, but they're good places to meet new people, too.

Despite its name, **Slacker.com** is no slouch. Rivals such as Last.fm and Pandora garner well-deserved praise, but don't compare to Slacker in ease of use. No matter what your music tastes may be, within about 30 seconds of first arriving at this Internet radio site you can be listening to your pick of a huge number of potential stations.

It gets even better. Slacker helpfully displays the full list of artists that play on any given station, but you don't have to stick with the list. If you start with one of the pre-made genre stations, you can toss bands you don't like from the lineup. Pick an artist station, which plays music from that artist and similar bands, and you can also mix in your choice of crooners. You can choose favorite songs to hear them more often, and skip those you don't like (up to six songs per hour for the free level of use).

Add in more fine-tuning options for each station, such as whether to lean toward lesser-known music or top hits, plus a downloadable software player that can run without a browser, and you'll like this hard-working Slacker. [www.slacker.com](http://www.slacker.com)





mately 10,000 times better. In addition to the standard listings, Meeve lets you create your own personal channel listings by combining your favorite TV programs and online video. It has a wealth of detail about each show, and the online-video listings contain links to the actual video content. Try that with your *TV Guide*. [www.meeve.com](http://www.meeve.com)

**SERVICE** **Yahoo Live** This is a video site with a difference—it broadcasts live video, rather than prerecorded clips. [live.yahoo.com](http://live.yahoo.com)

**SERVICE** **Fixmymovie** This site takes the grainy, dark video you've captured with your cell phone, Webcam, or digital camera, and helps you clean it up for posting online by adjusting the contrast and bringing out the details hidden in dark areas. [www.fixmymovie.com](http://www.fixmymovie.com)

**SERVICE** **FotoFlexer** Who needs software to edit photos or add special effects? Instead, head to this site and use its full complement of powerful editing tools. [www.fotoflexer.com](http://www.fotoflexer.com)

## System Utilities and Backup

**SERVICE** **Zamzar** Need to convert files from one format to another? With Zamzar you can convert files to countless types of formats. [www.zamzar.com](http://www.zamzar.com)

**SERVICE** **Bug.bd** If you encounter an undecipherable error message, head to this Web site and type in the error. If any of the site's previous users have found the answer to your problem, it will be listed there. [bug.bd](http://bug.bd)

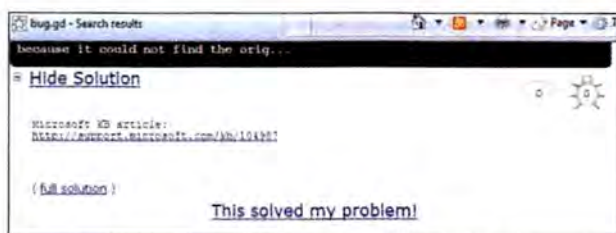
**SERVICE** **Clip2Net** This tool lets you capture screen shots and automatically upload them to the Web. You can then link directly to the images from your blog or Web site. [clip2net.com](http://clip2net.com)

**SERVICE** **iDrive** You can back up 2GB of data for free to this Web site, using associated software that sets up a virtual drive. When you copy files to that virtual drive, you're actually storing

your stuff at a secure iDrive server on the Internet. [www.idrive.com](http://www.idrive.com)

**DOWNLOAD** **CCleaner** This utility offers the best way to clean the gunk out of your PC, including waste from Windows, the Internet, Microsoft applications, and plenty of third-party applications. [find.pcworld.com/60383](http://find.pcworld.com/60383)

**DOWNLOAD** **AppSnap** Want to make sure all of the freeware on your PC is current? This program scans your system,



**INCOMPREHENSIBLE ERROR MESSAGE? No problem. Bug.gd will help you decipher even the gnarliest error messages from your PC.**

locates freeware that's out of date, and then upgrades the applications that you tell it to. [find.pcworld.com/60384](http://find.pcworld.com/60384)

**DOWNLOAD** **Eusing Free Registry Cleaner** Your Registry is filled with outdated and bad entries. Clean it with this free utility, and keep your system in tip-top shape. [find.pcworld.com/60385](http://find.pcworld.com/60385)

**DOWNLOAD** **C02 Saver** This free program puts your PC into sleep or hibernation mode at appropriate times, which conserves energy and reduces carbon dioxide emissions. [find.pcworld.com/60395](http://find.pcworld.com/60395)

## Maps and Directions

**DOWNLOAD** **WeFi** This app and service finds Wi-Fi hotspots but also maps other Wi-Fi users' locations by triangulating among hotspots. [find.pcworld.com/60123](http://find.pcworld.com/60123)

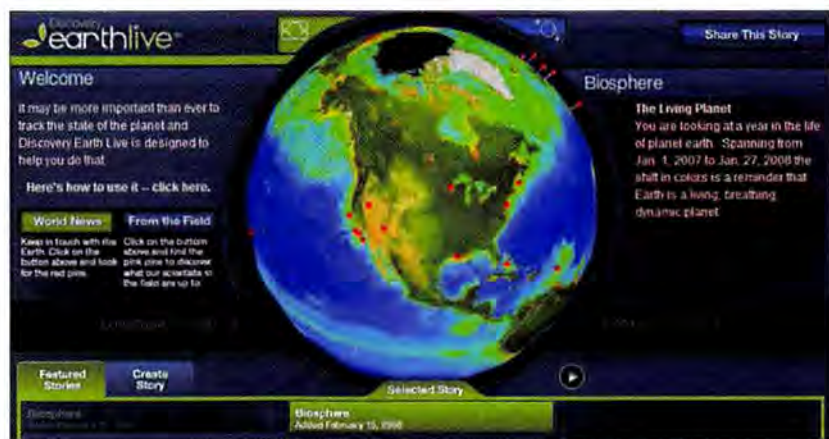
**SERVICE** **Discovery Earthlive** Interested in the current state of the planet? This Web site from the Discovery Channel shows a globe that presents multiple layers of information, including clouds, water vapor, and rainfall. [find.pcworld.com/60125](http://find.pcworld.com/60125)

**SERVICE** **Zillow** At this real estate site you can find out the worth of almost any home in your neighborhood. You can also scope out new neighborhoods, and chat with people who already live there. [www.zillow.com](http://www.zillow.com)

**SERVICE** **TerraServer** This Microsoft-run site gives aerial views of any location in the United States, and displays topographical maps too. [terraserver-usa.com](http://terraserver-usa.com)

**DOWNLOAD** **Stellarium** This open-source astronomy app displays all the celestial objects you could ever want to see, including stars, planets, nebulae, and constellations. [find.pcworld.com/60126](http://find.pcworld.com/60126)

**DOWNLOAD** **FreeMind** Finding maps of the world is easy—how would you like to make a map of your ideas and projects? That's exactly what this software >>



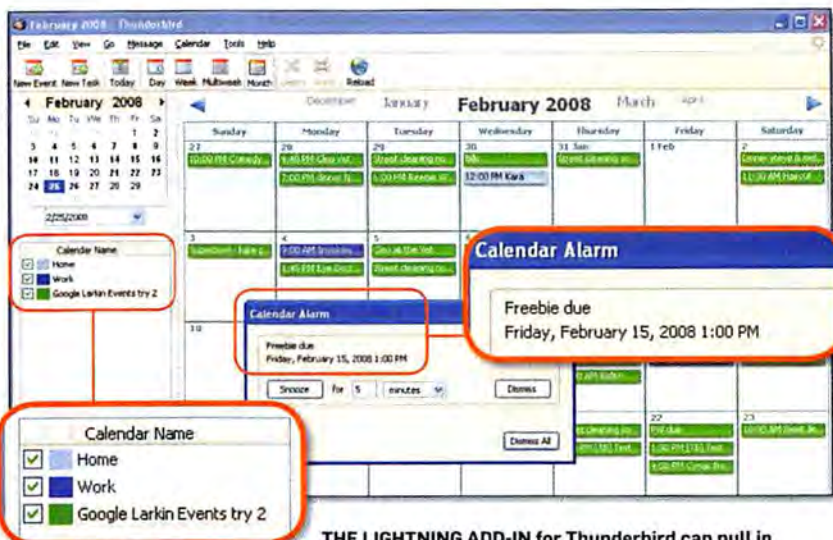
**DISCOVERY EARTHLIVE, BROUGHT to you by the Discovery Channel, shows you multiple layers of atmospheric information at once, including clouds, water vapor, and rainfall patterns.**



promises to do. [find.pcworld.com/60127](http://find.pcworld.com/60127)

**SERVICE MizPee** There's no delicate way to describe this site, so we won't try. You use it when you are in a public place and need to find a clean toilet—something that's not so easy in most metropolitan areas. [www.mizpee.com](http://www.mizpee.com)

**SERVICE Flightstats** Want to check for delays, learn the current status of flights at airports, and track planes as they fly to their destination? This site offers an exceptional amount of detail, such as whether certain airports are de-icing aircraft. [www.flightstats.com](http://www.flightstats.com)



THE LIGHTNING ADD-IN for Thunderbird can pull in events from your other online calendars and set alarms.

## Communications

**SERVICE Pownce** On this social networking site you can send items to friends and receive items from them, including messages, links, files, and event notices. [www.pownce.com](http://www.pownce.com)

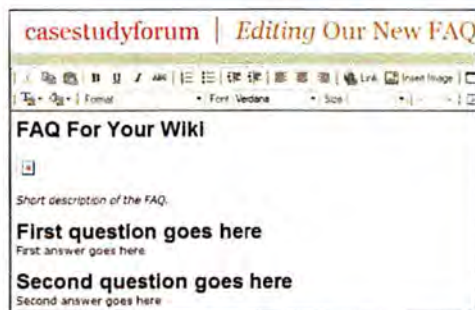
**DOWNLOAD Pidgin** Why can't instant messenger programs get along? With the open-source IM client Pidgin, they can. Within this single application, you can chat with people on all of the big instant messaging networks—including AIM, Google, ICQ, MSN Messenger, and Yahoo Messenger. [find.pcworld.com/60128](http://find.pcworld.com/60128)

**SERVICE Pbwiki** Creating and maintaining a wiki is a great way for people to collaborate. With Pbwiki, you'll find it a breeze to set up a wiki of your own, for free. [pbwiki.com](http://pbwiki.com)

**SERVICE MakeMeSustainable** Specify an activity at this site, and it calculates the amount of greenhouse gases the activity produces, in units of carbon dioxide. You can also see what other people in your geographic area have done to reduce their impact, or create sustainability discussion groups. [www.makemesustainable.com](http://www.makemesustainable.com)

**DOWNLOAD Gizmo** Tired of paying massive phone bills? Cut them down to size with this free Skype-like software, which allows you to talk for free with other Gizmo users through your computer. [find.pcworld.com/60374](http://find.pcworld.com/60374)

**SERVICE Dopplr** If you travel a lot and want to share your travel plans with family, coworkers, and friends, try this site. You can put in your itinerary and have your friends enter theirs, and the site will create a map showing where everybody will be. If you discover that you and a friend will happen to be in the same city, for example, you can make arrangements for dinner, even if



WHEN YOU CREATE a new Wiki with Pbwiki, a number of prebuilt templates help you get started.

it's in the airport. [www.dopplr.com](http://www.dopplr.com)

**SERVICE Talkshoe** Here's a free way to participate in group voice chats with people who share your interests. Head to the site and click a chat to join, and you'll be able to talk using the Web-based app. You can create your own chats, as well. [www.talkshoe.com](http://www.talkshoe.com)

**SERVICE TeeBeeDee** Tired of social networking sites aimed at people whose idea of ancient history is the Clinton administration? This service caters to folks 40 and above. [www.tbd.com](http://www.tbd.com)

## Time Management

**SERVICE Voo2do.com** Much more than a to-do list, this project management site helps you track how much time you spend on tasks grouped into different projects. [voo2do.com](http://voo2do.com)

**SERVICE TimeBridge** Need to schedule meetings with scattered colleagues on assorted e-mail and calendaring networks? Head over to TimeBridge, which can pull in your Outlook or Google calendar availability and allow participants (who don't have to be TimeBridge members) to choose from up to five proposed meeting times. [www.timebridge.com](http://www.timebridge.com)

**SERVICE 30Boxes.com** The interface of this calendar site lets you quickly create events with tags, invites, Google map links, and more. [www.30boxes.com](http://www.30boxes.com)

**DOWNLOAD SyncMyCal** This app can synchronize your Google, Pocket Microsoft Outlook, or 30Boxes calendar with your Outlook XP, 2003, or 2007 calendar. [find.pcworld.com/60129](http://find.pcworld.com/60129)

**SERVICE Scribe** The ongoing beta of Scribe's calendar and note-taking app has a slick display, with zoom effects that will make you quickly forget you're in a browser window. [iscrybe.com](http://iscrybe.com)

**SERVICE Ta-da List** If you just want a simple and easy list for tracking tasks, check out Ta-da List. [tadalist.com](http://tadalist.com)

**DOWNLOAD Lightning** This program adds a great-looking, full-featured calendar and task list to Thunderbird, >>





DELORME

# GPS for wherever you go.

## ON-TRAIL...

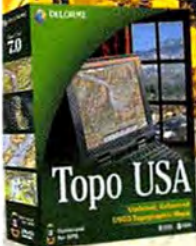


## ON-WATER



"Think Google Earth for the Palm of your hand."  
National Geographic Adventure Magazine

"Most Innovative Handheld GPS of 2007."  
gpstracklog.com



Full Version Included!

Hike in the woods with the Earthmate® GPS PN-20, not back to the store for expensive maps. All the DeLorme-renowned maps you need are included. Copy U.S. street and topo maps from Topo USA® 7.0 software to an SD card — easier than ever with pre-loaded maps included. Download \$100 of free USGS quads, NOAA nautical charts, and recent color imagery of your favorite U.S. locations.





Mozilla's excellent free e-mail application. [find.pcworld.com/60375](http://find.pcworld.com/60375)

## Music

**DOWNLOAD Winamp** The latest version of the venerable free music player can sync with iPods and fixes a serious security bug in earlier versions of the software. [find.pcworld.com/60131](http://find.pcworld.com/60131)

**DOWNLOAD Audacity** This capable open-source download can edit and record .mp3, .wav, and other digital audio files.

You can use the program to convert file types, record podcasts, and mix special effects into your favorite songs, as well. [find.pcworld.com/60132](http://find.pcworld.com/60132)

**DOWNLOAD iTunes Library Updater** If moving or deleting songs has thrown your iTunes library into disarray, grab this handy tool, which easily cleans up duplicates and orphaned entries. [find.pcworld.com/60133](http://find.pcworld.com/60133)

**SERVICE Soundsnap** Find almost any type of royalty-free sound sample at this well-designed site. [soundsnap.com](http://soundsnap.com)

**SERVICE iLike** With a plug-in for Windows Media Player or iTunes, iLike installs a sidebar displaying artist news (recent albums, local concerts, and so on) based on music already residing in your library. It also recommends new music that you might like. [ilike.com](http://ilike.com)

**SERVICE Slacker** Start with your pick of Internet radio stations in Slacker's in-browser player—from 90s Alternative to Outlaw Country to Big Band/Swing—or type in the name of a band to get a station covering that sort of music. Afterward, you can customize the station with your choice of artists, and fine-tune options such as song popularity and age. You can also download a stand-alone software player. See our sidebar on page 88. [www.slacker.com](http://www.slacker.com)

**SERVICE Lala.com** If you take the time to upload all or part of your MP3 collection to Lala.com, you can then play



### Mute Math bulletin:

"Flesh and Bones: Electric Fun" Live Album Now Available on iTunes

Just wanted to let everyone know that we released our live album, "Flesh and ..."

[View full post](#)

those songs anywhere through a Web browser.

You can't, however, download the songs to another PC. [lala.com](http://lala.com)

**DOWNLOAD Wavosaur** When you need to edit short audio programs, sound effects, or loops, give the free Wavosaur audio editor a try. It has all the basic audio editing functions (cut, copy,

paste, crop, fade in, fade out, and so on), and some audio analysis features, as well. [find.pcworld.com/60376](http://find.pcworld.com/60376)

**THE ILIKE SIDEBAR displays news and information about bands in your music library.**

## Desktop Customization

**SERVICE WinMatrix** This customization clearinghouse serves up a dizzying array of guides, links, and posts for the serious tweaker who wants to change the look and feel of Windows XP or Vista. [find.pcworld.com/60134](http://find.pcworld.com/60134)

**DOWNLOAD WindowBlinds** For "skinning" the various Windows interfaces, Stardock's WindowBlinds theme manager is the tool to use. After you pick up the program, head to Wincustomize.com (see below) for a kid-in-the-candy-shop feeling as you browse through 522 pages of free and for-pay skins that beautify the taskbar, window borders, Start menu, and other elements. The free trial won't skin Internet Explorer and has a

few other limitations; the full version runs \$20. [find.pcworld.com/60135](http://find.pcworld.com/60135)

**SERVICE WinCustomize** Here you'll find a wealth of free wallpaper, screen savers, and themes for Stardock's excellent Windows customization programs. [www.wincustomize.com](http://www.wincustomize.com)

**DOWNLOAD Vista Start Menu** Despite the name, this beefed-up Start menu runs on Windows XP as well as on Microsoft's newer OS. The much-larger menu can make getting to programs easier if you have a bunch installed, and it also provides quick access to autorun programs that are set to start with Windows. [find.pcworld.com/60136](http://find.pcworld.com/60136)

**DOWNLOAD RealWorld Cursor Editor** Replace any of the 15 Windows pointers with ready-made pointers, or create new ones from scratch or based on existing images. [find.pcworld.com/60137](http://find.pcworld.com/60137)

**DOWNLOAD RocketDock** This launchpad for files and programs brings some Mac OS flavor to Windows, introducing a bit of the Apple operating system's signature great looks and ease of use. [find.pcworld.com/60138](http://find.pcworld.com/60138)

**DOWNLOAD AlfaClock** Windows' taskbar clock is boring and limited. Replace it with this highly customizable display, which shows (or even speaks) the date

and the day of the week along with the time. [find.pcworld.com/60139](http://find.pcworld.com/60139)

**DOWNLOAD SlickRun** If you're a Windows power user who constantly heads to the Run command in the Start menu, SlickRun can save you some time with its floating on-screen command window. [find.pcworld.com/60140](http://find.pcworld.com/60140)

**DOWNLOAD Xplorer2 Lite** The dual-pane folder viewer and display filters provided in this Windows Explorer competitor can help speed up >>



**ADD SOME MAC look-and-feel to your Windows desktop with the RocketDock app and file launcher.**



# Millions of Choices for Electronics, One Choice for Power Protection.



**When it comes to power protection, Tripp Lite has all your solutions.**

Tripp Lite offers a complete line of UPS systems, surge suppressors, power strips, cable and connectivity products and more. We also introduced the first UPS system designed specifically for personal computers, and today we protect and power electronics in all your environments, including homes, small offices and home theaters. When you want solutions for all your power protection needs, think Tripp Lite.



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UPS protection for your PC, gaming, music and multimedia systems

Surge suppression to protect all equipment against damaging surges, spikes and line noise

Premium cables for superior high-speed data transfer between all components



## Small Office Solutions Provide:

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- Surge suppression to protect computers and vital system peripherals



## Home Theater Solutions Provide:

- Battery backup, EMI/RFI line noise filtering and surge protection for all components (TVs, DVRs/DVDs, HD source components, receivers, sound systems, PCs/servers and more)
- Vital protection and performance enhancement for all components
- Premium cables for crystal-clear audio/visual connections between all components

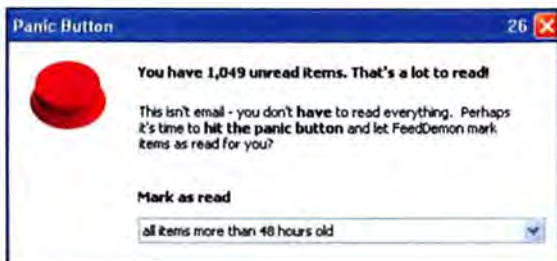
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POWER PROTECTION

[www.tripplite.com](http://www.tripplite.com)





**A COOL FEATURE:** In the FeedDemon news reader, which has recently become free, you can hit the "panic button" to instantly clear out your growing backlog of unread news posts.

major file management tasks, and you can still use Explorer whenever you want. [find.pcworld.com/60141](http://find.pcworld.com/60141)

## News Readers

**DOWNLOAD FeedDemon** It's hard to beat the polished and newly free FeedDemon when it comes to desktop news-reader features. And you can sync it with the Newsgator site to stay on top of news even when you're out and about. [find.pcworld.com/60142](http://find.pcworld.com/60142)

**DOWNLOAD RSSBandit** Some nice interface touches, such as attractive colored tabs and panels that keep their names when they collapse, make RSS Bandit a useful tool for keeping up with the news. [find.pcworld.com/60143](http://find.pcworld.com/60143)

**DOWNLOAD Feedreader** In Feedreader you can pull together news posts from all of your subscribed feeds matching one or more e-mail-like filtering rules. [find.pcworld.com/60144](http://find.pcworld.com/60144)

**DOWNLOAD Awasu Personal Edition** This program offers you several nice features, such as a quick full-screen switch for easy news reading on your desktop. The free personal edition, however, updates the content only once an hour. [find.pcworld.com/60377](http://find.pcworld.com/60377)

**DOWNLOAD GreatNews** Six different feed presentation styles, including Essay, Newspaper, and Firefox Sage, make this news reader (in beta) worth checking out. [find.pcworld.com/60378](http://find.pcworld.com/60378)

**DOWNLOAD FreeRangeFreeReader** Bring the RSS love to your BlackBerry, J2ME, Nokia, Palm OS, or Windows Mobile smart phone with this mobile news reader. The free version is limited to ten news feeds and relies on your phone's data connection; see sidebar, page 87.

anything to your computer. [feedshow.com](http://feedshow.com)

**DOWNLOAD RSS Ticker** This Firefox add-on for serious news junkies scrolls updates for your Live Bookmark feed subscriptions across the top or bottom of the browser window. Mouse over a headline for a summary, and click it to bring up the whole article in the browser. [find.pcworld.com/60380](http://find.pcworld.com/60380)

## Games

**SERVICE Splume** When you launch a green ball across the screen onto a red or blue ball in this instantly likable online game, the incompatible balls give each other the stink eye. Attach a green to another green, however, and the balls share a gaze of adoration. [splume.flashbangstudios.com](http://splume.flashbangstudios.com)

**SERVICE Excit** A fun spreadsheet. No, really. In this online game you lead a sprightly cross-hair cursor to the exit—without hurtling it off the edge of the spreadsheet game board—in order to advance to the next, progressively harder level. And each level of success you achieve provides a password you can use later to restart where you left off. [www.pixer.org/excit](http://www.pixer.org/excit)

**DOWNLOAD Command & Conquer Gold** Electronic Arts released the classic Command & Conquer Tiberian Dawn real-time strategy hit as a free download for the game's twelfth anniversary. To install the game, first burn the down-

loadable .iso files to a CD or access them with a free utility such as Virtual CloneDrive ([find.pcworld.com/60145](http://find.pcworld.com/60145)). Then follow the instructions at [find.pcworld.com/60146](http://find.pcworld.com/60146).

**SERVICE AirportSecurity** Pull an ever-changing list of prohibited items—canned cheese, a worn shirt, candy bars—from passengers' bodies and luggage quickly enough to keep the line moving in this online Shockwave game. [find.pcworld.com/60148](http://find.pcworld.com/60148)

**DOWNLOAD Dungeon Runners** Free players in this tongue-in-check, Diablo-esque MMOG (massively multiplayer online game) can't use the full range of items available to paid-subscription players, but they can still have a great time romping through the dungeons and building their own characters. [find.pcworld.com/60382](http://find.pcworld.com/60382)

**DOWNLOAD Little Fighter 2** Up to four people on the same computer, or up to eight in a network, can battle it out with fists, flung items and fireballs, and

other flashy special moves in this anime-like, manic fighting game. [find.pcworld.com/60147](http://find.pcworld.com/60147)

**DOWNLOAD Disaffected** This satirical "anti-advergame," in which players help customers in a dysfunctional FedEx Kinko's, takes a swipe at the genre of games meant to market a company or product. [find.pcworld.com/60381](http://find.pcworld.com/60381)

**DOWNLOAD Freeciv** If talk of Sid Meier's

classic game Civilization II evokes fond memories of hours lost to "Just one more turn," try this excellent free clone, which supports up to 30 network players. [find.pcworld.com/60392](http://find.pcworld.com/60392)

**DOWNLOAD f10w** Everyone wants to be an aquatic worm-creature, lazily chewing on microorganisms and evolving into something completely different, don't they? Grab a copy and get transformed. [find.pcworld.com/60391](http://find.pcworld.com/60391) ●



**IN DUNGEON RUNNERS, you collect gear and build your own skill-based character.**









## Lenovo ThinkPad X300

**BEST  
BUY**

The buttoned-up ThinkPad X300 may not have the MacBook Air's super-slim, spartan style, but from rock-solid construction to piled-in perks, this notebook offers just about everything that matters to the business traveler.

The Air and the X300 do have some similarities. They both sport 13.3-inch displays, although the X300 has a higher resolution—1440 by 900 pixels versus 1280 by 800—and with both, you can get a 64GB solid-state drive (it comes standard with Lenovo's machine, but tacks about \$1000 onto the Air's price).

The X300's keyboard is spill resistant, and the textured carbon-fiber and glass-fiber exterior is supposed to protect the innards. Unlike most ultraportables, it has both an eraserhead and a touchpad. The keyboard, with full-size keys, feels great.

The X300 is a little on the chunky side for a true ultraportable—just over an inch thick and weighing 3.4 pounds (4 pounds with an AC adapter) versus the Air's 3-pound heft. Then again, you can pop a disc in the ThinkPad's integrated, paper-thin, 3-ounce DVD drive and watch movies (the Air's optical drive is an external model), and you don't need an adapter to connect via ethernet, as with the Air.

With a 1.2-GHz Core 2 Duo L7100 processor and 2GB of RAM, it scored a 64 in our WorldBench 6 benchmark tests, outpacing the Air by a healthy 7 points. Its battery lasted for 4 hours, 22 minutes in our tests—average for ultraportables.

What the X300 lacks in style, compared with the Air, it more than makes up for with better features and more functionality.



ThinkPad X300 | Lenovo

Though the MacBook Air is thinner, the X300 is better equipped.

Street: \$2696

[find.pcworld.com/60319](http://find.pcworld.com/60319)



**INDY CAR OR laptop?** The X300's tough shell uses carbon fiber and glass fiber for strength and rigidity.



**UNLIKE MANY ULTRAPORTABLES,** the X300 has full-size keys and properly oriented arrow keys.



**MOST ULTRAPORTABLES HAVE** only a touchpad; the X300 has an eraserhead, too. The buttons for both are very comfortable to use.

PHOTOGRAPH (BOTTOM): ROBERT CAROIN

## The MacBook Air: Dreamy—and Dead Last

THE ULTRAPORTABLES IN our roundup compete with Apple's MacBook Air (in dimensions, if not in style). While we admired the Air's form and the engineering achievement it represents, in our tests it earned poor scores for performance and features. As a result, it came in seventh out of the seven models we tested. See our review at [find.pcworld.com/60192](http://find.pcworld.com/60192).





## Asus U2E

Go on, run your hands along the Asus U2E's leather-trim exterior. This ultraportable's luxurious cladding and long list of extras will make you feel like you're handling premium gear. We found other things to like about it beyond its style.

It weighs just 2.8 pounds, and its traveling weight with an AC adapter is only 3.5 pounds. It has a brilliant 1366-by-768-pixel wide-screen display. As on Sony's VAIO VGN-TZ295N, the screen is easy to view in tight spaces, though it lacks LED back-lighting. The U2E isn't as complete a package as the VAIO, but it is much cheaper, at a reasonable (for an ultraportable) \$1999.

The U2E's WorldBench 6 score of 53 put it at the middle of the pack among ultraportables that we tested at the same time, but it's still pretty slow for notebooks in general.

What saved this machine in our rankings was its endurance in our battery tests—a whopping 7 hours, 11 minutes with the larger of its two included batteries. That's more than 50 percent longer than the average battery life of the ultraportable notebooks we've tested.

As for other attractive features, the laptop provides an integrated Webcam, a fingerprint scanner, and an HDMI port for connecting the notebook to a television or to one of the few PC monitors that use that connection.

The Asus U2E is a fun, stylish, long-running notebook, and its cowhide couture—that is, its unusual leather covering and lining—is bound to turn some heads, though perhaps not the heads of die-hard Apple fans. >>

**74**  
GOOD

### U2E | Asus

Lightweight and leather lined, with very long battery life.

Street: \$1999

[find.pcworld.com/60193](http://find.pcworld.com/60193)



**SHINY, SLICK MOUSE** buttons are crammed in tightly under the touchpad, and the buttons feel cheap. The keyboard keys are smaller than standard, but still serviceable.



**WHEN A LEATHERBOUND** computer breaks down, where do you take it—a cobbler?



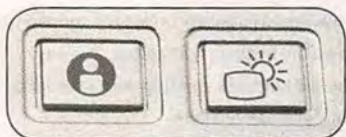
**YOU CAN CONNECT** the U2E to an HDTV with its HDMI port, but we'd rather see a FireWire port.







**A FINGERPRINT READER** and status lights accompany the sturdy but somewhat cramped mouse buttons.



**THE LEFT BUTTON** conjures a special control panel; the right one kills the backlight.



## Toshiba Portégé R500

It's a feature, not a flaw: You can easily twist the Toshiba Portégé R500's screen in your bare hands, deflecting it by an inch or so. Pressing the plastic panel on the bottom of the case underneath the hard drive makes it pop inward. The company insists that these unusual design attributes are intentional, and indeed bills both as features ensuring improved durability, but we'd still prefer a rock-hard shell.

The plastic bezel framing the 1280-by-800-pixel, 12.1-inch screen doesn't exactly come apart at the seams under such twisting, and it appears reasonably secure, but it is a little loose-fitting. I kept waiting to hear the sickening snap of plastic breaking, but the display still returned to its original shape and worked fine.

The R500 has a somewhat anemic engine (a 1.2-GHz Core 2 Duo U7500) that slogged through our tests with a score of 49 on WorldBench 6. But what the R500 lacked in the short sprint, it compensated for by staying in for the long haul, lasting a little over 5.5 hours in our battery tests, or about an hour longer than the average ultraportable notebook we've tested.

Toshiba provides all the outputs that one expects from an ultraportable laptop these days: FireWire, VGA-out, an SDHC Card slot, and a PC Card slot—heck, it even has an old-fashioned analog volume knob. Like the MacBook Air, though, it comes with only one USB port. The R500, however, also has ethernet.

Toshiba does many things right with the Portégé R500—you just can't become too bent out of shape over the twisty monitor. >>

**73**  
GOOD

**Portégé R500** | Toshiba

Toshiba's flexible laptop is lighter than Air, but perhaps too light.

Street: \$2149

[find.pcworld.com/60195](http://find.pcworld.com/60195)



**LIKE A CIRQUE du Soleil contortionist**, the screen on the Portégé R500 can be bent in ways that it probably shouldn't. Toshiba says it's supposed to do that, but we'd rather look the other way during a demonstration of its flexibility.



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# Sony VAIO VGN-TZ295N

The Sony VAIO design team must be ticked. Sony keeps producing geek-chic products like the VAIO VGN-TZ295N laptop computer we tested, and yet Apple gets all the attention with the MacBook Air. Sony deserves some recognition too; sure, Mac fans may be able to slip an Air into a manila envelope, but at least the VGN-TZ295N will let you watch DVDs without an external drive.

Roughly the size of a hardcover book and weighing 2.6 pounds (3.2 pounds with an AC adapter), Sony's tight little package comes with an 11.1-inch, 1366-by-768-pixel display that uses LED backlighting technology, giving it one of the sharpest, brightest screens of all the ultraportables we've seen. We think it matches that of the mighty MacBook Air, although the Air's display is a couple of inches larger diagonally. The VAIO's display remains as clear as day even when you are eyeballing the screen from absurd angles.

In our WorldBench 6 tests, it came in close behind Lenovo's ThinkPad X300 in performance, scoring 58 to the X300's 64. The VGN-TZ295N displayed stellar battery life, too; the notebook held out for nearly 6.5 hours in our lab tests.

Unfortunately, this notebook should come with a big fat warning label that says "Bloatware Inside!" When you launch your Web browser, it instantly opens three window tabs—one for AOL, one for eBay, and one for the SonyStyle shopping site. In addition, many of the machine's built-in applications include pitches about purchasing this or that product. To all that, I say, enough already.

This VAIO looks great, and its screen is phenomenal. But for its lofty price, we'd accept no less than perfection, and it falls just short. >>

**73**  
GOOD

VAIO VGN-TZ295N | Sony

Has a great LED-backlit screen—but is it worth the steep price?

Street: \$3500

[find.pcworld.com/60191](http://find.pcworld.com/60191)



**COOKIE-CUTTER KEYS:** As on the MacBook Air, this VAIO's keyboard uses a cut-out design with space between the keys. But the VAIO's keys are much smaller—0.2 inches smaller per key, making them difficult to type on.



**SONY SUPPLIES AN off switch for the integrated Sprint EvDO Revision A mobile wireless circuitry. It's useful for saving battery life, especially if you're beholden to another cellular carrier.**



**THE VAIO'S BEST feature:** Its LED-backlit screen is very bright, and can be seen from any angle.





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IT'S AS IF Fujitsu asked a focus group of people which hot-keys they needed. The result: buttons that link to Fujitsu's Web site, a display manager, power settings, and a tech support utility, respectively.



THE BACKWARD COMPATIBILITY of a PC Card slot means something to IT departments that have already invested in tons of accessories, such as wireless networking cards.

## Fujitsu LifeBook P8010

Fujitsu's LifeBook P8010 looks like a true business notebook; it lacks the trappings of fashion-forward models like the MacBook Air, the Sony VAIO VGN-TZ295N, or Asus's leather-trimmed ultraportables. You don't get a lot of flash for your cash, but at 2.6 pounds, the P8010 is one of the lightest laptops in this group.

The 1.2-GHz Intel Core 2 Duo SL7100 CPU proved poky in our performance testing: Its WorldBench 6 score of 50 made it the second-slowest of the group and put it about 22 percent below the average of all ultraportables we've tested. That this Vista machine came with only 1GB of RAM didn't help matters (most Vista systems we test come with at least 2GB). Thankfully, it can support up to 4GB of RAM, with a 2GB upgrade running about \$120 extra. Its battery lasted for just 3.5 hours—an hour short of the average ultraportable we've tested.

While the 12.1-inch, 1280-by-800-pixel display looks okay, it pales in comparison with the ones on the MacBook Air and the Sony VGN-TZ295N. The screen isn't nearly as crisp or bright as those units', and you have to set it at a precise angle just to get a clear view. The notebook is well equipped with ports and slots, though it doesn't have an HDMI port or an ExpressCard slot. Instead, it has a FireWire port and a PC Card slot—crucial if you have lots of wireless networking cards lying about.

The bunched-up buttons around the touchpad will make grown men cry, though *PC World* staffers with slimmer hands didn't complain about them, and they loved the big touchpad.

Fujitsu's LifeBook P8010 is an affordable workhorse, but you'll need to equip it with more RAM to make it an adequate performer. And to those prospective buyers with oversize hands: Consider yourself warned. ●



**LifeBook P8010** | Fujitsu

Least-expensive model we tested isn't ideal for people with big hands.  
Street: \$1899  
[find.pcworld.com/60093](http://find.pcworld.com/60093)



THOUGH WE LIKED the thickness of the P8010's mouse buttons, would it kill Fujitsu to make them wider and mount them closer to the edge—where our thumb is likely to be?





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\*1 Note: This figure comes from the comparison with SD30G2 - Intel Celeron 420, DDR2 512MB x 1, and 250G HD





# Does SP1 Fix Vista?

**Not really**, according to our Test Center results. Though Service Pack 1 makes Windows Vista faster on some tasks, you're better off sticking with XP. If you're already running Vista, we have some tips that will truly improve its performance.

BY SCOTT DUNN

WHEN IT COMES to Vista, the fix is in. It's just not the fix many mainstream users are looking for.

Last fall, Microsoft announced that Vista Service Pack 1 would improve the operating system's performance. The company claimed that SP1 would rev up Vista in the areas of file copying ([find.pcworld.com/60365](http://find.pcworld.com/60365)), waking from sleep or hibernation, and >>





adding or extracting files from compressed folders ([find.pcworld.com/60366](http://find.pcworld.com/60366)).

Microsoft also anticipated that SP1 would strengthen system reliability, broaden support for new hardware and emerging standards, and introduce improvements for IT administrators. We didn't attempt to gauge the validity of those claims following Microsoft's mid-March release of Vista SP1 ([find.pcworld.com/60403](http://find.pcworld.com/60403)). Instead we tested systems configured with and without Vista SP1 to see whether the promised performance gains would materialize.

### What We Tested and Why

We measured SP1's speed using our 32-bit WorldBench 6 test suite. We compared the overall performance of Vista Business with SP1 to that of Vista Business without SP1 and to that of Windows XP Professional with SP2.

Our test results indicate that where SP1 outperformed Vista, the margin of improvement was slim. What's more, we found little evidence that SP1 handled file copying better; amazingly, in many cases, pre-SP1 Vista was speedier.

Vista SP1 didn't wake from hibernation on our test desktop much faster than pre-SP1 Vista did, either—and on our laptop, it was slower to wake. SP1 did beat Vista at compressing files, but

by a tiny margin. Its only clear win over old Vista was in decompressing files—and even there, it was slower than XP.

Many *PC World* readers ([find.pcworld.com/60367](http://find.pcworld.com/60367)) have taken Vista to task for using too many system resources on its Aero environment, for trying to appeal to both business users and consumers without fully serving either group, for

**Windows XP clearly outperformed Vista and Vista SP1, with SP1 finishing second in many cases and third in others.**



problems with unavailable or limited drivers, and for general bugginess.

Unfortunately, we couldn't evaluate SP1's impact on each of those shortcomings individually, so we used our WorldBench 6 benchmark tests to gauge how well XP, Vista, and Vista SP1 performed a standard set of tasks. We found that Windows XP still outperforms Vista—with SP1 or without—by a wide margin. SP1 finished second in many cases and third in others.

Given those results—and in view of

the bug fixes SP1 delivers—current Vista users should take the free service-pack upgrade. But if you still use XP, you may want to stick with it for now.

### How We Put Windows to the Test

We conducted three types of performance evaluations: automated WorldBench 6 tests, hand-timed tests for file management and waking from hibernation, and video frame-rate tests using popular games. We ran WorldBench 6 with Windows XP Professional SP2, Windows Vista Business, and Vista Business SP1 on a higher-end desktop and a low-end but Vista-ready laptop. (See "WorldBench 6 Results: XP vs. Vista vs. Vista SP1," below, for each system's specs.) We ran each test three times, and then averaged the scores. To learn how our WorldBench 6 tests work, visit [find.pcworld.com/60370](http://find.pcworld.com/60370).

To test video, we measured the frame rate (in frames per second) that each system could handle from two games, Doom 3 and Far Cry. We ran tests with antialiasing on and off, and at the 1024 by 768 and 1280 by 1024 resolutions.

Finally, we ran hand-timed tests to measure file copying, file compressing and decompressing, and recovery time from hibernation on both systems.

PCW Test Center

## WorldBench 6 Results: XP vs. Vista vs. Vista SP1

VISTA SP1 OUTPERFORMED plain Vista in some tests, but not in all and not by much. What's more, XP outscored both Vistas overall.

TESTED SYSTEM	Windows version	WorldBench 6 overall score	WorldBench 6 application tests (in seconds)			
			Photoshop CS2	Firefox 2	Multitasking	Nero
DESKTOP						
Polywell P3500B 3-GHz Intel Core 2 Duo E8400 CPU, 2GB RAM, nVidia GeForce 8800 GT graphics card, Seagate ST3500630AS (500GB) hard drive	XP Professional SP2	131	340	146	188	483
	Vista Business	118	330	190	236	427
	Vista Business SP1	120	327	190	234	445
LAPTOP						
Acer TravelMate 5520 1.9-GHz Turion 64 X2 TL-58 CPU, 1GB RAM, ATI Radeon Xpress 1250 graphics card, Hitachi HTS541612J9SA00 (120GB) hard drive	XP Professional SP2	64	905	362	434	934
	Vista Business	55	1814	453	577	1588
	Vista Business SP1	55	1645	453	570	1718

NOTE: Tests conducted by the PC World Test Center. Results in bold red are the best for that test and system. For details on how we test, go to [find.pcworld.com/60103](http://find.pcworld.com/60103). All rights reserved.



## XP Wins Convincingly

As the composite scores indicate, XP outperformed both Vista and Vista SP1 on our automated WorldBench 6 tests by a significant margin, on the desktop and again on the notebook. Vista SP1 finished slightly ahead of plain Vista on the desktop test bed, but managed only a tie with it on the laptop.

In the areas where Service Pack 1 improved on pre-SP1 Vista's performance, the gains were far from dazzling.

In our desktop WorldBench 6 tests, XP, which dominated most of the results, finished last on a couple of measures: the Nero CD-burning test and the Photoshop image-effects test. The latter marked the only time Vista SP1 emerged as the clear winner.

In the Nero test for desktops, Vista ran 4 percent faster than Vista SP1 and 12 percent faster than XP.

On the laptop, XP had the best score on every test. The laptop results indicate that, as we expected, XP is the better choice for lower-power PCs.

On both test beds we used, the SP1 results were frequently the same or extremely close to the results for Vista. But the Photoshop and Firefox tests showed little consistency in scores between the desktop and laptop PCs running the two Vistas. Hardware differences definitely influenced the outcome.

## Windows, Do You Copy?

The file-copying tests yielded a hodgepodge of results that didn't radically favor any particular OS. According to Microsoft, Service Pack 1 improves the operating system's file-copying times; but in several of our tests, plain old Vista beat Vista with SP1. Vista without the update was about 10 percent faster than Vista with SP1 at copying a .zip file over a network, for example.

Results differed when the files being copied were scattered across the hard drive; in those tests, which measure both throughput and access time, SP1 outperformed original Vista by a few seconds on the desktop. XP finished last, trailing the winner by 15 seconds.

PCW Test Center

## SP1 Copied **Faster** in Only **One** Case

SP1 SHOWED SOME speed at compressing and copying, but Vista outshone it elsewhere.

TEST	Windows version	Time to complete task (in seconds)	
		Desktop	Laptop
Extracting files from a compressed folder	XP	75.4	153.4
	Vista	256.1	345.9
	Vista SP1	166.6	160.2
Copying several files over a network	XP	255.9	288.6
	Vista	271.3	291.8
	Vista SP1	286.1	311.8
Copying a large .zip file over a network	XP	244.2	246.6
	Vista	214.8	214.1
	Vista SP1	239.7	245.4
Copying several files on a local drive	XP	140.9	294.5
	Vista	129.7	261.7
	Vista SP1	125.5	270.4
Copying a large .zip file on a local drive	XP	105.2	229.9
	Vista	91.9	188
	Vista SP1	109.7	232.4

NOTE: This is a sampling of all hand-timed test results. Lower times are better. For all results, see [find.pcworld.com/60399](http://find.pcworld.com/60399).

On the laptop, however, pre-SP1 Vista came in first, by several seconds.

Access time played a lesser role when we copied a 3.06GB .zip file on a local drive. On the desktop computer, Vista was about 13 percent faster than XP and about 16 percent faster than SP1. On the laptop, Vista was 18 percent faster than XP and 19 percent faster than SP1. At copying .zip files, original Vista outshines both XP and SP1.

SP1 took top honors in only one heat of our hand-timed evaluations: the multi-copy test on the desktop—and that by a negligible margin over plain Vista.

In compression tests, SP1 did improve on Vista's performance, but XP stole the show. Vista took three times as long as XP to extract files on the desktop, and SP1 took twice as long.

SP1 also outran Vista when adding files to a compressed folder, but only

by about 2 percent. XP narrowly won the competition on both test systems.

In our hibernation tests, SP1 woke up faster than Vista by less than a second on the desktop and by 3 seconds on the laptop. As in the compression tests, XP took first place on both test systems, but its margin of victory over SP1 was narrower on the desktop system (2 seconds) than on the laptop (9 seconds).

## The Frame Game

Gamers have complained that Vista hampers game play, and our tests confirm that XP is substantially faster than either Vista version on games. SP1 had almost no gain over original Vista.

In frame-rate tests on the desktop PC, XP bested both versions of Vista every time. On the Doom 3 tests, antialiasing usually had a slightly negative effect on Vista's performance, but antialiasing >>



scarcely made a difference to XP. In the desktop Doom 3 tests without antialiasing, XP's frame rate was about 14 percent faster than that of second-place SP1; with antialiasing turned on, XP's frame rate was about 14 percent faster than that of second-place Vista. In the Far Cry tests, Vista and Vista with SP1 improved a bit with antialiasing turned on. Antialiasing degraded XP's performance on the Far Cry test, though XP still won handily on every test.

Our test laptop wasn't built for gaming. XP, Vista, and SP1 fared about the same; SP1 and Vista bested XP in Doom 3 and matched XP in Far Cry. But the frame-rate counts were very low for all three, ranging from 2 to 7 fps with antialiasing and 10 to 25 fps without.

As these tests show, graphics performance depends greatly on hardware and on the OS. So how do you know whether your current (or next) PC's graphics

PCW Test Center

## Got Games? Stick With XP

OUR CHART SHOWS what gamers already know: XP blows Vista away.

Windows version	Gaming test frame rates (in frames per second)			
	Doom 3		Far Cry	
	No antialiasing	With antialiasing	No antialiasing	With antialiasing
XP	195.7	195.5	253.7	231.6
Vista	173.4	168.4	206.6	213.7
Vista SP1	176.4	169.3	207.7	208.7

NOTE: Desktop tests at 1280 by 1024 resolution. Higher numbers are better. For all results, see [find.pcworld.com/60399](http://find.pcworld.com/60399).

card is up to snuff? To figure that out, follow the "See if your hardware is slowing you down" tip on page 109.

### The Rock-Bottom Line

It's not unusual for an OS designed for older, slower PCs to test well; newer operating systems tend to have more sophisticated features designed for more-powerful machines. For example, Vista's Aero environment requires a lot

more graphics power than XP's interface does. But our tests also indicate that Vista SP1 doesn't improve markedly over the original Vista—even when both are installed on a high-powered PC with components built to run the new OS efficiently. SP1 did outperform plain Vista in a few areas, but not in any jaw-dropping way. What's more, the service pack's poor performance in many areas compared with Windows XP

## What We Really Want From Our Relationship With Vista

FROM THE  
PCW  
FORUMS

### Dearest Microsoft,

We need to talk. We, the people of the PC World forums and the Vista user base, waited patiently for Vista to finally come out. We believed you when you said Service Pack 1 would fix most of Vista's shortcomings. Then we waited patiently again for SP1 to arrive.

And now, well, we're sick and tired of waiting—not just for Vista to get better, but for our Vista PC to finish booting up. And after waiting that out, we're fed up with having to "allow" various things to happen by clicking pop-up screens.

The thing about pop-ups is that we pay attention to them only when they're unexpected. In Vista, they cry wolf so abundantly that we start clicking 'Allow' by default, which leaves us no more secure than we'd be without pop-ups. That's why many of us disable the pop-ups in our User Account Control settings.

But it's not all about security. We especially don't like pop-ups that obstruct us from rearranging our Start menu and ask us if we're sure we want to do anything. Trust us, we're sure.

It's almost like you don't trust us. Now, we don't blame you for being a little paranoid because of past Windows attacks. But what about the good guys who just want to get stuff done?

Just ask "Evildave" of the PC World forums. He's frustrated because he can't tweak Vista's Registry, even when he's logged in as an administrator. In fact, Evildave got so frustrated by Vista

that he dumped Windows—not for a Mac, but for Ubuntu Linux.

Meanwhile, "Lilxkid24" is irked by the lack of drivers for his gear, by the drop in frame rates between XP and Vista, by the constant RAM-hogging even when his PC is idle, and by the lack of compatibility with older software and games. He has a laundry list of gripes on the PC World forums. You should take a look.



Don't get us wrong. We want to love Vista. In fact, we *do* love parts of Vista. Senior Editor Yardea Arar, for example, loves the pop-up previews of pages in the taskbar and the seamless way Vista syncs with her Windows Mobile devices. Senior Writer Darren Gladstone loves Vista's integration with his Xbox 360. Working as a Media Center Extender, it tracks sports stats while he watches a game—though he longs for better native video codec support over his Xbox 360 for viewing AVI files.

Vista just isn't what we want it to be after buying a system with enough RAM, battery life, and processing power to run it.

Basically, we want XP back. We liked XP. Can you hook us up? Love,

**A large portion of the Windows user base**

This "open letter" is based on forum comments posted in response to our request for Vista gripes (see [find.pcworld.com/60401](http://find.pcworld.com/60401)). For more user feedback on Vista, visit [find.pcworld.com/60367](http://find.pcworld.com/60367).

—Tim Moynihan



shows that Vista is still playing catchup.

Unfortunately, you may not be able to avoid Vista forever. Windows XP is slated to disappear from shelves in June, along with the last new computers that have XP installed at the factory.

In addition, as computer makers direct

more resources toward Vista, customers will be harder-pressed to find XP-compatible drivers for new hardware components. So if you want an XP system that will last as long as possible, you need to start your shopping today while such PCs are still available.

## Rev Up Vista on Your Own

SERVICE PACK 1 may not give your system much more oomph, but you have other ways to speed Vista up. Spending a few minutes (or a few dollars) optimizing your Vista PC can help it get its groove on.

**Get flashy:** If you have an extra USB flash drive that you don't use for much else, Vista can cache disk reads on it, thereby boosting performance beyond what you'd get from your hard disk alone. Simply insert the flash drive into an available USB 2.0 slot. If the drive is fast enough, a prompt will appear, asking whether you want to open the folder for the drive or use it to 'Speed up my system using Windows ReadyBoost' (see the screen shot above right). Choose the latter option, and follow the remaining prompts. When you're calculating how much space to set aside for ReadyBoost to use, Microsoft recommends that you let ReadyBoost use one to three times the amount of RAM on your system.

**Play your cards right:** USB thumb drives aren't the only way to boost system performance—fortunately, since USB memory sticks protruding from a computer (particularly a laptop) are easy to dislodge, and they can be a pain to remove and stow for traveling. If your PC has a reader for SD Card or CompactFlash media, you can use either of those cards in place of a USB stick to handle your ReadyBoost needs.

**Seize control:** Speeding up Vista isn't enough; you need to prevent the OS from slowing you down. The annoying Vista pop-ups that ask you to 'Allow' or 'Deny' many actions are examples of Vista's User Account Control at work.



**GET YOUR CACHE** value by plugging a seldom-used USB flash drive in your system and letting Vista do the rest to improve performance.

The process makes you safer, but your productivity may suffer if you must constantly respond to UAC's demands. For ways to reduce the intrusiveness of this feature, see "Annoyance Buster:

Make Vista's User Account Control Work for You" (find [pcworld.com/60397](http://pcworld.com/60397)).

**See if your hardware is slowing you down:** In Explorer, right-click *Computer* and choose *Properties*. Next to 'Rating', click *Windows Experience Index*. The item with the lowest score is the biggest drain on your getting a better Vista experience. For example, if the lowest score is attributed to Graphics, it may be time to invest in a new graphics card.

**Sideline Sidebar:** If you don't need the little "gadget" doodads in Vista's Sidebar, get rid of them. Right-click the Windows Sidebar icon in the taskbar tray and choose *Exit*. Then

open the Control Panel and launch *Windows Sidebar Properties* in the 'Appearance and Personalization' category. Uncheck *Start Sidebar when Windows starts* and click *OK* (see the screen shot below).

**What would Windows do?** If you have an older or less capable video card, click *Start*, type *systempropertiesperformance*, and press <Enter>. Click *Continue* if prompted by User Account Control. Select *Adjust for best performance*. Or cherry-pick the options you can't live without. (Fewer check marks mean better performance.) Click *OK*.

**Dis-Service yourself:** Don't let unneeded software components waste memory or put a ball-and-chain on your Windows startup. Click *Start*, type *msconfig*, and press <Enter>. Confirm if prompted by User Account Control. But be careful! Click the *Services* tab, and uncheck only the services you're certain you don't need. To be safe, uncheck one, reboot, and see if everything still works fine before moving on to another. Do your homework via online help or a Web search before experimenting!

Here are some services that you might be able to do without: If you don't work interactively with a remote computer, don't run programs from >>



**SAYONARA, SIDEBAR!** Prevent gadgets from slowing down an already sluggish system by preventing Sidebar from starting with Windows.



a server, and don't need Remote Desktop, uncheck *Terminal Services*. If you can live without Windows diagnostic and troubleshooting services, uncheck *Diagnostic Policy Service*, *Diagnostic Service Host*, and *Diagnostic System Host*. If you don't want Windows to index your files for searching, uncheck

*Windows Search*. Other Services options to consider disabling include 'Fax', 'Offline Files', 'Smart Card', 'Smart Card Removal Policy', 'Themes', and 'Windows Error Reporting Service'.

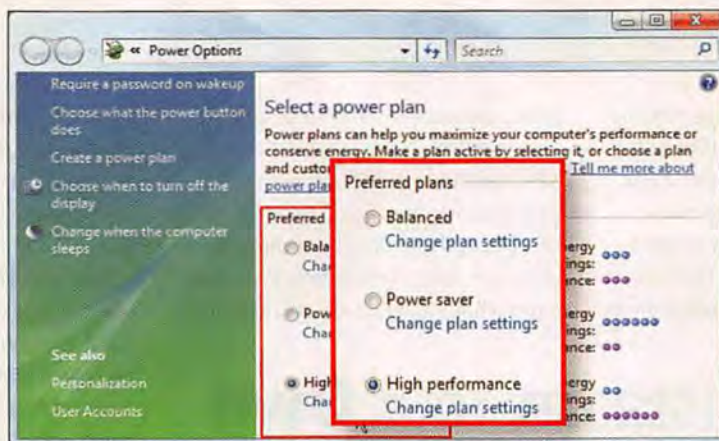
**Keep your disk in shape:** The same advice you've heard for years is true for Vista, too: Delete the useless clutter on your hard disk and defragment it. To do the

former, click *Start*, type *Cleanup*, and press *<Enter>*. Specify the drive and files to clean and click *OK*. You may need to repeat the steps for multiple drives. To defrag your drives, click *Start*, type *Defragmenter*, and press *<Enter>*. Use this dialog box to set up the utility to defrag your disk regularly at a time when you are away from your system. Vista has an

automatic defragmenting feature that may kick in at inopportune moments; scheduling your defrags will help ensure that these operations don't occur while you're working.

**Be a power pig:** If you don't mind spending more, you can boost your system's performance by adjusting its power options. In the Control Panel, launch *Power Options* in the 'System and Maintenance' category. Select *High Performance*, close the dialog box (see the screen shot above), and prepare yourself for a higher electric bill.

**Keep on tweaking:** For still more performance tweaks, check out my article "Shift Any Version of Windows Into High Gear" ([find.pcworld.com/60398](http://find.pcworld.com/60398)). ●



**MORE ENERGY MEANS faster computing.** To kick things up a notch, use the 'High performance' choice in the Power Options control panel.

## Will Windows 7 Be the Vista You've Always Wanted?

MICROSOFT IS KEEPING details of the next version of Windows close to its vest. But recent company moves and revelations hint at what we may see in the next operating system, code-named Windows 7 and due for release in late 2009 or early 2010.

At its recent MIX 08 conference in Las Vegas, Microsoft unveiled Internet Explorer 8, technology that likely will be a part of Windows 7, though Microsoft hasn't linked the two products yet.

Microsoft demonstrated IE 8, showing mainly developer improvements, but also some new end-user features. One, "Activities," lets users highlight any word or phrase on a site and then choose from a drop-down list of actions to take using that term, such as doing a Live Search or searching MSNBC for information. (For more on IE 8, see page 30.)

Aside from IE 8, little about Windows 7 is on the record, and the word from Microsoft is that the company will talk about the OS when it's good and ready. But analysts warn against expecting Windows 7 to be a blockbuster release, given the fallout Microsoft endured for its late and, to many, disappointing Windows Vista.

Mike Cherry, an analyst with Directions on Microsoft, says that for Windows 7, Microsoft's developers will likely keep the frilleries to a minimum. Doing so will allow them to deliver "something reasonable they can complete by a reasonable date," he says. "Their goal will be to try to put Vista behind them."

Recent court papers in a class action suit over Microsoft's Vista Capable sticker program (see page 45) revealed that even Microsoft executives were having driver- and application-compatibility problems with Vista after its release. In those papers, executives made statements to the effect that the delays and problems that accompanied Vista's rollout won't happen again.

Microsoft is still struggling to persuade businesses to move from XP to Vista, in light of its compatibility problems and hardware requirements. Some business users have suggested that companies may skip Vista altogether and hold on to Windows XP for a little longer before migrating directly to Windows 7.

To remedy these problems, Cherry says, Microsoft should focus on making Windows 7 a stable release for business customers, based on the same code used in the recently released Windows Server 2008. He believes that Microsoft's mistake with Vista was to try to serve both private consumers and business customers with a flashy release that added a host of multimedia functionality at the expense of practical considerations such as performance and compatibility. "What we really need [is] for a business edition to be built off of that server code, so it would look much less fancy than Vista—much more austere with not a lot of wasted functionality," Cherry says.

—Elizabeth Montalbano





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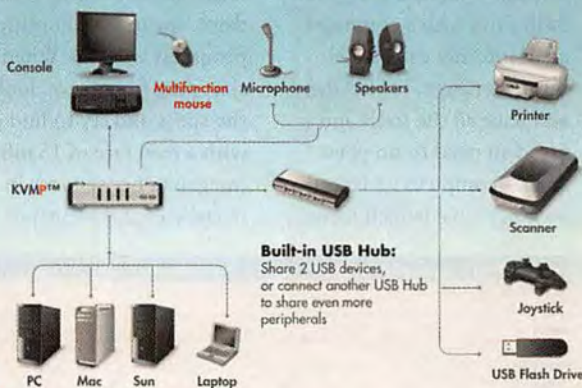
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# Here's How

## Carry a Portable Computer in Your Pocket

With a USB keychain drive and a little forethought, you can take a personalized computer everywhere and leave your laptop at home.

BY SCOTT DUNN

A LAPTOP IS a handy thing to have, but lugging one around everywhere can be downright inconvenient. Fortunately, one solution fits right in your pocket: the ubiquitous USB flash drive (aka keychain/thumb drive).

With the right device and software, you can plug your flash drive into a computer at an Internet café, hotel business center, or elsewhere, and have all the tools and files you need to do your work—complete with your own personal launch menu.

Sure, you can use online applications such as Google Docs or Zoho Office, but a flash drive allows you to carry a much wider assortment of the programs, utilities, and other fun doodads you've come to depend on.

Here's everything you need, from hardware to software and beyond, to get going in pocket computing.

### Harness the Right Hardware

To begin with, you need a good flash drive. Consider these tips before you buy.

**Take a drive on the reading edge:** The faster your flash drive, the more smoothly programs will run. When shopping for a drive, look at the specs and try to find one with a read rate of 15 mbps (megabits per second; in megabytes, 1.9 MBps) or

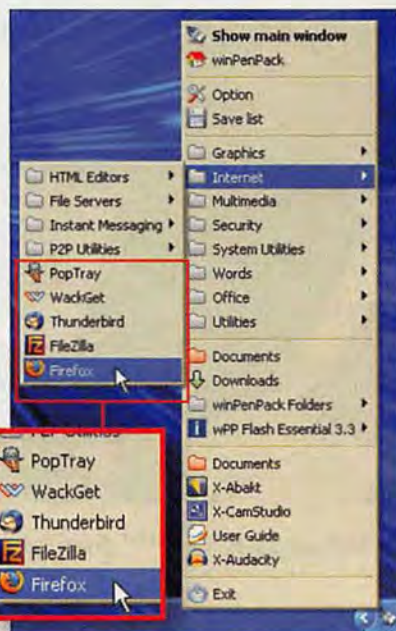
faster. If you already have a flash drive, you can evaluate its speed by using a free utility like HD Tach for Windows (find, [pcworld.com/60197](http://pcworld.com/60197)).

**Look for high-speed USB:** A USB 2.0 flash drive performs much better than a USB 1.x one. Make sure the drive you select specifies USB 2.0 or "high-speed USB."

**U3 or not U3?** Some flash drives (notably those from SanDisk) are labeled "U3" and can accommodate applications that use a proprietary format for USB drives. Such

drives usually come with a built-in pop-up program launcher called LaunchPad and a few programs, or they at least link to a Web page for downloading and installing free and for-pay U3 apps. SanDisk claims that only U3-compatible programs will run on such a drive, but I had no problem running U3 and non-U3 programs side by side on the same device. (Don't expect your non-U3 applications to show on the U3 launch menu, however.)

With so many portable applications available from various free sources these days, you don't necessarily

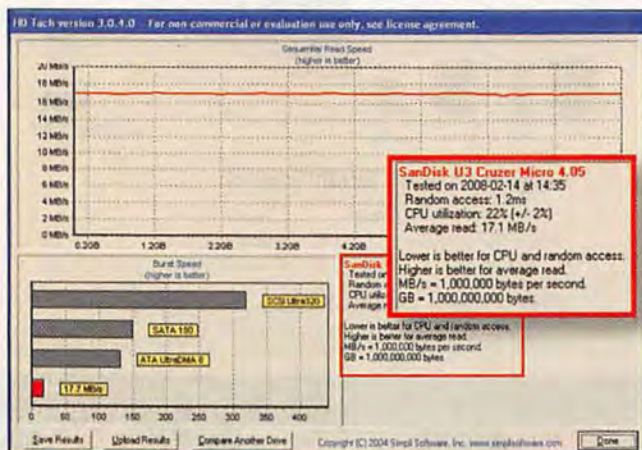


**INSTALL A VARIETY** of programs all at once with a suite like winPenPack (shown) or PortableApps, made for USB drives.

have to get a U3-equipped drive. If you do own one, you can either take advantage of the LaunchPad feature and its various apps or find utilities for removing U3 LaunchPad software from SanDisk drives (find, [pcworld.com/60198](http://pcworld.com/60198)) and from non-SanDisk drives (find, [pcworld.com/60199](http://pcworld.com/60199)). If you change your mind about such removal, SanDisk has a free tool for getting the software back (find, [pcworld.com/60200](http://pcworld.com/60200)).

### Snag the Best Apps

Once you have the flash drive of your choice, it's time to stock up on the



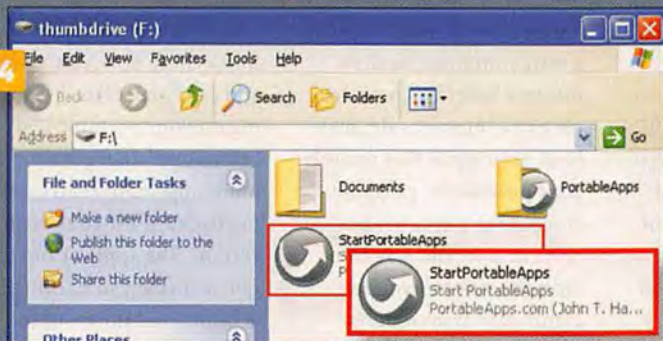
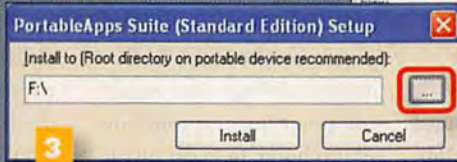
**POKY FLASH DRIVES** mean poky performance for portable apps. Benchmarking utility HD Tach gives you the bad (or good) news.



# Install PortableApps on Your Thumb Drive

A PACKAGE LIKE PortableApps may be all the software you need on your USB drive. Here's how to install it.

1. Insert a blank USB keychain drive into an open USB port on your computer.
2. Download PortableApps Suite Standard from [find.pcworld.com/60201](http://find.pcworld.com/60201) and double-click the executable file therein to begin the suite's installation.
3. Click the "..." button to the right of the "Install to" field to select your thumb drive; then click *Install*.
4. After about 15 minutes or so, the installation should be complete, and the progress bar will close automatically. Double-click your drive from the My Computer window, and then double-click *StartPortableApps* to open the application launcher.
5. You can now get started right away with Firefox, Thunderbird, the OpenOffice.org applications, and more. Or you can click *Options* to download and install additional applications for portable devices.



tools you'll need when you are away from your regular system. The term "portable software" usually refers to an application that can run from a single folder (usually on a removable device) without adding any files or Registry entries to the host system. Although this leaves out traditional behemoths such as Microsoft Office or Adobe's Creative Suite, you can still find a lot of handy,

useful software that meets the portable requirement.

**Your suite is waiting:** If you want an all-in-one package of basics—spreadsheet, word processor, graphics—you can have your pick of portable suites, all completely free (in some cases, donations are accepted).

An excellent collection is PortableApps, which comes in two sizes: the 260MB Standard ([find.pcworld.com/](http://find.pcworld.com/60201)

[60201](http://find.pcworld.com/60201)) and the 105MB Lite ([find.pcworld.com/60202](http://find.pcworld.com/60202)). The Standard version has a portable version of the OpenOffice suite, while the Lite version contains the AbiWord word processor instead. Both versions include an antivirus program, a Web browser (Mozilla Firefox), an instant messenger (Gaim), a sudoku game, a calendar and task manager (Mozilla Sunbird), and an e-mail cli-

ent (Mozilla Thunderbird).

You can find another all-in-one free collection in winPenPack ([find.pcworld.com/60203](http://find.pcworld.com/60203)). The winPenPack suites come in more flavors than PortableApps does—Essential, 1Gb, School, Game, Web—and you even have an option to make your own. You can also download individual applications. The offerings fall into a wide range of categories, from >>



# Here's How

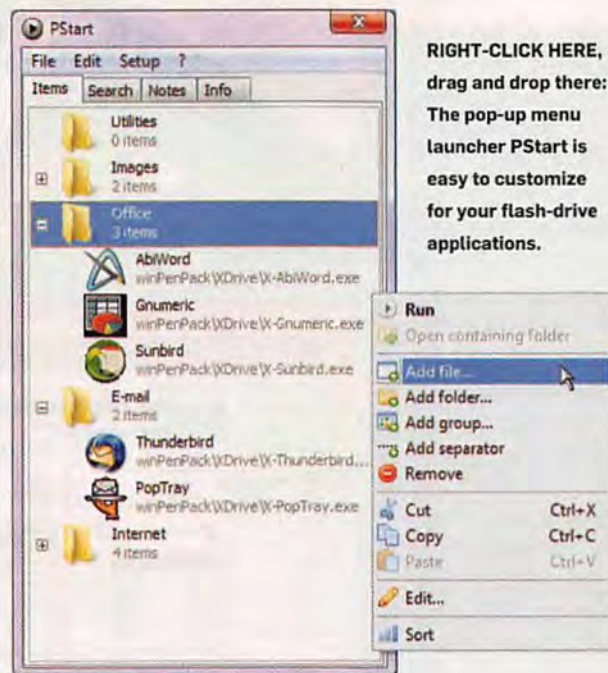
office, Internet, graphics, multimedia, and development to security, system, and utilities. The choices include considerable overlap with PortableApps; both offer Mozilla and OpenOffice products, for example.

**What's for launch?** Running your portable applications will be easier if you have a pop-up menu launcher. You'll find one on U3 flash drives, as well as in both PortableApps and winPenPack. In each case, an icon appears in the taskbar tray (the icon-studded area near the clock); click it to see a Start-menu equivalent that lists the applications on your flash drive.

Personally, I find the winPenPack launcher the most flexible and the easiest to customize. You can download winPenPack Launcher separately (go to [find.pcworld.com/60204](http://find.pcworld.com/60204)). If those launchers don't meet your needs, you can try still another free portable-app launcher, Pegtop Software's PStart ([find.pcworld.com/60205](http://find.pcworld.com/60205)).

**Roam the lands of the free:** Big collections are not the only place to find portable apps. Sometimes you can discover a portable version of your favorite program just by going to your usual search engine and entering the application name and then "portable" as keywords.

Other good places include sites like Portable Freeware ([www.portablefreeware.com](http://www.portablefreeware.com)) and the portable-freeware section of Ned Wolf's Absolutely Free Software site ([nedwolf.com/Freeware-Portable.htm](http://nedwolf.com/Freeware-Portable.htm)). Another site where you can find a portable sec-



**RIGHT-CLICK HERE, drag and drop there:** The pop-up menu launcher PStart is easy to customize for your flash-drive applications.

tion is Snapfiles.com.

Finally, try entering the keyword "portable" in the search box of your favorite software download page—for example, at (where else?) [www.pcworld.com/downloads](http://www.pcworld.com/downloads).

## Do Right by Your Data

Whether you carry work files with you on your flash drive or store them online, you still must take a number of precautions to protect those files—and your privacy and your computers—from harm, whether accidental or malicious. Keep in mind the following steps for maintaining such security.

**Scan for safety:** Since using your USB drive on an unknown computer exposes the drive to additional risks, be sure to install both antispyware and antivirus software as part of your set of portable

applications. As an extra precaution, scan the flash drive itself from your regular computer the next time you return home to make sure it didn't pick up any malware.

**Use common sense:** Because a host computer, such as one in a hotel business center or an Internet café, may have keyloggers that record your passwords, portable computing can never be 100 percent safe. But you can limit the risk by avoiding credit-card transactions when using your portable system on another machine. And it goes without saying that you should avoid online banking in such situations.

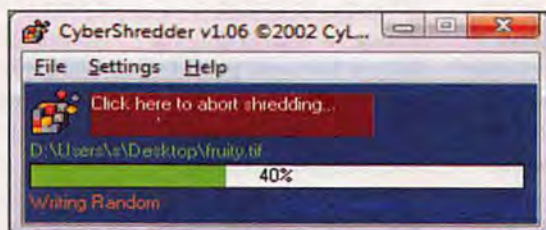
**Shred it; don't sweat it:** If you

are working on sensitive documents, you should keep them encrypted while they reside on your flash drive. The open-source tool TrueCrypt ([truecrypt.com](http://truecrypt.com)) and the freeware archiving program IZArc2Go ([find.pcworld.com/60206](http://find.pcworld.com/60206)), for example, both have encryption features that run on a flash drive.

In most cases, you'll have to copy documents out of the encrypted folder or container before working on them, and then copy them back when you're done. For added security, use a shredding application to destroy the work copies (after you have put a copy back in the encrypted folder, of course). CyberShredder ([find.pcworld.com/60207](http://find.pcworld.com/60207)) and UltraShredder ([find.pcworld.com/60208](http://find.pcworld.com/60208)) are two free portable utilities that do the job.

**Back up your portable, too:** Since these devices are small and easily misplaced, backing up your portable USB "computer" is arguably even more important than creating backups for your main system. The applications are much smaller, so backing up is faster, and the resulting files take less room on your backup drive. All of the suites mentioned above include backup utilities.

Of course, you don't really need such a utility; you can always just use Windows Explorer to drag and drop the contents of your flash drive to a backup disk. The important thing is to do it regularly.



**KEEP SENSITIVE FILES private—shred work copies with a utility like CyberShredder after working on a public computer.**



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T8100 3MB L2 Cache, 2.10Ghz	\$ 1035



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[illegible]



## Sync iTunes With Your Non-iPod Media Player

SO YOUR IPOD went to that electronics graveyard in the sky, and you replaced it with a non-Apple player. But your music library still sits inside iTunes, complete with painstakingly crafted playlists that you'd rather not lose. Do you have to switch to another music manager and re-create your playlists?

Not if you download iTunes Sync ([find.pcworld.com/60213](http://find.pcworld.com/60213)). This free Windows utility syncs any iTunes playlist to non-Apple players. Install iTunes Sync, fire up iTunes, and plug in your player. Right-click the iTunes Sync icon in the system tray, and choose *Configure MP3 Players*. Click *Add*, give your player a name, and



**WITH ITUNES SYNC**, sending songs to your non-iPod player is as easy as selecting the device and clicking *Sync MP3 Player*.

click the button next to *MP3 Player SubFolder to Sync to*.

One caveat: iTunes Sync currently works only with players that receive a drive-

letter assignment when you plug them in—a category that includes phones such as the BlackBerry Pearl and the Motorola Razr V3.

After selecting the desired sync folder on your player, choose a folder structure (indicating how you want copied songs to be organized) and the iTunes playlist you want to sync with. If you want more than one playlist, you can use iTunes' smart-playlist feature to create a new playlist that includes the ones you want; you then choose that playlist to sync with your player.

After making those selections, close the config window, right-click the iTunes Sync icon again, and choose *Synchronize MP3 Player*. Click the *Sync* button and sit back while your playlist breaks free of its iTunes shackles.

—Rick Broida

### ANSWER LINE

### SEND QUESTIONS TO ANSWER@PCWORLD.COM

**?** How do I remove a USB drive if Windows says that it isn't safe to do so?

Stan Grant, Lodi, Ohio

INSTEAD OF EXPLAINING why a drive can't be safely removed, Windows simply recommends—via a dialog box—that you wait and try again, and that often works. But while you're waiting, check your taskbar and system tray for apps that might be running files off the USB drive. Close any such programs, as well as any apps that were running files from that drive, even if you've already closed those files.

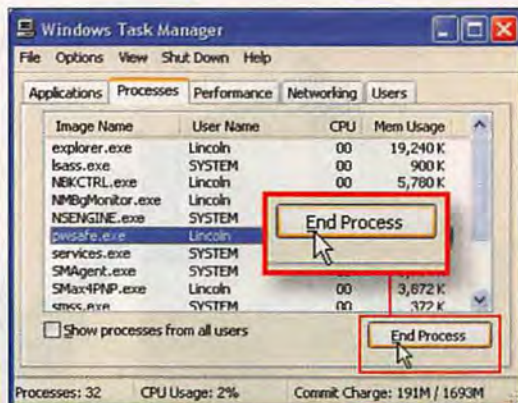
Still no luck? Try Task Manager:

1. Press <Ctrl>+<Alt>+<Delete>. In Vista, follow that by clicking *Start Task Manager*.
2. Click the *Processes* tab.
3. Examine the list of processes, looking for anything that could be from that drive—a process with a name similar to that of one of the files on the drive, for instance.
4. If you do find such a process, select it, click the *End Process* button, and then confirm your decision when prompted.
5. Try removing the drive again.

If Windows still won't let you remove the drive, it's time for desperate measures. Here are two:

1. You can shut down your PC, remove the device, and then reboot. It works, but it's time consuming and annoying.
2. You could take a deep breath and just pull the stupid thing out. I know, I'm not supposed to tell you that. It's bad advice. But I've done it more times than I'd care to admit, and it has never backfired on me. I can't guarantee that it won't backfire on you, however. And don't even think about attempting this if your external drive is NTFS-formatted.

If those solutions don't help, here's another one you can try. Download and install USB Safely Remove ([find.pcworld.com/60209](http://find.pcworld.com/60209)). This \$20 shareware program puts its own icon in the system tray in



**USE TASK MANAGER** to locate any processes that may be running from your USB drive, and click *End Process*.

place of Windows' remove icon. When it can't safely close a drive, it shows you what processes are causing the problem and allows you to stop them.

USB Safely Remove has other cool features, too. You can rename your USB devices, set up a hot-key to stop a particular device, and set autorun options.

—Lincoln Spector



# systor

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## See HD Video on Your TV With a Media Center Extender

YOU'VE JUST BOUGHT a shiny new HDTV set and you're loving the quality you get from digital cable and DVDs. If you also have HD video on your PC, whether downloaded from the Internet, recorded with a TV tuner, or imported from your HD camcorder, you're in luck: You can send it from your computer to the TV through a Media Center Extender for the ultimate digital entertainment experience.

For this article, we used the \$300 Linksys DMA2200, one of a new generation of extenders (for a review, see page 72). This unit adds a 1080p upscaling DVD player to the \$250 DMA2100 extender; if you already have a progressive-scan upconverting DVD player, though, the DMA2100 is all you need.

To get up and running with your Media Center Extender, start by plugging it into an HDMI or component video port on your HDTV, then run through a few configuration screens to set up your TV resolution and aspect ratio, plus the type of network you will use (wired or wireless). If your network is wireless (as most home networks are), you will also need to choose your network and encryption settings. All of this is easy to navigate with the included remote.

Finally, you'll be presented with a key to type into Windows Media Center on your PC so that the application can recognize the extender. In our case, Vista automatically recognized the extend-



WITH A MEDIA Center Extender networked to your PC, you can view high-definition video on your TV through a Media Center interface.

er and popped up a 'Found new hardware' balloon to prompt us. Click the balloon to complete the setup, and enter the key that you received from the extender.

Once Windows Media Center connects to your extender, you'll need to set up the media folders you want the extender to be able

to access. Media Center will then check the quality of your network connection, which is vitally important for smooth HD streaming.

This step is where things fall apart for many users, since most people still use 802.11g Wi-Fi at home; in that configuration, most extenders will barely function. Switching to wired ethernet on the PC side yields a slight improvement, but the arrangement still won't work for HD video. In our trials, we swapped our old 802.11g router for an 802.11n model, which finally gave us near-acceptable performance on the 2.4-GHz band, and perfect performance on the 5-GHz band. (The extender includes dual-band 802.11n Wi-Fi.)

Once you clear the network hurdle, your extender will offer you a wide selection of Internet content and movie downloads as well as whatever media is on your PC or a network drive. Some of those offerings—such as Vongo's movie service—come at a premium price.

—Becky Waring

### MEDIA CENTER ALTERNATIVES

## Digital Entertainer and Apple TV

IF YOU HAVE Windows XP or Vista Home Basic, you won't be able to use a Media Center Extender with your PC, but plenty of HD-capable options are ready to fill the gap for you, such as the Netgear Digital Entertainer HD (find.pcworld.com/60345; around \$350) or the Apple TV (find.pcworld.com/60369; \$299 list for the 40GB model). Both of these devices will grab video, music, and photos from networked PCs and play them back on an HDTV. The Netgear supports up to 1080i playback, while the Apple TV supports up to 720p. Both have HDMI ports and built-in Wi-Fi networking, but they vary widely in other features.

The Netgear system has the advantage of being able to play back media stored on NAS drives as well as on multiple PCs on your home network, so you could keep your photo and audio libraries on a shared network storage drive while using your PC as a DVR to record TV shows. The Apple TV has its own 40GB or 160GB internal drive, but you must stream the content from iTunes on your PC or download content directly from the iTunes Store, so it's not as versatile as other devices. Aside from its simple graphical interface, the main reason to buy an Apple TV would be to view iTunes content.



**THE Netgear Digital Entertainer HD and the Apple TV are two solid alternatives to a Windows Media Center Extender.**





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## Make Your Own Video Mashups for YouTube

SOME OF YOUTUBE'S best videos aren't exactly original creations. Many are mashups, meaning they're a mixture of original and existing material. A classic example is "Vote Different" ([find.pcworld.com/60331](http://find.pcworld.com/60331)), which combines a Hillary Clinton speech with Apple's iconic "1984" TV commercial. The clip itself plays like the original, but with Clinton's visage superimposed on various screens and her voice overlaid on the soundtrack.

In contrast to the slick "Vote Different," the entertaining "Ballmer Monkeyboy iPod Mashup" ([find.pcworld.com/60333](http://find.pcworld.com/60333)) takes footage of Microsoft president Steve Ballmer wiggling out on stage and superimposes it on a familiar iPod-commercial background. (Be sure to catch the ending.)

### Create a Mashup

Before you get started with your own mashup, keep in mind that YouTube strictly enforces copyright laws; you can include copyrighted songs and video clips only if it qualifies as "fair use." Unfortunately, making that determination can be complicated. Check out YouTube's guidelines on copyrighted content, and then use good judgment. Obviously a 10-minute clip from *The Office* would be copyright infringement, but a clip of Michael saying, "That's what she said," may be fair game.

Finding material for your mashup requires a

little creative borrowing for clips. With a program such as Replay AV ([find.pcworld.com/60335](http://find.pcworld.com/60335)), for instance, you can capture just about any streaming audio or video. Head to sites like AOL Video ([video.aol.com](http://video.aol.com)) and Veoh.com to unearth all manner of news clips, TV shows, and even movies. If you have a Media Center PC with a TV tuner, you can record shows and then extract clips using editing software.

You can even borrow from other YouTube videos, provided they're designated "public." You'll need to download the videos and convert them to a format your editing program supports. Free Web sites such as Vixy.net and Zamzar.com can do both in one step: Paste in the URL of the YouTube video, select a format, and provide your e-mail address. You'll get a message containing a link to download the converted video.

Several sites offer free sound effects and music to



**A FUNNY VIDEO** mashup like this one of Microsoft's Steve Ballmer in an iPod ad can make your handiwork famous on YouTube.

complete your production; try Partners in Rhyme ([www.partnersinrhyme.com](http://www.partnersinrhyme.com)) and Soundsnap.com.

### Edit and Upload

To turn your found footage into a cool mashup, fire up Movie Maker in Windows or use iMovie on a Mac. Or try YouTube's own Remixer ([youtube.com/ytremixer](http://youtube.com/ytremixer)). Remixer lets you add titles, transitions, borders, and music. It also allows you to

combine multiple videos from YouTube into a single video, though you can't actually edit the footage.

Import your video into your editing program. Most programs will automatically split your raw footage into separate clips by detecting scene changes. With that done, you can cut your clips to the proper length and arrange them in any order. You can trim each clip from its beginning and end, or split it in two. Using your application's timeline view, you can drag and drop clips to put them in the desired order. Add transitions by dragging them in between clips.

After you've finished editing your video, save it as a YouTube-friendly file. YouTube accepts videos in popular formats such as AVI, MOV, and WMV, and converts them to its own FLV format. Just be sure to keep the file size under 100MB.

—Rick Broida



**YOU DON'T HAVE** to buy expensive editing software to put your mashup together. Movie Maker comes with Windows XP and Vista.



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## USB FLASH DRIVES

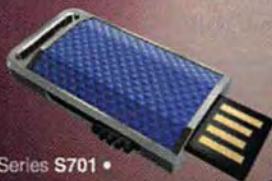
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# fantasia

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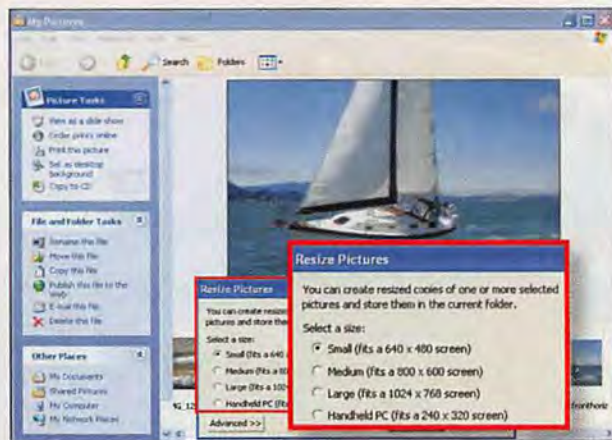
THESE DAYS, pretty much everyone is an amateur photographer. But high-end photo-editing tools aren't the best choice for everyone. Two free downloads can make digital photography a lot more fun—and a lot more productive—without taking shots at your wallet.

### Image Resizer

Need a quick-and-dirty way to resize a group of photographs? Get this free, exceptionally easy-to-use PowerToy from Microsoft ([find.pcworld.com/60305](http://find.pcworld.com/60305)). Right-click a single photograph or a group of photos, and select **Resize Pictures**; a dialog

box will appear, inviting you to resize the images to any of four possible sizes: Small (640 by 480 pixels), Medium (800 by 600 pixels), Large (1024 by 768 pixels), or Handheld PC (240 by 320 pixels). When you make your selection and click **OK**, it will create copies of your pictures in the new size while leaving the originals intact. By clicking the **Advanced** button before clicking **OK**, you can elect to resize the original pictures instead of making a copy.

Note: You can make pictures smaller, but not larger; if you choose a size bigger than the original, the program simply won't obey.



**YOU DON'T HAVE** to muddle through bloated photo apps just to scale down your family photos. Image Resizer does it in seconds.

### Photoscape

Photoscape ([find.pcworld.com/60307](http://find.pcworld.com/60307)) is another remarkable free piece of software that any self-respecting digital photographer will want on his or her PC. This program comes with a file viewer, a photo editor, a slide show creator, a batch editor, a screen-capture program, and

much more. It also has some original tools, such as one that combines multiple photos in a single frame. Another convenient tool takes photos that are in the RAW format used by many digital cameras and converts them to JPG format, so they'll work with more applications.

—Preston Gralla

### ANSWER LINE

### SEND QUESTIONS TO ANSWER@PCWORLD.COM

**?** How do I read a file that Windows doesn't associate with any of my applications?

gale17, from the PC World forums

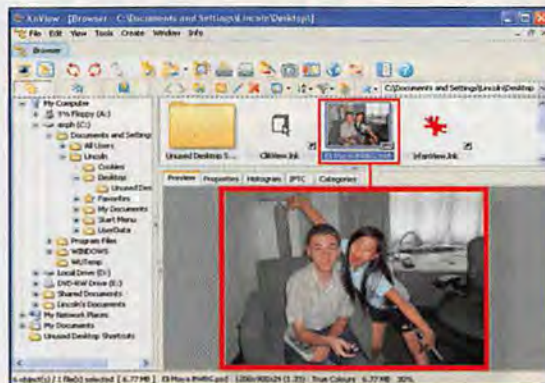
IF DOUBLE-CLICKING A file gives you an error message rather than launching a program, try the drag-and-drop test, as follows:

Make an educated guess as to the file's associated application, based on the context in which you received the file. For instance, if it came attached to an e-mail message referring to it as a report or letter, it's likely a word processing file.

Launch the appropriate program for that type of file, and drag the file to the menu/toolbar portion of the app's window. If the file opens, you guessed correctly and you are all set.

Or visit [FILExt](http://filext.com), The File Extension Source ([filext.com](http://filext.com)). Enter the mystery file's extension into the text box; the site will say what type of file it is and, as well, offer possibly helpful links.

Once you've identified the file type and the program that probably created it, go to the software vendor's site and look for a free viewer program.



**IF YOU HAVE** an image file you can't open and view, the free, downloadable XnView utility can probably open it for you.

If you believe that it's an image file, download and install XnView ([find.pcworld.com/60309](http://find.pcworld.com/60309)). This free utility displays image files saved in a number of formats, including Photoshop's own .psd, and it can convert images between them. It also comes with a basic editor.

Microsoft Office can read documents and images in a variety of formats—assuming that you've installed the right filters. To see what filters you've installed and to install others, follow these steps:

To start, select **Start>Run**, type **appwiz.cpl**, and press **<Enter>**. Now select **Microsoft Office...** and click **Change**.

In the resulting wizard, select **Add or Remove Features** and click

**Continue** (Office 2007) or **Next** (earlier versions). If you get a page containing check boxes for the Office applications, plus another check box labeled **Choose advanced customization of applications**, check that box. Once the **Update** button changes to **Next**, click it.

In the resulting feature list, expand **Office Shared Features** and then **Converters and Filters**.

Select what you want; then click **Update** (or **Continue**).

—Lincoln Spector



Cyberpower recommends Windows Vista™ Home Premium

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## Make Your Networked PCs See Each Other

IF YOU HAVE several PCs sharing an Internet connection, they should be able to share files with each other. But sometimes Windows falls short of automating file sharing between networked computers. Here's how you can force wayward machines to make the connection.

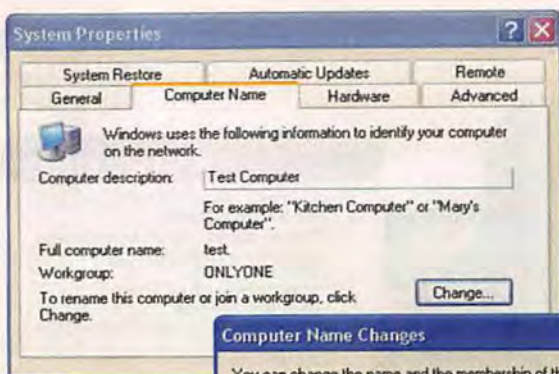
Start by checking your firewall. Third-party PC firewalls like ZoneAlarm and Norton Internet Security often block local networks. As a precaution, begin by disconnecting your Internet connection. Then turn off each PC's firewall.

If possible, turn on just one PC's firewall. Does the problem return? If it does, check that machine's firewall settings and documentation to see how you can make it local-network-friendly. You may have to add your other PCs to a "Trusted Zone" or some such group.

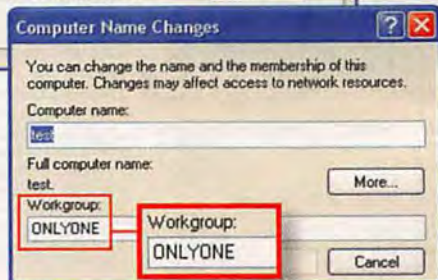
Repeat this process with each PC. Don't reconnect to the Net until all firewalls are back up and working.

Here are some more good troubleshooting techniques:

**Make sure that all your PCs are in the same workgroup:** Press <Windows>-R, type sysdm.cpl,



**CONFIRM THAT the entry for 'Workgroup' is the same on all of your PCs; if it isn't, the machines won't see each other.**



and press <Enter>. Then click the *Computer Name* tab. If the workgroup name there does not match the workgroup name listed on your other computers, click *Change*.

**Make sure that file and printer sharing is on:** Press <Windows>-

R, type ncpa.cpl, and press <Enter>. Right-click the network connection, and select *Properties*. If *File and Printer Sharing for Microsoft Networks* is unchecked, check it.

**Make sure that you are sharing a folder:** Browse to the folder you want to share. If the folder's icon doesn't have a little hand under it, right-click it and select *Sharing and Security*. Then in the *Sharing* tab, check *Share this folder on the network*.

In Vista, the folder's icon should have a tiny picture of two people in the lower-left corner. If it doesn't, right-click it and select *Share*. In the resulting dialog box, type *everyone* into the text field, click *Add*, adjust the permission level (if you wish), and click *Share*.

If the computers still don't see each other, try a last-ditch trick that sometimes works: Press <Windows>-R, type the other PC's network path, and press <Enter>. That network path is probably two backslashes followed by the computer's name on the network, such as \\chris. If this succeeds, map the computer as a network drive.

—Lincoln Spector

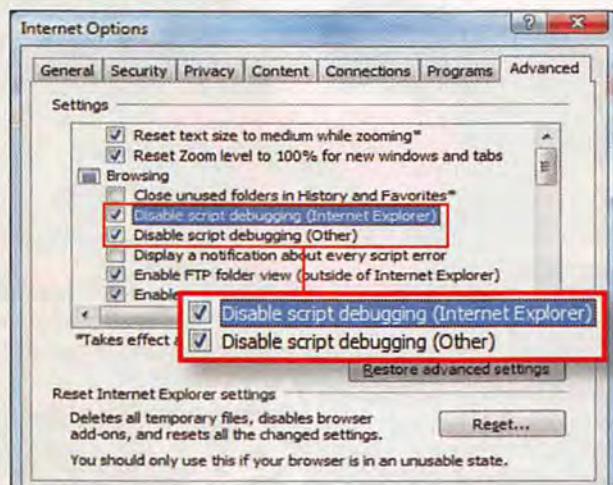
## Stop IE's Debugging From Bugging You

FROM THE  
**PCW**  
FORUMS

PC WORLD'S writers and editors work hard to answer your computer questions. But we're starting to get quite a bit of help from the contributors to

our online forums. In this new series, we bring you insights from the experts in our online community. (Join our forums at [forums.pcworld.com](http://forums.pcworld.com).) If we use your tip in print, we'll send you a PC World t-shirt.

**?** Whenever I surf the Web, Internet Explorer repeatedly pops up with a debugging error message. Once I click No to debugging, the page loads just fine. How do I turn off the debugging feature? *edcdoc*



**DISABLE TWO DEBUGGING options in Internet Explorer's Internet Options menu to do away with irritating debug messages.**

To disable the debugging message, open Internet Explorer and click *Tools*•*Internet Options*. In the Internet Options window, select the *Advanced* tab. Under *Browsing*, check the boxes next to the lines that read *Disable script debugging (Internet Explorer)* and *Disable script debugging (Other)*. Make sure that the box next to 'Display a notification about every script error' is not checked.

Next, click *Apply* and then *OK*, close Internet Explorer, and restart the computer.

*mphenrises*





**PCWorld**

"25 Products  
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## STEVE BASS'S HASSLE-FREE PC

### Fix Hard-Drive and Folder Annoyances With These Simple Tips

**Boot unbootable drives, stop irritating startup folders, and speed up Windows Explorer.**

YOU PRESS YOUR PC's power button, and instead of seeing the familiar Windows logo, you encounter a boot-failure message. You could throw yourself in front of a moving truck—or maybe just read my quick fix. I also show you how to correct dopey folder behavior and how to uninstall unwanted programs cleanly.

#### My PC Won't Boot (OMG!)

**The Hassle:** I booted my laptop only to see a message stating 'Boot Failure: System Halted'. I've tried every partition-recovery program under the sun, but my notebook still won't boot. H-e-l-p!

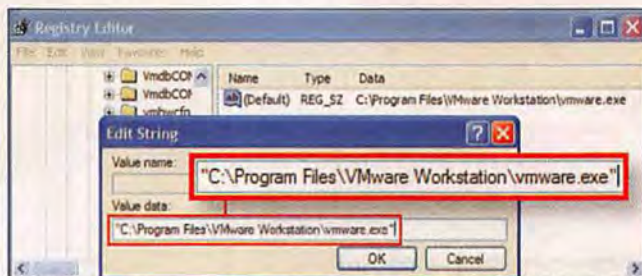
**The Fix:** Stay calm. Somehow the laptop's BIOS isn't able to identify your hard drive's partition. But chances are good you can fix it. First, boot to the BIOS (press <Del> or <F10> as you boot) and jot down the current settings. Then find the option to set the BIOS back to the default. It's usually the menu item on the far right. Reboot and keep your fingers crossed.

If that doesn't work, grab a copy of the free DTIData NTFS Recovery Repair tool ([find.pcworld.com/60343](http://find.pcworld.com/60343)). It lets you repair the boot sector and make the drive bootable again. Before you start, however, it's essential to read the instructions at [find.pcworld.com/60341](http://find.pcworld.com/60341) and [find.pcworld.com/60342](http://find.pcworld.com/60342).

#### Program Folder Opens at Startup

**The Hassle:** When I boot my system, an Explorer folder pops open on the desktop for the VMWare virtualization app I recently installed. Where's this folder coming from—and how do I stop it?

**The Fix:** You'll need to go on a treasure hunt to find where the program's folder is loading. The first spot to look is in Scheduled Tasks (from Control Panel). Not there? See if a shortcut with the



**TO REPAIR THE Registry entry for this folder, add quotation marks to both the start and the end of the folder's path.**

program's folder resides in the Startup folder (Start>Programs>Startup). No luck? Then use WinPatrol, a free utility for removing background programs (download it at [find.pcworld.com/60324](http://find.pcworld.com/60324)), and see if it's listed. If it is, use WinPatrol's Remove feature.

My guess, though, is that Windows is trying to read a Registry entry with an incorrect value, likely a string that contains spaces but is not surrounded by quotation marks. Windows is reading only part of the path, so it opens up a folder on the desktop.

You can manually massage this Registry entry by opening RegEdit (click Start>Run, type `regedit`, and press <Enter>). Next, use <Ctrl-F> to search for the path you see in the Explorer folder that appears on your desktop. This path will look similar to 'C:\Program Files\VMware Workstation\vmware.exe' with a space separating other characters, such as '%1', if they appear. In the right-hand panel, double-click the item and add a quotation mark to the start and the end of the path. If the problem is not resolved, you may have additional flawed Registry entries. Some fun, eh?

#### Speed Up Windows Explorer

**The Hassle:** I use Windows XP on a fast, dual-core system with a SATA II drive and lots of RAM. Yet Windows' My Computer sometimes takes a full 2 minutes to open.

**The Fix:** Ah, the pain. I'll bet you're on a network, and XP is merily monitoring shared resources—a printer, for instance, or a networked folder—to make connecting to those resources easier. But you can turn off the monitoring, and still access shared stuff.

Open Windows Explorer, go to Tools>Folder Options, click on the View tab, and uncheck Automatically search for network folders and printers—and you'll feel the speed again.

#### Back Up—But Validate, Too

I made a terrible discovery. My old, reliable backup image wasn't any good. I had backed up to a drive with a bad sector, so my Acronis True Image backup was corrupt. Lesson learned: Always, always find and use your backup program's validate feature. It's the only way to be certain of having a reliable backup. (You can download Acronis True Image from [find.pcworld.com/60323](http://find.pcworld.com/60323).) ●

#### TOOL OF THE MONTH

### Revo Uninstaller

I NEVER USE Windows' brain-dead uninstaller. It's slow, it supplies scant info, and it often leaves remnants of the app behind. My replacement is Revo Uninstaller, a free tool so useful, it's on my Start menu. It tells me the unwanted program's version and location, when I installed it, and the vendor URL. I highlight an entry to uninstall, and a click brings me to the program's folder or Registry entry. After Revo uses the app's uninstall routine, it scans my PC and finds remaining odds and ends—files, folders, and Registry entries. A dialog box gives me options to delete them or remove them from the Registry. Get Revo at [find.pcworld.com/60315](http://find.pcworld.com/60315).



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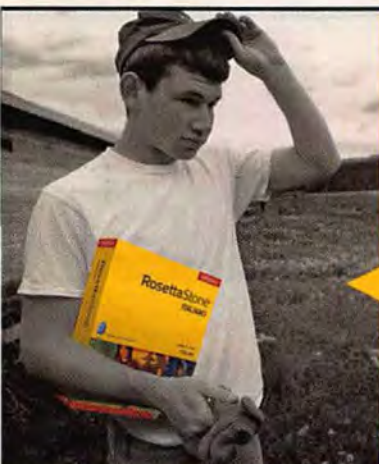
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When Outlook Express began downloading my e-mail a few days ago, Windows popped up the dreaded message, 'Symantec Service Framework has encountered a problem and needs to close. We are sorry for the inconvenience.'

Gee, thanks. If a single tear were shed every time Windows said it was sorry, the world's coastal cities would be underwater. But right now, my Net connection is dead.

I reboot. Same story. Symantec's Norton Internet Security 2008 dislikes something about one particular e-mail message, and when Norton crashes, it takes my Net connection with it.

I figure I'm fairly safe, since I've set Outlook Express to display mail as plain text so it won't inadvertently launch malware. I turn off Norton's e-mail scanning, reboot, and pull down the mail. Then I launch Symantec's Live Update and grab the latest Norton bits. But when I turn scanning back on, the problem persists.

When I request an online support chat, Norton Internet Security offers to install remote-assistance software. But that software merely produces another error message.

So I use Norton's chat system. "Please let me know when exactly happened this issue?" a rep named Santosh asks. I do. After a few back-and-forths, he declares, "First we need to delete temporary files from your computer."

Now, this is where the whole thing could have taken an ugly turn. This is where,

had I obeyed blindly, I could have spent hours futzing with Santosh's instructions. Instead, I asked the one question you must always utter when dealing with Martian support reps: "Please tell me what you are going to have me do, all told."

Answer: "After delete temporary files we need to run Live Update."

"Anything else?"

"Then run full system scan."

"Then what?"

"After follow the above steps issue persist we need to uninstall and reinstall the product."

In other words: Waste valuable time messing with a product meant to help me avoid wasting valuable time.

I ask for details. Santosh has me look for a folder called NISO80015. I don't have that one, but I do have NIS 15.0.0.60.

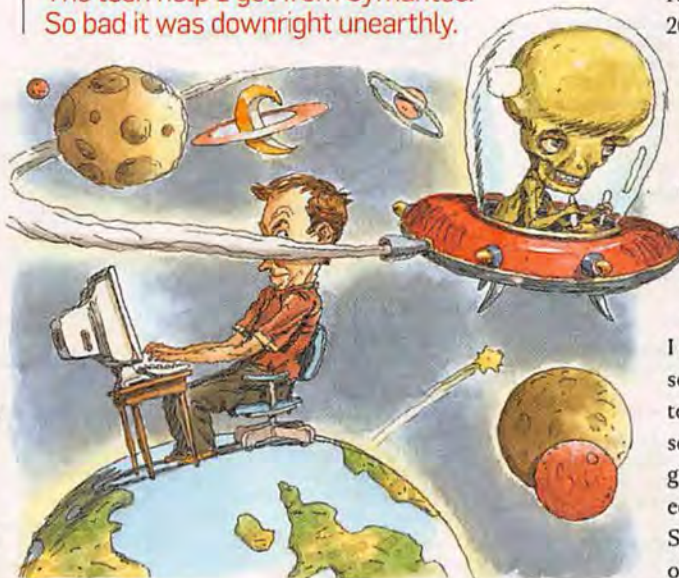
"Okay," says Santosh. "Please delete all folder and files except this folder." He means the temp files. But if I'm supposed to keep the Norton file, how do I know the others are safe to delete? Why do I have a different folder than the one he asked for? And why does the chat window disallow right-click copying, which would let me easily save his advice?

Norton products have a history of delivering messages that don't mean what they say.

Yesterday, Internet Security 2008's history file said my backup program made 1455 changes to Windows start-up files—highly unlikely. Today, it tells me similar changes were made when I booted up—but omits the event that supposedly happened yesterday.

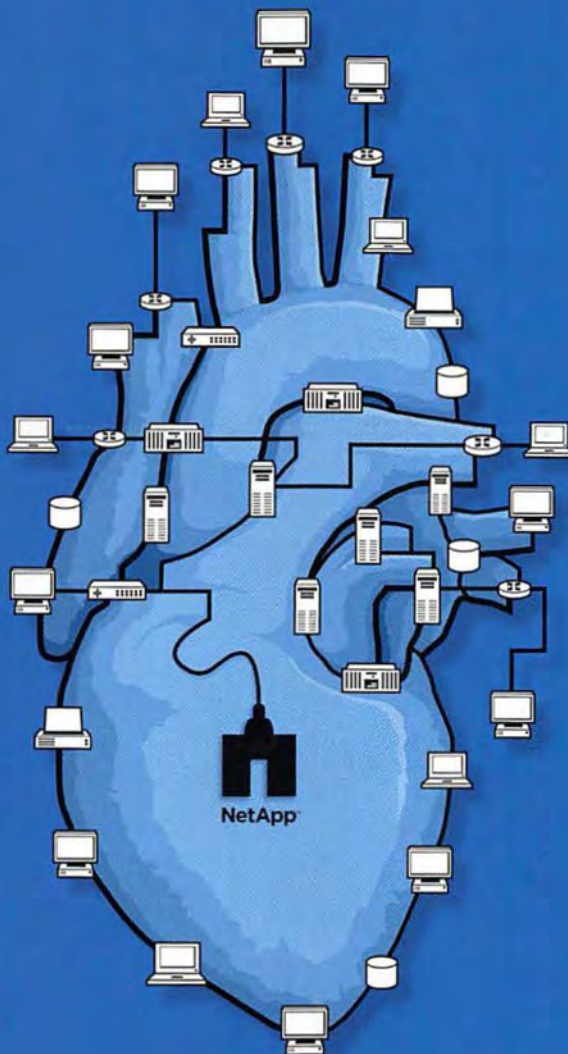
After dealing with Santosh, I ended up running a system scan and turning e-mail protection back on—which seems to have fixed the glitch. But am I truly protected? Not, apparently, from Symantec's own failings—or its Martian support. ●

The tech help I got from Symantec:  
So bad it was downright unearthly.



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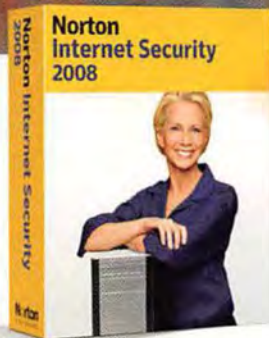




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