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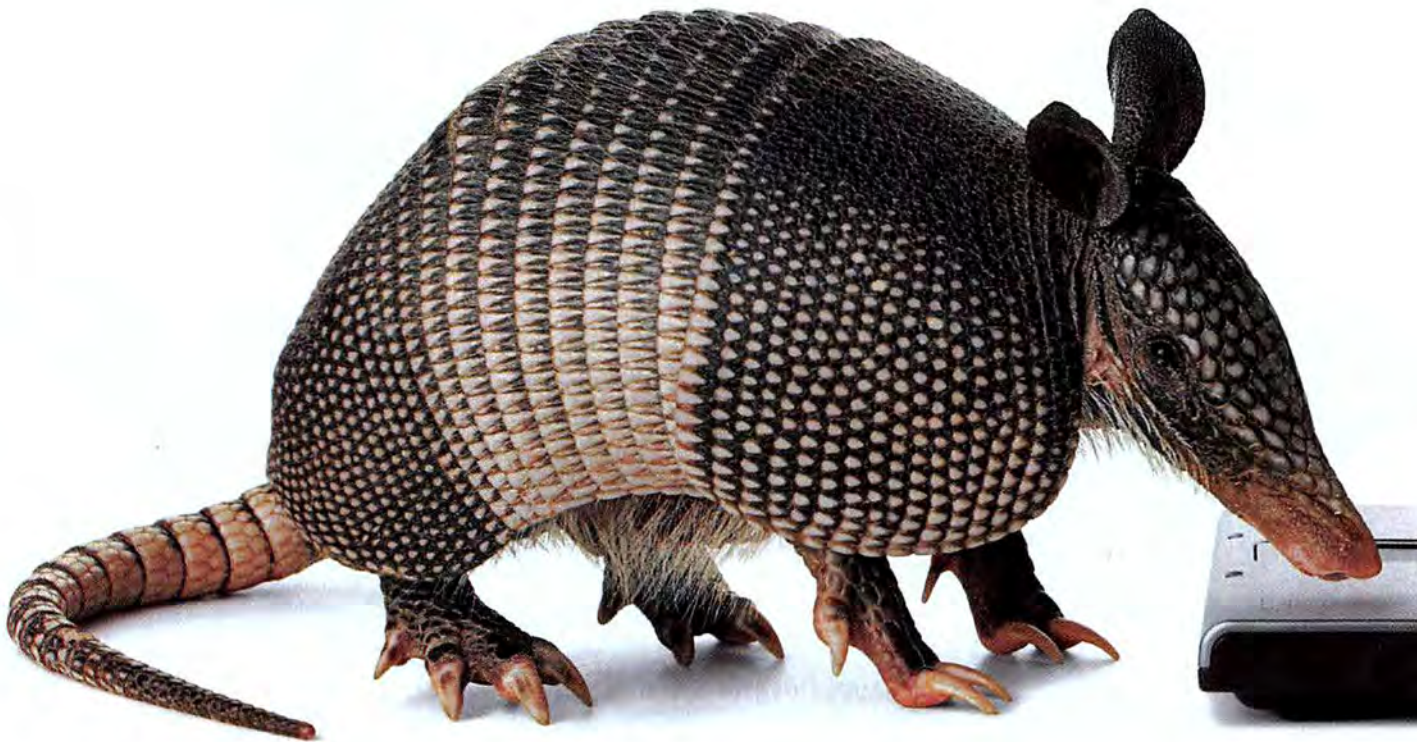
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COVER STORY

96 53 Hardware Secrets

So your tech gear is getting a little long in the tooth? You don't have to purchase a whole new setup to be up-to-the-minute. We've pulled together dozens of upgrade tips, useful tricks, and thrifty add-ons for your PC (whether desktop or notebook), printer, camera, phone, media player, and other devices. We even cover gadgets to enhance your graphics.

Cover photography by Robert Cardin.



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122 More HDTV for Your Money

Big-screen high-definition televisions are taking over the marketplace, as improving performance and falling prices attract buyers. We sort through the competing sizes and technologies to find the best models available at three sweet spots—in sizes large (37-inch LCDs) extra-large (42-inch plasmas) and extra-extra-large (50- and 52-inch DLPs).



ONLINE SHOPPING

151 How to Avoid the Biggest Web Shopping Annoyances

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ON THE COVER



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COMING UP IN JANUARY

Windows Vista: The next version of Microsoft's flagship OS is coming soon. What's in it for you?

Cheap PCs: We point out the best choices among budget-friendly models, and provide buying tips.

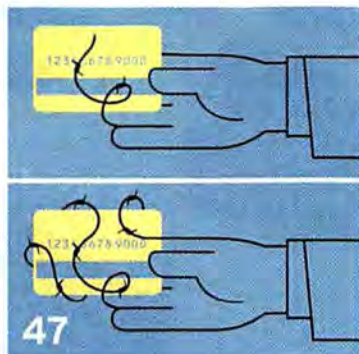
The Most Useful Sites Ever: It's a Web 2.0 world now, with Web sites offering a trove of new functions.

Photo Printers: Get the most out of your snapshots by using the top printers, sites, and software.

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*Based on model year 2005 CAFE average fuel-economy ratings and weighted sales for passenger-car and light-truck fleets sold in the U.S. by major manufacturers. [†]Civic Hybrid and Fit Sport with SMT shown. 2007 EPA mileage estimates: 49 city/51 highway, 33 city/38 highway, respectively. Use for comparison purposes only. Actual mileage may vary. ©2006 American Honda Motor Co., Inc. environmentology.honda.com

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30 Products and Services We Miss Most

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PC World editors fondly recall some of their favorite tech goodies of bygone eras. Join us on our geek-friendly stroll down memory lane.



The 15 Freakiest Web Sites

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A clearinghouse of deadbeat dates, B-movie thrillers, and a Gothic Personals listing—all of these and more make up our list of freaky sites.



The 50 Greatest Gadgets of the Past 50 Years

find.pcworld.com/52738

PC World's official (albeit idiosyncratic) list of the top gadgets to emerge over the past five decades—from Kodak's Instamatic to Sony's Walkman to Apple's iPod.

POPULAR COLUMNS



GeekTech

find.pcworld.com/47508

Contributing Editor Tom Mainelli discusses the latest technologies, demystifies computer components, and guides you through hardware and software upgrades.



Digital Focus

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Intel Core 2 Duo E6600

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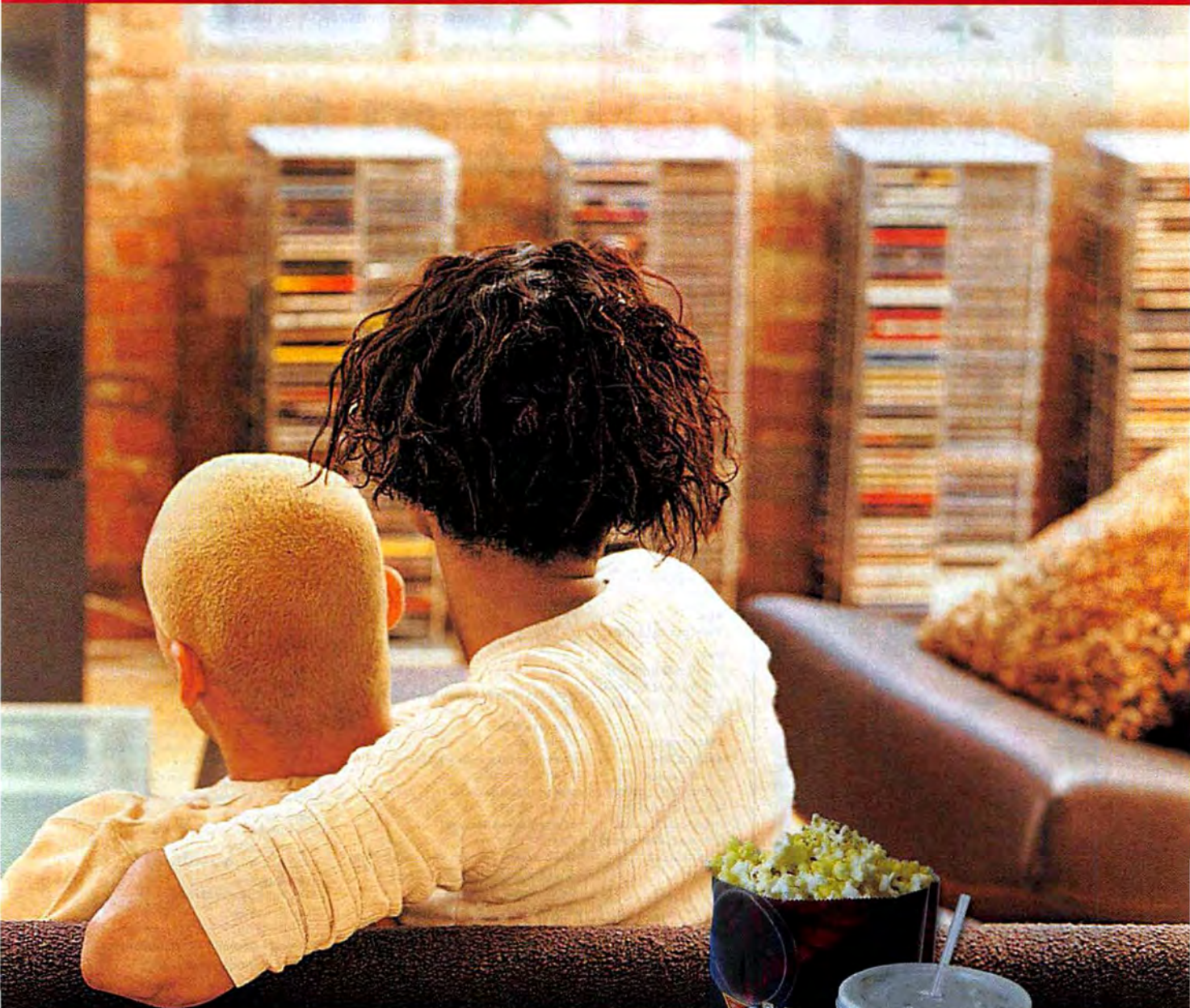
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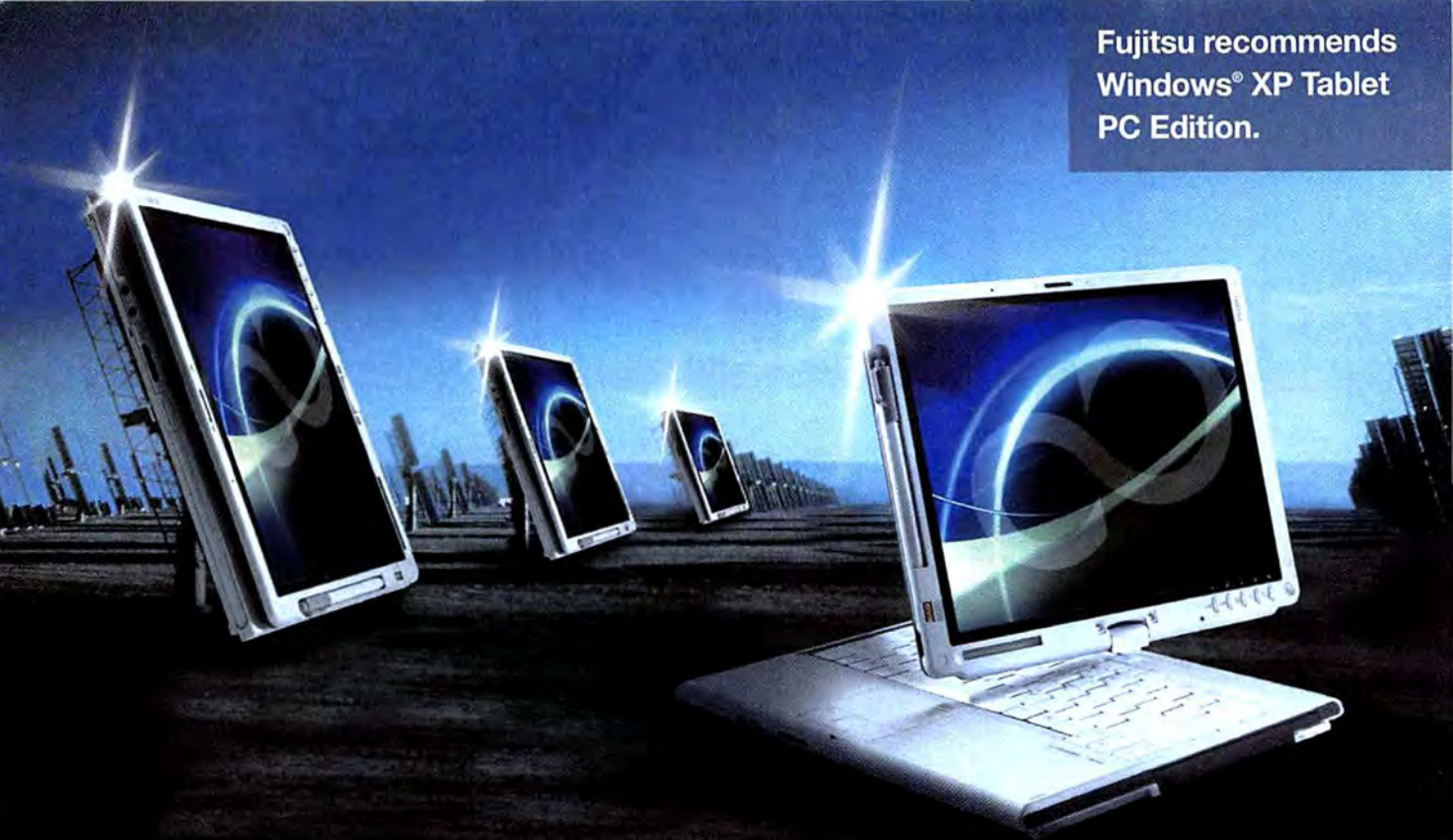


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Go to find.pcworld.com/55404



The Great Big Decision Known as HDTV

What's new and what's next...and why you're reading about it in PC World.

WHEN IT COMES to the future of television, my living room is not exactly a leading indicator. In it sits the same bare-bones 27-inch CRT I owned a decade ago; to call the fuzzy-wuzzy images it produces "standard definition" would be to pay them a compliment they don't really deserve.

I do spend plenty of time *thinking* about making the great leap forward to HDTV, though. And when I want to see what's new and cool in high-def, I know where to go: straight to our Test Center, where *PC World*-ers such as Data Manager Jeff Kuta and Associate Editor Laura Blackwell can often be found evaluating the latest sleek screens.

Along with author Roy Santos, Jeff and Laura were key players behind "More HDTV for Your Money," this issue's featured review (page 122). For the article, we rounded up LCD, plasma, and DLP sets from big names and little guys alike, with an eye on sets that deliver on HDTV's promise at a reasonable price.

If you're one of the millions of folks who are itching to buy an HDTV right now, our ratings will help. Still, the plain fact is that HDTV involves far more than a TV. At the moment, everything from my satellite dish to my TiVo is undeniably, defiantly standard def; truly going HD will mean replacing nearly every component in my entertainment center with a high-def equivalent. Just thinking about it gives me a pain in the wallet.

So on some level, I'm looking for excuses to bide my time. Which is what I found in Senior Writer Alan Stafford's "New HDTVs Bring Higher Def, Better Color" (page 28)—in the story, he pre-



TEST CENTER
wizards Jeff
Kuta and Ulrike
Diehlmann
take on HDTVs.

views a variety of upcoming technologies and trends. Bottom line: We HDTV slowpokes will wind up with better pictures and sound, more content options, and fewer connection hassles...at lower costs. Sounds like a scenario I can live with.

WHAT IS THIS, TV WORLD?

THE HDTV COVERAGE in this and other recent issues raises a question worth addressing: Just how much attention should a publication known as *PC World* devote to stuff that isn't PC-centric?

Lately, we've heard from some readers whose answer is "Little or none." They've asked, begged, or instructed us to stick with traditional fare—namely, information about standard computing boxes and the software they run.

But surveys and other research tell us that PC absolutists are a minority, outnumbered by readers who regard topics

like HDTV as logical components of what *PC World* does. We, obviously, agree.

Even in a world where the computer and entertainment continue to merge and morph—I don't know about you, but much of the tube I watch these days is YouTube—HDTV is something of a departure for us. But in multiple ways, covering it is strikingly similar to what we've been doing for almost a quarter of a century.

With HDTV, as with the PC, there are new technologies to learn about, conflicting standards to sort out, and pitfalls to avoid. And considering that you could pay more for your next TV than for your next PC, objective, comparative product reviews like the one in this issue are essential.

"All the expertise we have from all those years of evaluating displays goes into how we look at TVs," explains Ulrike Diehlmann, director of the *PC World* Test Center. "We do real-world tests with a variety of signals, and find out things you wouldn't know otherwise unless you took a set home."

Ultimately, we don't envision a day when the PC won't be the most important single product in *PC World*. But we see the technology in your life as one big world, from the PC to TV to the cell phone and beyond—and we think it all has a place in *PCW*. What's your take? Write me at harry_mccracken@pcworld.com, or visit our forums (forums.pcworld.com). ■

Harry McCracken is editor in chief of PC World. Read his blog at blogs.pcworld.com/techlog.



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NEWS & TRENDS

EDITED BY EDWARD N. ALBRO

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Beefed-Up Browsers

INTERNET EXPLORER 7 ADDS SIGNIFICANT NEW CAPABILITIES; BUT FIREFOX 2, THOUGH A MORE MODEST UPGRADE, RETAINS THE OVERALL FEATURES EDGE. **BY ERIK LARKIN**

IT'S TIME TO retire your old browser. Microsoft and Mozilla, makers of the top contenders in the ongoing browser war, have both come out swinging this October with nearly simultaneous major versions of Internet Explorer (for XP) and Firefox, respectively. Both upgrades are worth getting, and IE 7 is a significant leap forward from IE 6, but Firefox 2 is still the more robust application.

Firefox 2 offers no radical changes compared with version 1.5, which came out a year ago. It's a measured step, purposely nonjarring for current Firefox users. A built-in antiphishing tool makes its first appearance, but most other changes simply refine many of the same features that are new to IE 7. Version 2 polishes tabbed browsing,



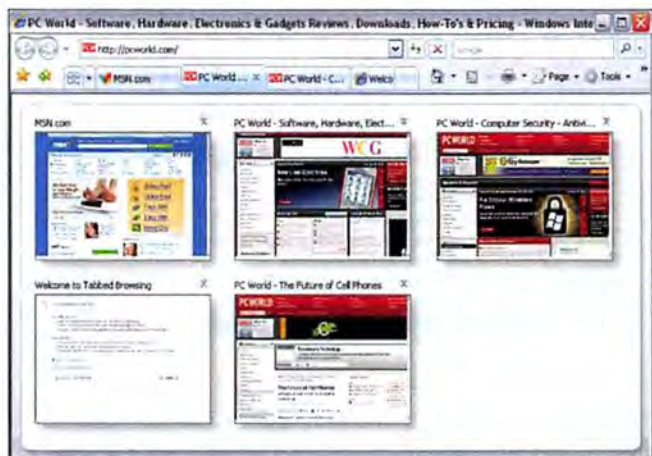
newsfeed support, and add-on management. Regrettably, you'll still find some sites written specifically for IE that don't look right in Firefox 2. You can add a plug-in, however, that will let you view a site in IE to get around the problem; my favorite is IE View (download it at find.pcworld.com/55554). People

who want to get Firefox 2 now (the final version should be available as you read this) should download it directly at mozilla.com/firefox. Existing users of the browser will receive a notice about version 2 once Mozilla has made a minor update to version 1.5, but that message will come a few weeks after version 2 is out.

Microsoft had further to go to bring IE up to par with the competition (IE 6 was released in 2001), and so IE 7 is a more thorough overhaul of its predecessor. You can't miss the new user interface, with its tabbed browsing, integrated searching, and newsfeed support. Microsoft also added an antiphishing tool and boosted IE 7's security in response to seemingly never-ending IE 6 holes. Over a few months, the company will prod users to get version 7 via Automatic Updates; you can also download it at any time from microsoft.com/ie. (A final version for Windows Vista will ship with Vista early in 2007.)

For this story, we evaluated feature-complete release candidates of both browsers, IE7 RC1 and Firefox 2 RC2, prior to their final release.

ILLUSTRATION: JOE ZEFF



THE NEW TAB functions of IE 7 allow you to preview your open tabs through a special page and access whichever you want with one click.

TABBED UPGRADES

IE 7's new streamlined look resembles Vista's. The back, forward, and favorites buttons, and the address bar, are all compressed into two rows up top, along with a new search box you can customize with your choice of search engine. You won't see a menu row with standard XP options like File, Edit, or View (you can bring it back if you want). But you will see welcome new tabs—which you can drag and drop to arrange as you wish—for viewing multiple pages within one IE window.

You also get a new session-saver option: When you close the browser, you can click a box to have IE remember your open tabs, then open the same ones next time. This small but highly useful feature could gradually make a big difference in your daily browsing.

The tabs don't get their own row, however, so they can start to appear somewhat squished if you have many open at once. To navigate, you can click a small button that shows thumbnail previews of all your open tabs on a new, temporary page, and then click one of the thumbnails to acti-

vate its tab. You can also select from all open tabs via a dropdown list accessed via a small button to the left of the tabs.

While less obvious, Firefox 2's tab updates are generally a step ahead of IE's. For example, you can configure Firefox to always save your last session for future use; with IE 7 you have to click a box every time. Firefox also lets you reopen closed tabs via the History menu or by right-clicking an open tab.

As in IE's implementation, each Firefox tab has its own closing button. However, Firefox provides no thumbnail previews of open tabs.

BETTER NEWS

RSS FEEDS OFFER a great way to quickly check news and updates from different sites without visiting them all. RSS support is new to IE 7, and upgraded in Firefox 2.

In IE, if you browse a page with an associated feed, an icon to the right of the tabs will light up. Click it, and you'll see the latest headlines from that feed along with an option to subscribe. Once you subscribe, you can check it via the feeds button in the new Favorites Center, where you'll

also find your browsing history. However, you have no way to quickly preview the feed's contents without opening the feed's rendered page in IE, which somewhat defeats the purpose—you may as well visit the regular site. Microsoft says that it deliberately designed IE's feed support to be bare-bones because it is meant as a platform for future RSS reader applications.

Using Firefox 1.5's Live Bookmarks, you can bookmark a feed and then preview all its headlines at once. If you click a headline, you go to that story on the relevant site—but if you click a link that opens the feed itself, you see only Web-code gibberish. Firefox 2 makes the raw feed understandable, and offers a range of new subscription options. For example, you can now add a feed to a personal Bloglines, Google Reader, or My Yahoo page, or to a stand-alone RSS reader, though it may not work with all readers.

SAFER BROWSING

BOTH BROWSERS ADD anti-phishing features meant to protect against malicious fake sites that attempt to trick users into divulging their logins or financial information. Firefox's default protection stops at comparing sites against a known blacklist of phishing sites, while IE 7 includes site analysis that will try to warn you about a suspicious site even if it's not yet on a blacklist, an approach similar to that implemented in the latest security suites.

According to the folks in Redmond, IE 7 will scan a page for phishing hallmarks in the URL or page content. The addresses of suspi-

IN BRIEF

Product Pipeline



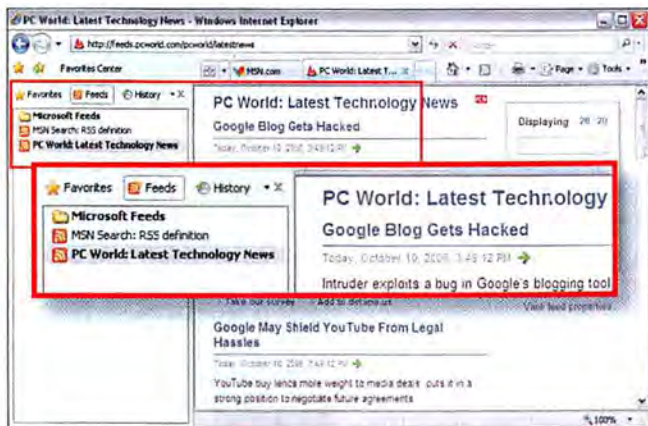
FASTER EVDO UPLOADS:

Wireless EvDO data networks enable broadband-like downloads, but uploads have never exceeded dial-up-like speeds. That's changing: By year's end, Sprint plans to introduce EvDO Revision A service, which should boost upload speeds to 300 to 400 mbps. Sprint already sells Rev. A PC Cards from Novatel (\$250), Pantech (\$200), and Sierra Wireless (\$250, above). Verizon has said it will offer Rev. A service, but hasn't said when.

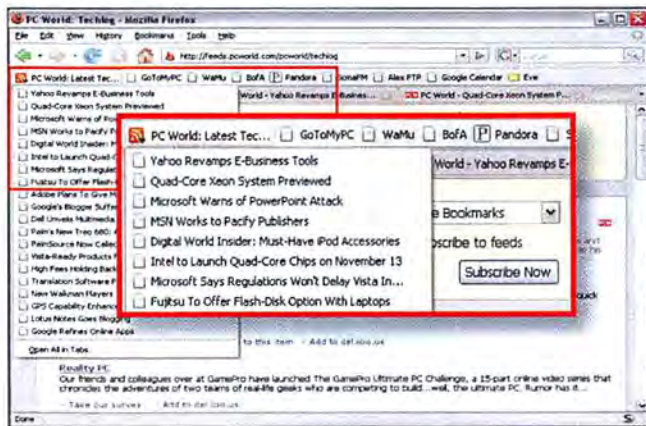


MUSICAL MONITOR:

ViewSonic's new ViewDock Series LCD monitors each double as an iPod docking station and a sound system with stereo speakers and a subwoofer. The displays come in two sizes: the 19-inch VX1945wm (\$329) and the 22-inch VX2245wm (\$449). Both have four USB 2.0 ports, an eight-in-one card reader, a microphone, and a dock that supports all iPod models, says ViewSonic.



IE 7 NOW has a newsfeed function, so you can see feed content on a rendered page, plus all your RSS subscriptions in the Favorites Center.



FIREFOX HAS INCLUDED newsfeed support for some time; it lets you see a feed page and preview headlines of other feeds you subscribe to.

cious sites will get sent to Microsoft, where they're compared against a blacklist. If a site appears on the list, IE will block the page. If it's a known good site, you'll see the page. If the site is unknown, you'll get a warning. Microsoft says it protects your privacy and the URL queries it receives, but it does save the data.

Testing page content (as opposed to relying solely on a blacklist) is a good idea since phishing sites typically have very short life spans, or they shift Web addresses quickly as the crooks behind them race to nail a few victims

before being blacklisted.

By default, Firefox compares sites against a locally stored blacklist—meaning you won't have to send out lists of the URLs you visit—and displays a warning if it sees a match. However, you can instead choose to send the URLs you visit to Google, which will compare them against a more frequently updated list. Google doesn't associate the information it logs with other personal data about you, but the URL or other page information sent may itself include personal data that will be logged.

IE 7's new security features go beyond an antiphishing tool. For example, its "Delete Browsing History" option clears temporary files, cookies, history, form data, and passwords, either all at once or separately, something you can already do in Firefox 1.5. You also get a new "Fix Settings for Me" feature that warns you if you reset security settings to something Microsoft deems unsafe.

Microsoft has also improved ActiveX handling, tightened the program's code, and changed the underlying architecture to reduce potential

areas of attack for hackers. Overall, the new IE has many more security fixes than the revised Firefox. But such fixes were necessary to address IE 6's many holes, including some recent ones that allow drive-by downloads that can fill your PC with malware if you visit a poisoned site (for more on this, see this month's *Bugs and Fixes* on page 63).

Moreover, while Firefox has its share of security flaws, Mozilla has proven much faster at patching them.

BOUNTIFUL ADD-ONS

FIREFOX USERS HAVE long been able to choose from a wide assortment of free extensions that add functionality—ranging from improved RSS reading to security enhancements to ad blocking—which increases that browser's appeal to many users. IE 7 is taking aim at that advantage with a new add-on manager, as well as an accompanying site (ieaddons.com) to promote and distribute the extras.

Microsoft doesn't quite hit the target, however. You can enable, disable, and delete add-ons in IE's manager, but it's not very user-friendly; for example, the manager offers no descriptions of the add-

FEATURES COMPARISON

IE 7 AND FIREFOX 2 GET TWO THUMBS UP

IE 7 IS a major improvement over IE 6, but Firefox 2's customization options make it our pick.

WEB BROWSER	PC World Rating	New features	Security upgrades	Bottom line
Firefox 2 mozilla.com/firefox	90 Superior	Session saving; new RSS subscription choices and display feeds; less memory usage; new manager for extensions and themes; in-line spelling checker; one-click undo of closed tab	Built-in antiphishing tool using a local or Google-maintained blacklist	Firefox 2 doesn't introduce groundbreaking changes, but it improves on a good thing. The browser alone is great, and it really shines when you customize it with extensions and themes.
Internet Explorer 7 microsoft.com/ie	82 Very Good	Tabs; session saving; streamlined interface; basic RSS support; extension manager; page zoom; improved Web-standards support	Built-in antiphishing tool using a blacklist and site analysis from Microsoft; easy one-step clearing of browsing history and cookies; warnings about low security settings; improved ActiveX handling	IE 7 is an enormous improvement over IE 6, and makes for a decent, usable browser. But features that Mozilla has polished in Firefox, such as add-on management and RSS support, still have rough edges in IE.

CHART NOTES: For a full list of changes to each application, see find.pcworld.com/55551 (Firefox) and find.pcworld.com/55552 (IE).

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ons. Also, to see all possible extensions, you must go through four categories that themselves are far from intuitive: add-ons currently loaded in Internet Explorer, add-ons that have been used by IE, add-ons that run without requiring permission, and downloaded ActiveX controls (32-bit). Moreover, to update your plug-ins, you must manually check for new versions and download each one.

By contrast, Firefox 2 builds on a good thing with a revamped manager that controls themes and extensions in one window. As before, each one includes a description, and a Find Updates button quickly checks for updates for every add-on.

It can be great fun to tinker your way to a fully customized browser with extensions, but you can risk slowing things down by over-taxing system resources. Firefox users have griped about its memory usage in the past, and while Mozilla often blames add-ons, the company says version 2 uses significantly less memory than version 1.5 does.

MOSTLY SMOOTH UPGRADES

WHEN YOU INSTALL the new IE (a roughly 15MB download), you'll be prompted to check for updates and then run Microsoft's malicious-software removal tool, which scans for viruses. The first time you launch IE 7, you'll also see a new page asking you to choose a default search engine and whether to run the antiphishing guard.



FIREFOX 2'S NEW integrated antiphishing tool gives you a pop-up alert when you accidentally surf to a known phishing site.



IE 7'S BUILT-IN antiphishing tool stops you from loading a known phishing site, instead giving you a clear warning in your browser window.

The new IE will save your old bookmarks and some settings, including your chosen privacy level for handling cookies. Other items may be reset. In my informal test, IE 7 reset my custom security configurations for the Internet zone to the Medium High default setting; if your security is set to High, however, IE 7 will preserve it.

Microsoft also says that IE 7 won't try to change your default browser if your choice is not IE, and that it should use roughly the same system resources as version 6.

The Firefox 2 download is a much smaller 5MB, and also seems to use fewer resources than IE 7. In my informal tests immediately after installing and launching IE 7, the browser with three open tabs used 80MB of memory; under

similar conditions and with the same three tabs, Firefox used 58MB. Otherwise, the performance of the two browsers appeared similar.

When you install Firefox, you'll see a pop-up prompt to check for updates to themes and extensions you have that aren't yet compatible with the new version. Popular extensions typically update quickly; other add-ons and many themes can take weeks longer. If you have incompatible add-ons, the browser upgrade will still occur, but those add-ons will be disabled in version 2 until updated extensions are available (you can check by clicking the Find Updates button in the add-ons manager).

Firefox preserved my bookmarks and most of my test settings from version 1.5, including my master pass-

word for saved log-ins and my chosen default font. The cookie setting didn't transfer because my particular choice (to allow sites to set cookies unless I have removed their cookies in the past) isn't the same in Firefox 2. You'll find some settings in different areas of the Options window, also; for example, password preferences are now under Security instead of Privacy.

LET THE WARS RAGE

IE 7 INCLUDES other new features, such as quick page zooms and enhanced Web page programming support. Such tweaks, combined with the browser's major improvements, might slow or even halt the generally steady IE-user flight toward Firefox.

But it's telling that the last time we compared the major browsers, back in January, we looked at beta versions of Firefox 1.5, IE 7, and Opera 9. Mozilla has effectively lapped Microsoft by releasing both 1.5 and 2.0 in the time Microsoft took to complete IE 7. (Opera remains at version 9.)

Which one should you use? For satisfied Firefox 1.5 users, moving to version 2 is a no-brainer, as they'll get new features and won't be thrown off by major interface changes. Confirmed IE users have a similarly easy choice: IE 7's features make it a much better browser than 6.x, and its security enhancements alone make it a must-have.

Of the two rivals, Firefox remains the better application. Since IE users will have to adjust to a new layout and interface anyway, this might be a good time to give Firefox a try, and then watch IE 8 play catch-up again in five years.

HP recommends Windows® XP Professional



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PROCESSORS

Test: Intel's Quad-Core CPU Speeds Video

KENTSFIELD CPU BOOSTS SOME MULTITHREADED APPS, BUT HAS LITTLE BENEFIT ELSEWHERE.

YOU MIGHT THINK that since two cores are good, four CPU cores will be twice as good—but our first tests of Intel's new quad-core chip, the 2.66-GHz Core 2 Extreme QX6700, say different.

PCs with the new chip (formerly code-named Kentsfield) offer plenty of speed and will significantly boost video editing and 3D rendering tasks, but our tests illustrate that most users will get more bang for their buck by sticking with Intel's dual-core Core 2 Extreme chip, the 2.93-GHz X6800. For the same

\$999 price, the X6800 provides more clock speed than the 2.66-GHz QX6700 does, which gives the X6800 an edge since few mainstream programs are able to fully use four or more CPU cores.

We looked at a pre-production quad-core chip and D975XBX2 motherboard in a lab-built PC, as well as at Xi's MTower IGE, a \$4149, fully decked-out system with the new CPU (see chart).

As our previous tests show,



INTEL'S NEW CHIP, the 2.66-GHz Core 2 Extreme QX6700, has four processor cores.

PCs with the dual-core X6800 provide blazing performance. It's still the faster chip for single-threaded apps, such as

Office programs, and it holds the advantage in our multitasking test. Kentsfield's scores are nearly identical to those of a same-speed Core 2 Duo PC on standard productivity apps—not surprising since Kentsfield is essentially a pair of linked Core 2 Duo dies on one chip.

The new chip really starts to shine with programs that can take advantage of its four cores, such as video and 3D editing software. We ran tests on a Kentsfield PC with several such programs at an Intel preview event (see find.pcworld.com/55559). While we didn't confirm these results in our lab, we saw dramatic speed improvements—around 80 percent in POV-Ray 15, a 3D scene-rendering app, and 33 percent in Sony's Vegas 7.0a video editor.

Gamers won't see many immediate gains from quad-core, but next year's Alan Wake and Unreal Tournament 2007 will fully support multithreading, making the new chip a fair buy. And anyone working with video or 3D rendering should get significant boosts right away. Other users should benefit from the technology over the next year as more games and mainstream apps take advantage of multiple CPU threads.




Also look for AMD's 4x4 platform, its two-CPU quad-core offering, by year's end.

—Eric Dahl

TEST REPORT

QUAD-CORE: NOT MUCH FOR THE MAINSTREAM

OUR LAB-BUILT PC using the four-core Core 2 Extreme QX6700 chip produced scores similar to those of the same PC with the dual-core E6700 chip in most mainstream-application tests.

TESTED SYSTEM	CPU	Number of cores	WorldBench 5 	TIME IN SECONDS		Doom 3, 1024 by 768
				Multitasking test	Ahead Nero Express 6	
LAB-BUILT REFERENCE PCs *						
Core 2 Extreme Quad	2.66-GHz Core 2 Extreme QX6700	4		292	183	148
COMPARISON SYSTEMS						
Core 2 Extreme	2.93-GHz Core 2 Extreme X6800	2		279	181	157
Core 2 Duo	2.67-GHz Core 2 Duo E6700	2		296	185	151
AMD Socket AM2 FX-62	2.8-GHz Athlon 64 FX-62	2		362	187	123
COMMERCIAL PCs						
Xi MTower IGE find.pcworld.com/55586	2.66-GHz Core 2 Extreme QX6700	4		283	168	157
COMPARISON SYSTEM						
CyberPower Gamer Infinity SLI Ultra find.pcworld.com/55563	2.93-GHz Core 2 Extreme X6800	2		267	157	164

TEST CENTER FOOTNOTES: ¹Numbers are in frames per second. Test run without antialiasing. ²All lab-built reference systems were put together by the PC World Test Center and used similar components; see find.pcworld.com/55585 for configuration details and additional test results. **CHART NOTES:** For details on how we test, go to www.worldbench.com. Higher is better for WorldBench 5 and Doom 3 tests; elsewhere, lower is better. Bold denotes best score. Tests conducted by the PC World Test Center. All rights reserved.

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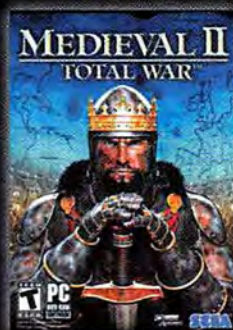
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TV TECHNOLOGY

New HDTVs Bring Higher Def, Better Color

INCREASED RESOLUTION, NEW PERIPHERALS AND CONNECTIONS PROMISE THE BEST TV YET.

FALLING PRICES AREN'T the only positive news for HDTV shoppers: New and upcoming sets boast higher resolution and improved image and sound quality. Here's what to look for.

1080P TVs

LCD TELEVISIONS THAT can display images in 1080 progressive resolution (or 1080p, as opposed to the 720p capability of most HDTVs in our roundup on page 122) are increasingly common; and the format is getting support in such peripherals as Blu-ray drives, HD DVD drives (like Toshiba's HD-XA2), Sony's PlayStation 3, and Microsoft's Xbox 360 (via an accessory HD DVD drive; see find.pcworld.com/55537). Also at hand is a growing collection of 1080p content on Blu-ray and HD DVD discs.

Plasma has been slow to reach 1080p because cramming lots of tiny pixels into a plasma panel is a manufacturing challenge. Big-screen 1080p plasmas are finally appearing, but they don't come cheap. Pioneer's 50-inch Pro-FHD1 retails for \$8000, and Panasonic's 65-inch TH-65PX600U goes for an even heftier \$10,000.

HDMI 1.3

THE PLAYSTATION 3 and Toshiba HD-XA2 are also the first two devices to deliver 1080p content through the new HDMI 1.3 interface, which enables "Deep Color,"

meaning up to 48-bit color depth (the current high is 24 bits). "More colors allow for better gradation and color shading," says Eric Haruki, research director for TV markets and technologies with IDC. HDMI 1.3 also supports new 7.1-channel audio formats, including Dolby TrueHD and DTS-HD.

To experience HDMI 1.3's benefits, however, all your

back of some digital TVs and set-top boxes to decrypt digital cable signals (in lieu of a cable box)—has been waning. But two FCC mandates should stimulate CableCard adoption beginning next year.

By March 2007, all new TVs must have digital tuners, and since CableCard slots add relatively little cost, observers say vendors may simply add them as well. The FCC has

receive programs; unfortunately, cable operators, the consumer electronics industry, and other concerned parties have made little progress agreeing on a two-way CableCard standard to support interactive features such as electronic program guides and video on demand.

Some efforts are under way. Steve Panosian, Samsung's director of marketing for DLP and CRT televisions, says that by the time you read this, Samsung will have rolled out an Interactive Digital Cable Ready DLP set, the HLS5686C, but only in Milwaukee, where Time-Warner Cable is testing a two-way cable system.

LED DLPs

IN SEPTEMBER, NUVISION began shipping the 52-inch 52LEDLP, an LED-illuminated DLP set; in October, Samsung began shipping another LED DLP, the 56-inch HLS-5679W. Containing an LED array, the sets can achieve full brightness in 5 seconds, as opposed to as much as 45 seconds with a traditional DLP model. In addition, LED arrays are supposed to last seven to ten years in typical use—a much longer life span than that of conventional DLP lamps.

Expect to pay a premium for these new technologies, if you find them. If you can't, holiday prices for conventional sets should prove consoling: Haruki says 720p plasmas may go for as little as \$1000.

—Alan Stafford



PLASMA GOES TO 1080p: Pioneer's 50-inch Pro-FHD1 is among the first 1080p plasma TVs, but it retails for a whopping \$8000.

components—including the TV—must support the standard. "You don't need it to do 1080p, but it's still a good thing," says Scott Ramirez, vice president of marketing for Toshiba. LG Electronics, Mitsubishi, Samsung, Sharp, and others have promised HDMI 1.3 sets next year.

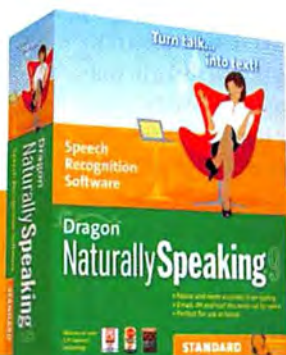
CABLECARD 2.0

CONSUMER ELECTRONICS industry support for CableCards—the small PC Card-like devices that fit into the

also said that as of July 2007, cable operators must make CableCards the sole means of decrypting digital TV signals. This means any new set-top boxes will have to use a CableCard, says David Broberg, vice president of consumer video technology for CableLabs, the company that develops cable TV specifications including for CableCards. (Companies won't have to replace existing cable boxes, though.)

However, first-generation CableCards of today can only

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ENTERTAINMENT

Movie Downloads Are Still a Flop

SKIPPING THE VIDEO STORE SOUNDS GOOD, BUT DON'T COUNT ON IT ANYTIME SOON.

GIVEN ALL THE recent hula-balo about digital movie downloads, you'd think Hollywood finally had embraced the Internet revolution.

Online services such as Amazon's Unbox, Apple's iTunes, CinemaNow, and Movielink promise instant access to movies without your having to schlep to Blockbuster or wait for Netflix. You can watch a movie shortly after it starts to download, carry movies on a portable player, and, with CinemaNow, burn them to disc to watch in your living room.

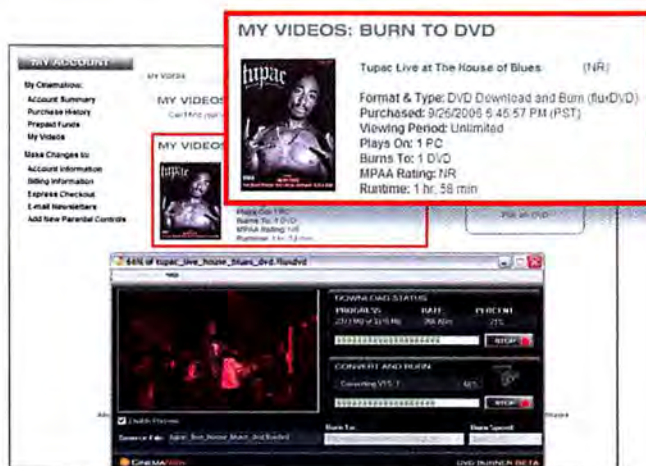
So what's wrong with this picture? A lot. Some downloadable films are more expensive than their DVD counterparts and offer fewer features. Downloading the movies can be tiresome. And

watching films on something other than your PC or portable device can be a pain.

HOW FAST?

APPLE'S ITUNES DOES the slickest job of integrating an online movie store with a media player, but at press time fewer than 100 movies were available, all from Disney-owned studios. I tried the 99-minute *Hitchhiker's Guide to the Galaxy* (\$10, no special features), which took only 90 minutes to download. And I could start watching it right after the download began.

I launched *Poseidon* from Amazon Unbox just 3 minutes after starting the download to my PC at 600 kilobits per second, but when I tried an episode of *Firefly* at 300 kbps, I had to wait nearly 20 minutes.



ONLY ONE SERVICE, CinemaNow, allows you to burn downloaded movies to DVD for later viewing in your living-room player.

The \$15 *Poseidon* came with only a making-of featurette. Unbox's sharper images and richer colors set it slightly apart from the other three.

As for other features, only CinemaNow lets you download and burn films to a disc with standard DVD menus, extra features, and even printable cover art for the disc case. But at press time only 113 titles were available for burning, most of them obscure (*Space Truckers*, anyone?).

I downloaded *Tupac Live at the House of Blues* from CinemaNow over an 802.11g wireless connection; burning it to DVD took exactly 4 hours. Though the disc played back

fine on my DVD player and on two test PCs, a third computer couldn't read it until I installed a new codec.

The *Tupac* download looked so-so; however, a company representative said that the download's quality was identical to the DVD's. In general, the image quality of all four services was good.

CinemaNow's \$20 *Poseidon* downloaded to my testing laptop in just 90 minutes and was available to watch within roughly a minute. But it cost \$5 more than a comparable DVD at Target, with no special features. Movielink also charges \$20 for a bare-bones download of *Poseidon*.

FEATURES COMPARISON

MOVIE DOWNLOAD SERVICES: NO WINNER

IN OUR TESTS, no one service stood out. Common gripes: pricing and limited selection.

DOWNLOAD SERVICE ¹	Number of full-length movies ²	Price range	Burns to playable DVD?	Number of devices per title	Compatible players
Amazon Unbox www.amazon.com/unbox	1000	\$9 to \$20	No ³	Two PCs, two portable players	Windows Media "Plays for Sure" ⁴
Apple iTunes 7 www.apple.com	Less than 100	\$10 to \$15	No ³	Unlimited PCs, five iPods	Video iPod
CinemaNow www.cinemanow.com	1800	\$10 to \$20	Yes ⁴	Three Windows Media Player devices	None
Movielink www.movielink.com	1000	\$9 to \$20	No	Two PCs	Portable Media Centers ⁵

FOOTNOTES: ¹All services' movies play while downloading. ²Estimated number at press time. ³Can burn a DVD for backup of movie data on a PC. ⁴Only 113 movie titles at press time. ⁵Only episodes of *Babylon 5* were available to play on a portable device at press time.

TUNE IN NEXT YEAR

THE REAL CHALLENGE? Watching digital flicks in your living room. I hooked the laptop to my home projector, but movies displayed at less than half the size of a DVD. Next year, devices such as Apple's iTV that let you feed digital content directly to the boob tube should make movie downloads more attractive. For now, downloadable movies are like popcorn without any butter or salt—tolerable but hardly tempting.

—Dan Tynan



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CENTRINO SEQUEL

The Buzz: Get ready for some important notebook updates from Intel early next year. The company's latest mobile platform, code-named Santa Rosa, should launch in the first half of 2007. One of the neater additions is a technology called Robson, which packs a large cache of flash memory onto the motherboard to shorten boot and resume times, and help save power. Wireless networking gets a boost, too, since the new platform will include draft-802.11n networking. Some improvements in speed are also on tap, including a faster bus (800 MHz versus 667 MHz), updated mobile Core 2 Duo

SANTA ROSA



CPUs with superior power-saving technology, and integrated graphics ready to handle all the 3D-accelerated eye candy in the Aero Interface for Windows Vista.

Bottom Line: I can't wait to see how well all these integrated flash technologies work. Now if laptops could just get fire extinguishers built in, we'd be in business.

HIGH-DEF VIDEO COMES HOME

The Buzz: Home movies will get a whole lot sharper, thanks to a raft of affordable camcorders on the way that record in 720p or 1080i. Based on a new codec called AVCHD (Advanced Video Codec HD), these new camcorders record to flash, DVD, or hard disk. A pair of models from Sony are available now: The \$1400 HDR-UX1 records to DVDs, while the \$1500 HDR-SR1 packs a



30GB hard drive. Panasonic, which codeveloped the format with Sony, is planning to release its own AVCHD units in the first half of next year.

Bottom Line: Thus begins our countdown to the inevitable premiere of *America's Funniest High-Def Videos*. And you thought dogs on roller skates were funny in standard def.

APPLE iTV

The Buzz: Media streaming devices have been fighting an uphill adoption battle for years. That landscape is about to change, as Apple prepares to launch its

HERE NOW

1 VIEWSCORE: New site averages scores from an assortment of independent gadget reviews. viewscore.com

2 8GB ZEN V PLUS: Updated Nano rival continues to offer a better value than the iPod does. find.pcworld.com/55366

3 SLINGBOX: This video place-shifting box now comes in lots of attractive high- and low-end models. find.pcworld.com/55368

4 RHAPSODY: Version 4 ties in with both SanDisk players and Best Buy. rhapsody.com

5 SCRAPBLOG: Drag and drop to create an attractive presentation for photos. scrapblog.com

own \$299 iTV streaming device at Macworld in January. The preview units that Apple showed at its fall developers conference looked like thinner Mac Minis and featured HDMI and component video outputs, digital and analog audio connections, and wireless networking. Rumor has it the final version also contains a hard drive, but at that price I have to assume it's more of a cache than a storage device.

Bottom Line: When Apple finally gets into the game, you know a product class is about to take off. Apple rarely arrives first, and it doesn't always build the best new tech, but it can design and market like nobody's business. ■

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

FUTURE TECH

NEUTRALIZE BAD WEB SITES

WE ALL KNOW that our trusty Web browsers are far from trustworthy these days. So how do you make sure you can surf the Web safely with all the malicious code out there? A Microsoft research project called BrowserShield hopes to solve the problem by analyzing dynamic Web pages and rewriting their code on the fly to edit out dodgy behavior. If a site attempts to download a file without your permission, for example, BrowserShield could edit out the offending code and display the rest of the page. That's fairly easy to do on a static page, but the wealth of dynamic content online makes the task much more difficult. The researchers plan to work with other Microsoft teams to add the technology to future browser plug-ins, firewalls, and other software.

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November/December 2006

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- Internal power adapter
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(ET.1916B.0DF)



Acer AL1916W Ab

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

\$215

(ET.1916B.W08)



\$199

(ET.1717B.MD8)

Acer AL1717 Bbmd

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



\$189

(ET.1706B.008)

Acer AL1706 Ab

- 17" TFT LCD
- 1280 x 1024 native resolution
- 500:1 contrast ratio
- 140° horizontal viewing angle
- 140° vertical viewing angle
- VGA signal connector
- 270 cd/m² brightness
- 8ms response time
- Internal power adapter
- Black color

Acer recommends Windows® XP Professional.

Acer® AcerPower™ 1000

- AMD Athlon™ 64 Processor 3800+
 - HyperTransport™ Technology
 - Enhanced Virus Protection Technology²
 - Cool'n'Quiet™ Technology
- Genuine Windows® XP Professional
- 512MB DDR SDRAM
- 80GB³ SATA hard drive
- DVD-Dual drive (DVD+/-RW)
- NVIDIA® GeForce® Go 6150 graphics
- Gigabit LAN
- USB keyboard and mouse
- 2.4" W x 9.8" D x 7.9" H
- One-year limited warranty⁴



Acer AcerPower 1000-UA382P

\$599

AMD Athlon™ 64 Processor 3800+
Genuine Windows® XP Professional
802.11b/g WLAN

Acer AcerPower 1000-UA381P

\$579

AMD Athlon™ 64 Processor 3800+
Genuine Windows® XP Professional

Ultra-Compact Efficiency

The AcerPower 1000 delivers desktop-level performance in a system that's just one-tenth the size of a typical tower desktop. Plus, operation is ultra-quiet and power consumption low.

**Windows® Vista™
Capable**

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

Acer® Projectors with DLP® Technology

Acer PD726W Wireless Projector

\$1,699

- 3700 ANSI lumens
- XGA (1024 x 768) native resolution
- UXGA (1600 x 1200) maximum resolution
- 2500:1 contrast ratio
- 7.7 lb. (3.5kg)

(EY.J2901.012)

Acer XD1170D Multipurpose Projector

\$632

- 2300 ANSI lumens
- SVGA (800 x 600) native resolution
- SXGA (1280 x 1024) maximum resolution
- 2000:1 contrast ratio
- 4.8 lb. (2.2kg)

(EY.J4001.007)

Acer PD311 Portable Projector

\$732

- 2000 ANSI lumens
- SVGA (800 x 600) native resolution
- SXGA (1280 x 1024) maximum resolution
- 2000:1 contrast ratio
- 2.9 lb. (1.3kg)

(EY.J3401.006)



acer

acer

Acer recommends Windows® XP Professional.

Home Entertainment

Acer® Aspire™ 5100

- AMD Turion™ 64 X2 Dual-Core Mobile Technology TL-50
 - AMD PowerNow!™ Technology
 - HyperTransport™ Technology
 - Enhanced Virus Protection Technology²
- Genuine Windows® XP Professional
- 1GB DDR2 533
- 120GB³ hard drive
- Integrated Super-Multi drive (DVD+R, DVD-R, DVD-RAM)
- 5-in-1 card reader
- 15.4" WXGA (1280 x 800) TFT display
- Integrated ATI® Radeon® Xpress 1100 graphics
- 802.11b/g WLAN, 10/100 LAN, V.92 modem
- One-year limited warranty⁴



Acer Aspire 5102WLMi

\$899

AMD Turion™ 64 X2 Dual-Core Mobile Technology TL-50
Genuine Windows® XP Professional
(LX.ABH06.014)



Windows® Vista™
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2-Year Extension of Limited Warranty (146.AB820.EX2)

\$99

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

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

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(146.AD077.002)

\$199

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Excludes extension of International Traveler's Warranty.

¹ Depends on availability of PC-supported connections and location.

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

³ 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.

⁴ For a free copy of the standard limited warranty end-users should see a reseller where Acer products are sold or write to Acer America Corporation, Warranty Department, P.O. Box 6137, Temple, TX 76503.

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WHERE'S THE BROADBAND?

MYSPACE DEFENDED



SURFING ON THE JOB IN PERSPECTIVE

IN THE OCTOBER *News and Trends* article "Employers Crack Down on Personal Net Use," you report that one company found that employees spent a total of "17,000 hours in one year on recreational surfing (roughly 3 hours per employee per week), which translates into an estimated loss in worker productivity of \$867,000, according to Networks Unlimited."

HOT TOPICS IN FORUMS

Vendors, Digital Movies, and Congress

HERE ARE SOME of the hot topics going on now in our forums. You can take part in our community discussions by heading to find.pcworld.com/55165.

► **EXPECTED SONY PLAYSTATION3 SHORTAGE:** "Isn't it amazing how [before a console's release] manufacturers promise that millions of units will be available. But then as the release date gets closer, some mysterious [production] 'problem'...occurs...touching off a frenzy of pre-sale buying..." —*btrottah*

► **MOVIE DOWNLOADS:** "There is just no way I am downloading any movies until

Well, let's do a little additional math. Three hours per week, divided by five workdays in that week, equals 36 minutes a day. Come on. Perhaps these people were surfing on their lunch break. Most employers allow a 30-minute lunch break and give a couple, if not more, 15-minute coffee breaks per day. For this company, that adds up to 28,340 hours per year or \$1,445,340 in lost productivity.

I'm sure that there are those who abuse the privilege of accessing the Net on company time, but I'd be willing to bet that just as much or more time is lost on such things as talking with your coworkers about sports, cars, movies, kids, and so on. A little perspective, please.

Jake Forget, Dover, New Hampshire

TRUE, ONLY A fool would believe that improper Web usage such as pornography and gambling are harmless to employers. But recreational Web surfing by employees does not necessarily equate to unpro-

I can burn them to a DVD. All I want is the ability to move the movie from the computer to the living room. Is that too much to ask?" —*gallowglass*

► **McAFEE'S 'FALCON' BUG:** "McAfee has got to stop forcing involuntary beta software on paying customers!! ... I spent a huge amount of time installing, uninstalling, and troubleshooting this latest mess." —*acurban*

► **CONGRESS AND NET NEUTRALITY:** "Why did we let the government go into the Internet business? We the people own the Internet..." —*axhandlebill*

ductivity in a professional environment.

More often than not, professionals are working more hours in this era than ever before. Let's say I have a staff of 40 or more well-qualified professionals working upward of 50 hours a week. Do you believe I'm concerned that they spend 3 hours a week on Yahoo Mail or shopping online? I don't think so. This is a sign of the times. They rarely take lunch, they work weekends, and they dedicate most of their lives to their employer.

Mark Starry, Norwich University, Vermont

MICROSOFT VS. HACKERS

READING STUART JOHNSTON'S latest column on holes in Microsoft Office ["Hackers' Latest Office Target Is PowerPoint," *Bugs and Fixes*, October] raised several fascinating questions. If I understand the article correctly, there are now some very powerful tools ("fuzzers") that are improving crackers' productivity, enabling them to find many holes in Microsoft Office and other programs.

I infer from this that Microsoft, despite its huge cash reserves, doesn't own copies of these tools so that it can find the holes before the crackers do. Nor, apparently, has it hired a sophisticated cracker to try to find these holes so it can patch them. And yet it still wants us to buy its products? Or am I missing something?

Bill Holab, Brooklyn

LET THE FEDS SPY ON!

ALLOW ME TO quarrel with Yarden Arar's October *Consumer Watch* column ["Is Your ISP Helping the Feds Spy on You?"]. She deplores that my Internet service provider may be giving federal authorities information on my Internet activities—but I certainly hope it is. While I expend huge energy on maintaining my privacy, that effort does not extend to ►

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frustrating those we ask to provide for our safety. The Patriot Act, along with other legislation and court rulings, provides the legal authority to go after people who use the Internet for any illegal purpose, including terrorism.

The worst invader of our private lives isn't the government; it's the commercial interests and the modern thief who steals our identity so as to steal our money.

L. Hicks, Lincolnshire, Illinois

OVERSEAS SHIPPING

REGARDING OCTOBER'S *On Your Side* item ["Online Stores Not Friendly to APO Buyers"]: The real reason most suppliers will not ship to FPO or APO addresses is that they are USPS postal boxes, and nobody signs for the merchandise—a potential liability for the vendor.

Many reasons also exist for not shipping electronics to these addresses—no offshore support facilities, for example.

Robert Nadell, Virginia Beach, Virginia

BROADBAND OR BUST?

I READ JEFF Bertolucci's article ["The Best Broadband in America," October] with dismay. I must be in a no-man's-land of broadband.

I live near a major market (Lansing, Michigan), but far enough away to be out of reach of cable, DSL, and Wi-Fi. My options are limited to satellite and telephone dial-up. My home is in a parklike setting with lots of trees and wildlife. The trees, however, rule out satellite. So it's lowly (and slow) dial-up. Verizon says faster service may come some time in the future, but it can't say when.

Bertolucci's closing comment—that you don't have to settle for dial-up anymore—just doesn't apply.

Robert Williams, Eaton Rapids, Michigan

UNFAIR TO MYSPACE?

REGARDING THE RECENT PCWorld.com article by Dan Tynan, "The 25 Worst Web Sites" [find.pcworld.com/55365]: Leave it to PC World to slam yet another large and successful operation, as you have Microsoft. Now it's MySpace.com. Yes, there are predators and scumbags on that site—as well as on practically any other

public forum on the Web, and in person at airport concourses, the corner drug-store, and baseball stadiums everywhere. What does that have to do with the success of MySpace? It just so happens that the site is also a great place to showcase music if you are an artist trying to break into an otherwise locked-up-tight music industry (I am a songwriter).

Thanks anyway, though, for placing MySpace at number one on your "worst sites" list and thereby giving it publicity in your magazine and on your Web site—albeit notorious publicity.

James M. Stelhorn, Scottsdale, Arizona

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

RATE THIS ISSUE

TELL US WHAT you think by going to www.pcworld.com/pcwinput—you could win a \$300 gift certificate from Amazon.com. The site explains the official rules and offers an alternate method of entry into the drawing.

CORRECTIONS

NOVEMBER'S *INTERNET TIPS* should have noted that the Blurb publishing service lets users retain rights to their original content but currently pays no royalties on Blurb Bookstore sales; the company plans to add a royalty system, however.

November's *Plugged In* should have said that Soudigo's Callisto adapter costs \$49.

October's *Answer Line* should have included the following full directions for syncing briefcases between a notebook and a desktop that are networked: "Create a folder in the notebook's My Documents folder called *Holds Briefcase*, right-click it, select *Sharing and Security*, click *Share this folder*, check *Allow network users to change my files*, and click *OK*. On the desktop PC, create a briefcase in the notebook's *Holds Briefcase* folder."

PC World regrets the errors.

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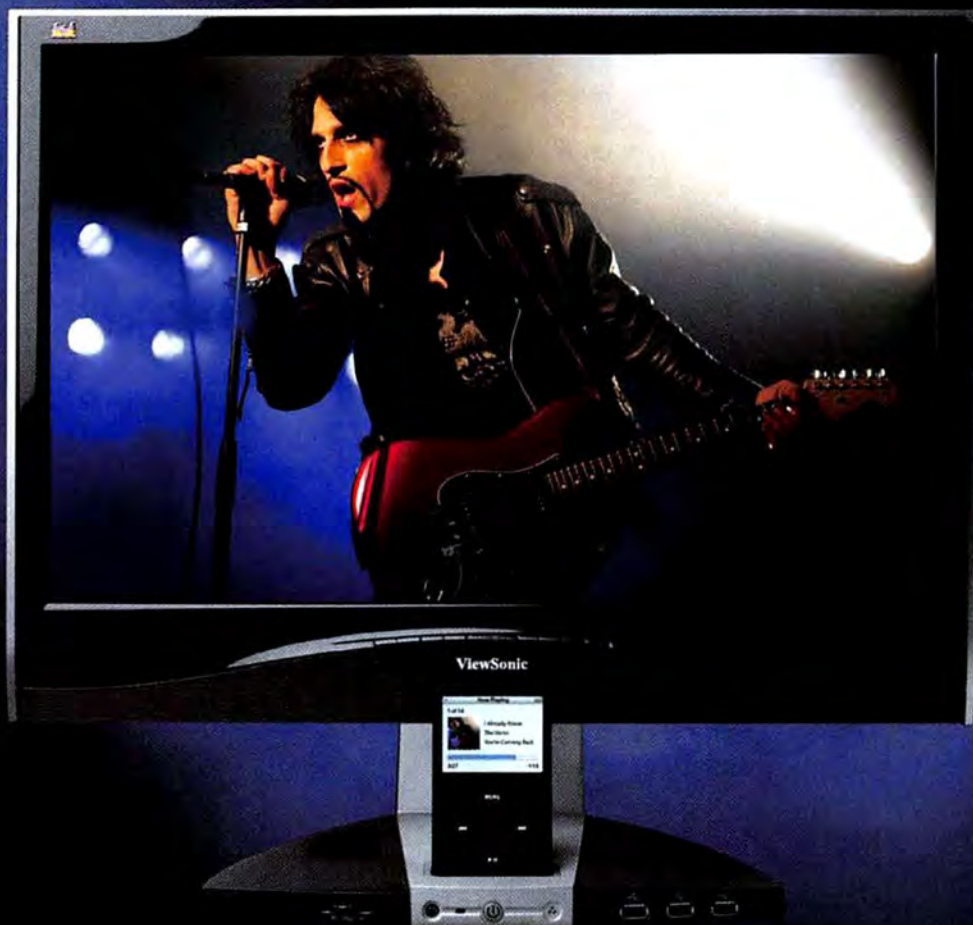


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**MONITOR CLEANER
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Protect Yourself Against Credit Fraud

New options help prevent miscreants from racking up charges on your card.

YOU WON'T FIND a more enthusiastic online shopper than me. Clothes, wine, kitchenware, pet food—if it's available online, I've probably bought it there. In fact, I've purchased so much stuff on the Web over the years that my UPS driver waves when he sees me on the street.

I buy most of my gifts online, too; and as we enter the home stretch of the holiday season, I'll have more company than ever. Who wouldn't prefer pointing and clicking to trudging on foot (sometimes in inclement weather) from store to store and braving long lines of fellow shoppers?

Of course, seasoned buyers occasionally encounter dubious shopping sites, and the general state of leaky security should encourage anyone to be cautious with credit cards. True, the credit card fraud rate, once as high as 0.15 percent, has been holding steady at about 0.06 percent for some years now, meaning that, for every \$100 charged on credit cards, only 6 cents goes for unauthorized purchases. And if you ignore phishing e-mail and scrupulously shop at reputable sites with secure servers (look for <https://> at the beginning of the URL), you're far less likely to lose your credit card information online than to someone who captures the data by swiping the physical card through a skimmer. Even so, you can take these steps to make your online shopping trips safer still.

VIRTUAL CREDIT CARDS

WHAT IF YOU could complete an online purchase with a credit card that functioned solely at one store, or for the dura-

tion of one transaction? That's the benefit of virtual cards, from credit card issuers such as Citibank, Discover, and MBNA.

The virtual card service for MBNA (my MasterCard issuer) is called ShopSafe, and it's available free to anyone who signs

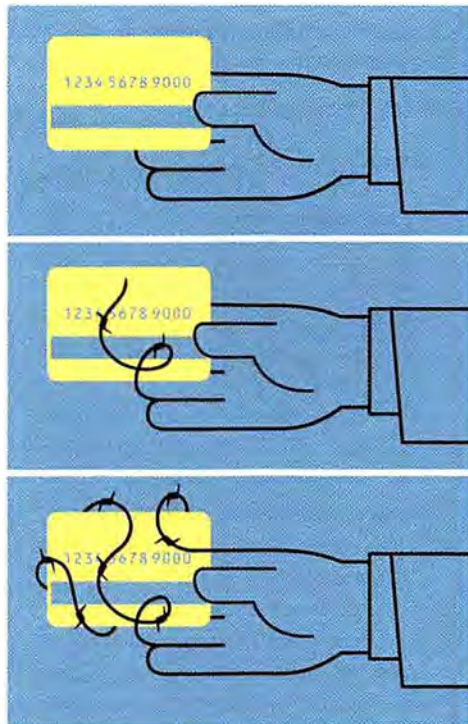
and a CVC2 number (a number printed on the card that some sites ask for as an additional fraud prevention measure).

Now you can use that information to pay any merchant site that accepts the underlying credit card (in this case, MasterCard). The charges show up on your regular bill. You can create as many cards as you want (but you can use each one at just a single merchant site). The software helps you keep track of your various virtual cards and the transactions you've used them for. Of course, you can't use virtual cards in the real world (to rent a car or pick up movie tickets, say). But they do minimize exposure of your account information online.

PAY BY E-PAY

A NEWER OPTION available at some online merchants relies on electronic payment systems that many people already use to deal with their monthly bills. Where offered, ModaSolutions' Secure-eBill typically appears alongside credit cards or PayPal as a payment option. If you choose it, you get an invoice in your e-mail from the merchant; if you're a first-time customer, you must set up that merchant as a payee with your bank or electronic bill-paying service. After making the required payment, you should receive e-mail confirmation that your payment has reached the merchant. Merchants never get your bank information; ModaSolutions simply notifies them that a payment has been posted to their account in your name.

The disadvantages: You might have to wait a few days for the payment to ►



up for MBNA's Net Access service for tracking and paying MBNA credit-card bills online. You can use ShopSafe either through your browser or with free downloadable desktop software. When creating a virtual card, you specify how long it should remain good (choices range from 2 to 12 months) and a spending limit (you can change this later on). Then the service generates a card number, along with an expiration date based on your request



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CONSUMER WATCH

be processed, and you might set up a lot of payees that you'll never revisit. Also, because the payment is a direct debit from your bank account, you won't have any chargeback recourse if the purchase is unsatisfactory for some reason.

THE PAYPAL OPTION

PERHAPS THE BEST-KNOWN credit card alternative is PayPal, which eBay owns. To make payments via PayPal, you must provide the service with a source of funds—either your bank account or a credit card. But you don't provide that account data directly to a seller; instead, you instruct PayPal to transfer your payment to the seller's account. PayPal identifies you to the payment recipient by your e-mail address only. Though most big commercial sites don't accept PayPal, a growing number of smaller merchants do.

PayPal, too, has its downside. Like cred-

it cards, it promises complete refunds for transactions by people who spoof your identity. But its protections against unethical merchants are far less extensive. It covers payments of up to \$1000 for qualified eBay purchases that go sour (you don't get the item, or it's "significantly not as described"). But "qualified" here means that the seller meets certain requirements (including 98 percent or better positive feedback) and that the item is tangible and physical (as opposed to a service or software). For non-eBay transactions, even if PayPal finds your claim valid, PayPal will get you a refund only if the seller's PayPal account has enough money to cover the claim.

If you use a credit card to fund your PayPal account, you might be able to recover your money via a chargeback through the credit card company. But because PayPal is on the hook for the entire amount, it ►

PRIVACY WATCH

How to Secure Files on Your Hard Drive



IF YOU KEEP valuable files on your laptop, you probably know that you ought to protect your data.

But knowing you should do something isn't the same as actually doing it, as evidenced by the steady stream of incidents where sensitive information gets lost or stolen from corporate laptops.

The tasks of installing and running encryption software have not always been easy. But I gave a couple of new tools a try recently, and they make encryption simpler than it has ever been.

I tried PGP Whole Disk Encryption 9.5 (\$119, www.pgp.com) and SecurStar DriveCrypt Plus Pack (\$161, www.securstar.com). Both applications can encrypt single files, batches of documents, or the entire hard drive and everything on it. This last feature makes the most sense: You enter your password only once per Windows session, and everything gets encrypted automatically as you work.

Files are encrypted only while on the hard drive. If you send an e-mail attachment to someone from your encrypted hard drive, the software automatically decrypts the attachment before it leaves the PC, and the recipient receives a normal, unscrambled message.

Full disk encryption tools used to have one major drawback: They slowed PCs considerably. But as processor power has gone up, software makers have optimized their products so effectively that you can barely tell the encryption is happening. I surfed the Web, checked and sent e-mail, and even played some graphically intensive games on the encrypted laptop without encountering a perceptible performance hit from the encryption software, which quietly went about its business in the background.

With tools like these available, you have to wonder how many laptops full of sensitive information must be stolen from the car trunks and airport lounges of the world before their owners do something to protect that data.

—Andrew Brandt

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expects you to exhaust its dispute resolution process before turning to your credit card company, and the wait might result in your missing your credit card issuer's own deadlines for redress requests.

BEING A CAREFUL SHOPPER

I WORRY MORE about my credit card falling victim to physical theft than to online fraud: A few years ago, someone stole my wallet and used my credit cards to charge thousands of dollars' worth of merchandise and restaurant meals. But I didn't have to pay a dime of those charges: Major credit cards have zero-liability policies for consumers whose cards are used without their authorization, regardless of where the purchases occur.

But if your credit card or credit card number gets stolen, cleaning up afterward is a big hassle. So for an additional layer of protection, look for online merchants that participate in the Verified by Visa or Verified by MasterCard pro- ▶

ON YOUR SIDE

Monitor Cleaners May Harm Screens

 A COUPLE OF weeks ago, I purchased the CompUSA LCD/CRT Cleaning Kit and used it to clean the screen of my Dell 18-inch LCD monitor. But a few hours later, when I turned on my monitor, most of the screen was discolored. A CompUSA executive supervisor told me that he had discussed my problem with others at the corporate office and that they would not do anything for me.

*Michael Roth
West Hollywood, California*

On Your Side responds: After we got in touch with CompUSA, its representatives ordered a new monitor for Roth, but they would not provide us with any further information about the cleaning

kit's ingredients or whether other customers had reported similar problems. The product's packaging does not state its ingredients. When we purchased the kit and tried it on a notebook monitor, we did not see any discoloration.

The Dell manual we looked at warns users not to apply industrial-strength cleaners or petroleum-based products. John Young-Hein, vice president of Meridew Enterprises, which makes a different line of cleaning products called Klear Screen, says that many screen-cleaning gels contain alcohol or ammonia, "big no-nos for an LCD."

Following your manual's cleaning instructions is the best strategy, starting with the least-aggressive method.

—Amber Bouman

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†AIM Industry White Paper on Records, Document and Enterprise Content Management for Public Sector, 2005.

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CONSUMER WATCH

grams. To shop at a participating merchant, you must enroll with your card issuer and create a user ID and password that you then enter on the merchant's site. Relatively few retailers use these two programs, though. Many more ask you to furnish the aforementioned CVC2 number printed on your card, which eliminates fraudsters who have obtained the account number but not the card itself.

Going online can help you catch fraud early. Shirley Rooker, president of Call for Action, a Bethesda, Maryland-based nonprofit coalition of radio and TV consumer help lines, recommends that you monitor your credit card activity online for unauthorized charges, which can be a sign of identity theft, a far more serious problem than credit card fraud. "Just because your credit card has been stolen does not mean you're the victim of identity theft," Rooker says. "But you have to make sure it's not something greater."

Rooker also urges people to take advantage of the federal law requiring each of the national credit reporting agencies—Equifax, Experian, and TransUnion—to provide you with a free copy of your credit report once every 12 months. These reports will show if someone has opened a credit account in your name. You can request one free report from a different agency every four months at www.annualcreditreport.com. Don't be fooled by sites with similar names that request a credit card number before providing you with a report, and then bill you for a "credit monitoring" service.

Security is on everyone's mind these days, and with good reason. But if you're careful and take a few simple steps to prevent problems, you shouldn't have anything to worry about. ■

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

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your computer and wireless hubs for your devices. They'll move freakish amounts of data with unearthly speed (up to 480 Mbps). Eventually this technology will be built right in! Until then, learn how to upgrade by visiting www.usb.org/LookForTheLogo.



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ARE YOUR CD- and DVD-burning jobs giving you a headache? I have solutions for fixing various problems, including one of my pet peeves: the inscrutable 'power calibration' error.

Hassle: I want to record a Web show that is not podcast. How do I do it?

The Fix: Two tools will do the job. Audacity is a freebie (find.pcworld.com/55108) and is easy to use. Just click the red button to start recording and the orange one to stop it, and then from *Files*, choose *Export as MP3*. Plenty of editing tools are built in, so you can, say, remove silence. One drawback: It also records PC sounds, so if you're not careful, you'll hear error sounds and new-message "dings."

I like the \$18 Total Recorder (find.pcworld.com/55109) better than Audacity because of its additional, useful features. My favorite allows you to set up multiple daily and weekly recording schedules. (The \$36 Pro version automatically does everything—opens the browser to a designated URL, starts and stops recording, saves the file, and closes the browser. And yes, system sounds are turned off.)

Be aware, though, that copyright laws



may apply. If you're doing more than recording a show for later listening, that may be illegal, says Fred von Lohmann, senior intellectual property attorney for the Electronic Frontier Foundation.

The Hassle: My wife wanted to burn a bunch of files onto a CD. She right-clicked them in *My Documents* and chose *Send*, but the CD drive was nowhere to be found. My computer, which is identical to hers, shows the drive. How does she get it back?

The Fix: Fortunately, the solution is easy. Simply open *My Computer*, right-click on the CD drive, select *Properties*, choose the

Recording tab, and then check *Enable CD recording on this drive*. Voilà.

Power Tip: If you try burning to a DVD and get a 'power calibration' error, it's probably because the disc is a cheapo. Best bet is to grab a firmware upgrade for your drive; you'll find an extensive list at The Firmware Page (find.pcworld.com/55111). Even some brand-name DVD discs aren't made by the company selling them; download the free DVD Identifier utility to see the real manufacturer (find.pcworld.com/55112).

The Hassle: I stuck a music CD into my drive, and surprise—instead of Windows Media Player, Explorer opened. What's up?

The Fix: Someone (not me) might have accidentally clicked 'Open folder to view files using Windows Explorer' when the Audio CD Properties dialog box appeared. That someone also might have clicked 'Always do the selected action.' You can undo that choice by resetting Windows' AutoPlay feature: From *My Computer*, right-click your CD drive, select *Properties*, click the *AutoPlay* tab, and click the *Restore Defaults* button. In the same Properties dialog box, you can reset the AutoPlay options for video files, pictures, and other media file types as well.

Power Tip: Download Autoplay Repair Wizard, a freebie that fixes most AutoPlay problems that occur with removable devices (find.pcworld.com/55113). ■

TOOL OF THE MONTH

Save and Manage Your Videos

WANT TO FIND a video you just viewed online? The file is probably already on your hard drive, in your Internet cache folder. CacheSort (find.pcworld.com/55114) offers an easy way to dig up all of the videos—and JPEGs—stored in the cache. This free tool automatically moves (or copies) files from the cache into folders you specify. The downside

is that the application is a bare-bones affair; in fact it's downright geeky. For instance, it lacks an installer—you simply double-click the file, and the tool appears in your system tray. To view your collection of movies and images, right-click the program icon and select *CacheSort*. You can safely ignore *Settings* (it's an old-fashioned INI file).

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

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GADGET FREAK

DAN TYNAN

The Must-Have Gadgets of 2006

Looking for great tech gear? Check out these magnificent seven.

SANTA ISN'T THE only one who's been making a list and checking it twice. Over the last year hundreds of gizmos have passed through Chez Freak, but only a handful inspire sincere gadget lust.

These devices all share certain traits: They serve a real need (read: not yet another iPod accessory). They're innovative. Most important, they're simple to use. Plug them in, turn them on, and they work. The way it should be.

iRobot Dirt Dog: Meet man's new best friend. iRobot's Dirt Dog is a sweeper designed for use in basements and garages. Just push the "Clean" button and stand back. It scuttles about picking up wood shavings, loose screws, and other weekend workshop detritus. The \$130 price (irobot.com) is worth howling about, too.

MusicGremlin: Don't wait for Microsoft's Zune MP3 player. With the Wi-Fi-enabled MusicGremlin (musicgremlin.com), you can download songs from any hotspot and then legally swap them with your buddies online. Sure, navigating through songs could be easier, and \$300 (plus \$15 a month for the music service) is pricey for a device with only 8GB of storage. But being able to download virtually any song, anytime, anywhere, is wicked cool.

Pure Digital Point and Shoot Camcorder: This pocket-size digital videocam lets you capture 30 minutes of decent-looking video in its 512MB of flash memory and then transfer the clips to your PC via a clever USB "arm" that swings out from the base of the unit. The camera's built-in software allows you to manage videos, e-mail downsized clips to friends, or share your masterpieces on Google Video

with just a few clicks. The features are bare-bones—only 2X zoom, 640-by-480 clips, and minimal playback options on a 1.5-inch LCD—but then again, so is the \$130 price (find.pcworld.com/55547).

PowerSquid Surge3000 Calimari: Even I find it odd how excited I am about this \$80 power strip (powersquid.net). Yes, it really looks like a squid: Six tentaclelike



plugs extend to handle power bricks without blocking other sockets, and its surge protection (up to 3240 joules) keeps your pricey gear from getting fried. Two plugs even light up so you can find them in the dark. It's ideal for geeks with too many gadgets and nowhere to plug them.

Sony Reader: This device redefines the electronic book. Sony's glare-free screen and E Ink technology are amazing, the unit is push-button easy to use, and its 7-by-5-inch size strikes the perfect compromise between a PDA and a laptop. The \$350 Reader (sony.com/reader) can hold around 80 books in its 64MB of memory, and more when you add a Sony

Memory Stick or an SD Card. Sony launched with about 10,000 titles in its proprietary e-book format (the unit also reads text, Acrobat, and Word files). Pricing and availability of titles will vary, but the gizmo itself is terrific. (For details, see our review at find.pcworld.com/55501.)

Zvox 325: One wire—that's all the Zvox 325 (\$349, zvoxaudio.com) needs to produce booming audio from your TV, MP3 player, or DVD machine. Just plug in this VCR-size speaker unit and connect it to the device's headphone jack. Two knobs let you control volume and switch from stereo to surprisingly good surround sound. It's simplicity itself.

PicoCricket: I got this robotics kit for my 7-year-old daughter, but soon I was fighting her for it. PicoCricket (\$250, picocricket.com) combines Lego pieces and fuzzy pipe cleaners with sophisticated light, motion, and sound sensors. Kids build their own toys and then program them to respond to stimuli by dragging and dropping "Pico-

Blocks"—brightly colored shapes that represent different chunks of object-oriented code. So, for example, you can build a flower that plays music when the sun rises, or a birthday cake that lights up when you touch it. You'll need about 30 minutes with Pico's quick-start guide to master the basics, but far longer before you're willing to let your kids have at it.

A Merry Geekmas to all, and to all a good night. ■

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

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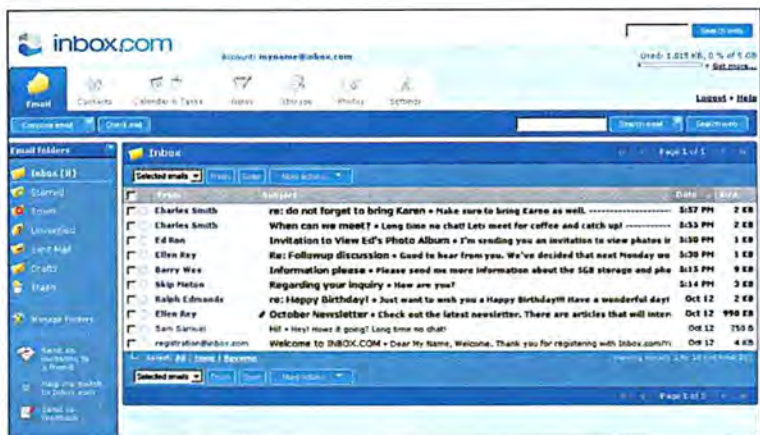
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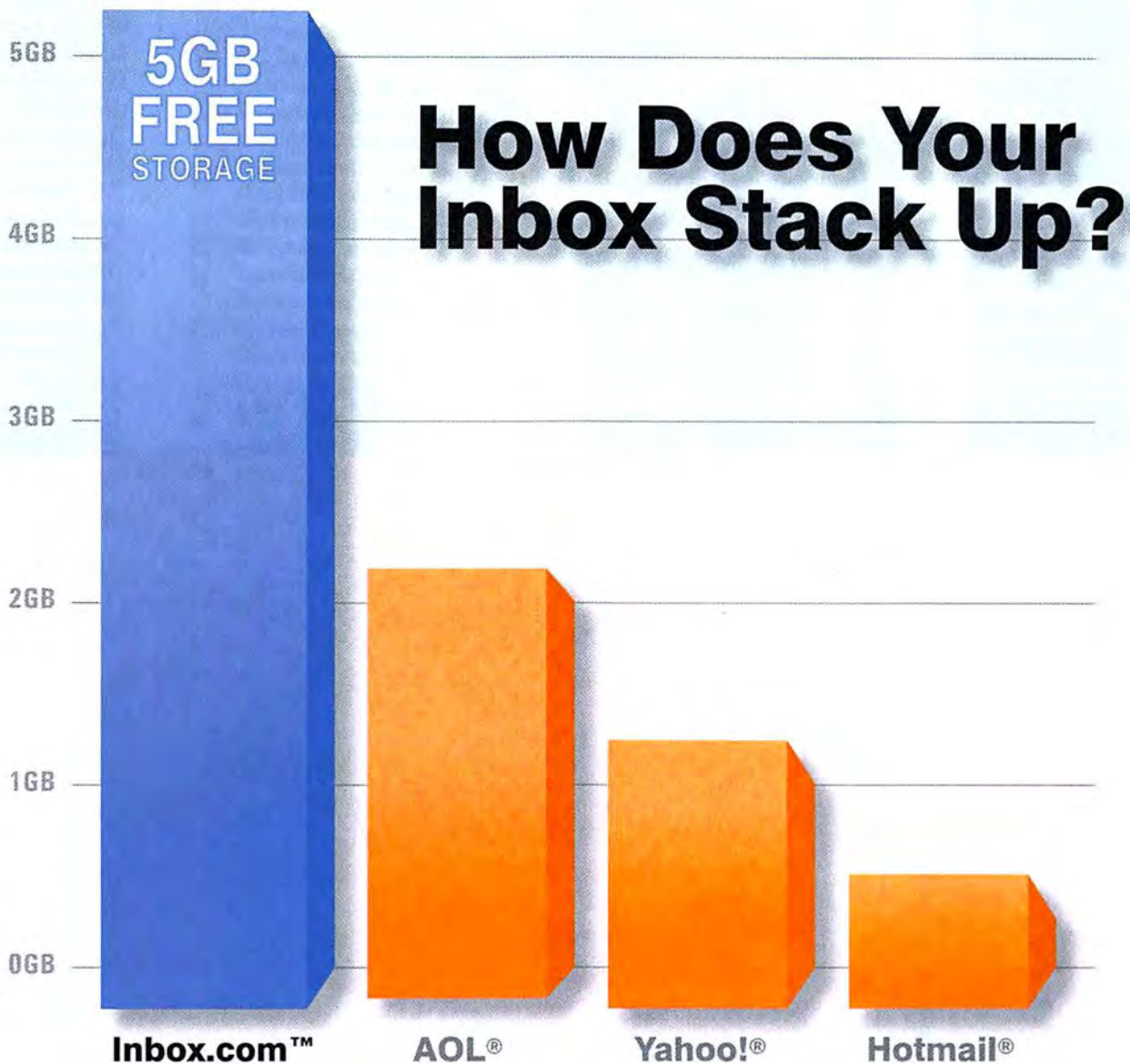
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Drive-By Downloads Cruise Through IE

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THEY COULD LURK in booby-trapped banner ads on a site you regularly visit, or in a poisoned HTML e-mail. And because of new holes, such drive-by downloads can bust your Internet Explorer 6 or Outlook client and fill your PC with malicious software.

This latest risk for IE 6 on Windows XP (SP1 and SP2), 2000, and Server 2003, plus Outlook 2003, is much like the huge WMF vulnerability Microsoft fixed in January. In this case the hole involves a rarely used, Microsoft-only Web graphics format called Vector Markup Language. It's like a little-used basement window you forgot to lock. Worse, you'd only have to read or preview an e-mail or visit a poisoned site in IE to be infected, no click required.

If you have Automatic Updates turned on, you should already have the patch. Otherwise, you can get it at find.pcworld.com/55307, along with additional information.

But you're not safe yet. IE 6 has another graphics bug, this time in the way it handles movie or game files that employ DirectAnimation.



Dangerous new bugs allow no-click-required Web attacks.

Exploit code for the hole is already on the Web. Like the VML problem, this one also facilitates drive-by downloads, and the same versions of Windows are affected. Microsoft is likely to have distributed a patch by the time you read this; you can also retrieve it

at find.pcworld.com/55300.

Note that Firefox, Opera, and even IE 7 are unaffected by these holes. If you've been waiting for a good reason to drop IE 6, this might be it.

MEDIA WOES

AS IF THAT weren't enough, Adobe patched critical holes in its Macromedia Flash Player as well. Version 8.0.24 and earlier could open you up to yet another drive-by download if you simply view a doctored Flash movie. Microsoft distributed vulnerable versions with Windows XP SP1 and SP2, and with XP Pro 64-bit.

For the fix, upgrade to version 9.0.16.0, available from find.pcworld.com/55301 or via Flash's auto-update feature. See the details at find.pcworld.com/55302.

And just to show that media across the board is unsafe this month, Apple patched six critical holes in all QuickTime versions prior to 7.1.3E running on Windows 2000 and XP. The popular media player has playback flaws with several file formats, including H.264 and native QuickTime movies. Grab the upgrade and more information from find.pcworld.com/55303. ■

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

IN BRIEF

Segways Stumble

WATCH OUT FOR Segways: The company is recalling all 23,500 of the vehicles for suddenly careening over forward when their wheels reverse direction, with no warning, because of a software bug. Get more details at find.pcworld.com/55305.

Mozilla Fixes

MOZILLA PATCHED FOUR critical flaws in the Firefox browser; two also affect the Thunderbird e-mail program. At press time, there were no reports of attacks exploiting these holes. Get the fix by updating both apps to version 1.5.0.7 via their update feature, or at www.mozilla.org/products. For more information, go to find.pcworld.com/55304.

PowerPoint Pain

ANOTHER ZERO-DAY security hole hit PowerPoint 2000, 2002, and 2003. Go to find.pcworld.com/55340 for a patch, and, as always, exercise caution with unexpected e-mail attachments.

BUGGED?

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

MORE VENDORS RECALL LAPTOP BATTERIES

TOSHIBA, LENOVO, AND Fujitsu have hopped on the recall bandwagon for hundreds of thousands of laptop batteries that use defective Sony-made battery cells. Some of the defective batteries pose a fire hazard; others just stop working. To see whether your laptop is affected, head to find.pcworld.com/55336 by the cutoff date of December 31 if you have a Satellite or Tecra series Toshiba, and to find.pcworld.com/55337 if you have an R, T, or X series ThinkPad. For Fujitsu's LifeBook models, check find.pcworld.com/55502.

And be ready for more: Sony says it will announce additional recalls for other laptop batteries that use the defective cells.

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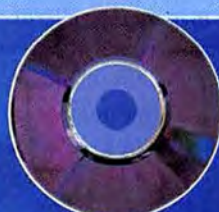
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REVIEWS & RANKINGS

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BACKUP DRIVE
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- 76 ATI RADEON X1900 XT,
ATI RADEON X1950 XTX
- 81 SONOS DIGITAL
MUSIC SYSTEM

Popular Image Editors Gain New Tools

Adobe Photoshop Elements 5 and Corel Paint Shop Pro Photo XI help ease your surfeit of photos.

PHOTO EDITING

LIKE MANY PEOPLE, I find that managing my collection of digital images is almost as big a job as editing them. New versions of two popular imaging applications—Corel's **Paint Shop Pro Photo XI** and Adobe's **Photoshop Elements 5**—promise to help you deal with photo glut, but only one of them delivers. Excellent editing tools and advances in the importing and sharing of photos put Photoshop Elements a big step ahead of Paint Shop Pro.

Both programs feature photo-downloading utilities that help you organize new images. The downloader in the latest version of Elements has received an impressive overhaul: When it recognizes that you've connected your digital camera to your PC or inserted a memory card into a reader, it can batch-rename all of the images in a variety of formats,

remove red eye (though that feature isn't new), put the pictures in a new subfolder, and delete them from your memory card when it's done—all without any intervention on your part, if you choose to set it up that way.

Corel's photo downloader dumps images into SnapFire, its new ad-supported application. (The program disc

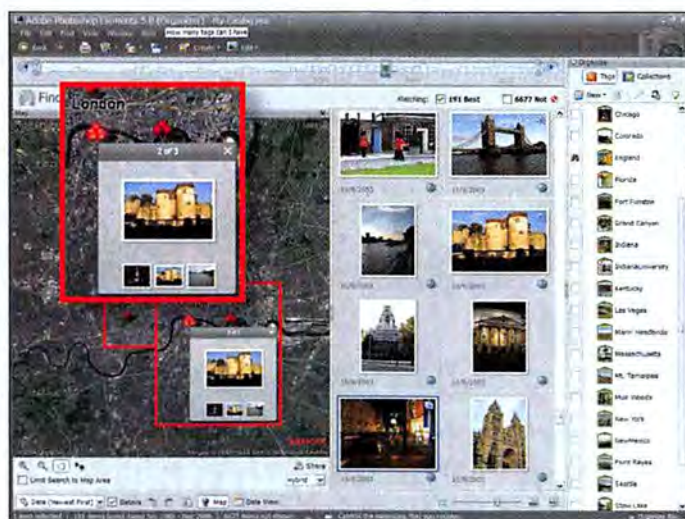
includes the app, but you must install it separately.) The SnapFire downloader detects memory cards and CDs—any CD. In fact, when I inserted Adobe's Elements CD to install the application, Corel's downloader tried to bring up the images from that disc. SnapFire allows you to create a custom folder using the download date or a

custom name, but it will not rename individual photos—a big disadvantage compared with Elements. Corel says it's considering adding that capability as an advanced feature in subsequent versions.

Oddly, Paint Shop Pro includes another organizer that's accessible from within the program. This organizer, which uses the same database

as SnapFire, lets you very quickly search images by date, size, tag, or rating; still, I'd have preferred to see Corel consolidate the best features of the two organizers into one.

In Elements, the process of tagging photos so you can find them fast later hasn't changed—it's still exceptionally easy and intuitive. In Paint Shop Pro, unfortunately, tagging doesn't get the same priority: You must dig through menus to find tags, and when you do find them, they're tiny.



PHOTOSHOP ELEMENTS 5 allows you to plot your images on a Yahoo-powered map; the location information will then be stored in the image's metadata.

RANKINGS

- 83 HP PHOTOSMART D7360
- 85 SAMSUNG K5 MP3 PLAYER
- 88 ROXIO EASY MEDIA CREATOR 9, NERO 7 ULTRA EDITION ENHANCED
- 92 DELORME STREETATLAS USA 2007 PLUS WITH EARTH-MATE GPS LT-20, MICROSOFT STREETS & TRIPS 2007 WITH GPS LOCATOR
- 94 RIM BLACKBERRY PEARL CELL PHONE



94

- 72 TOP 10 DESKTOP PCs
- 78 TOP 5 NAS DRIVES
- 86 TOP 10 POINT-AND-SHOOT DIGITAL CAMERAS
- 90 TOP 10 COLOR LASER PRINTERS



85

Also, searching by multiple tags requires using a dialog box, whereas in Elements, you simply check off boxes in a prominent tagging palette.

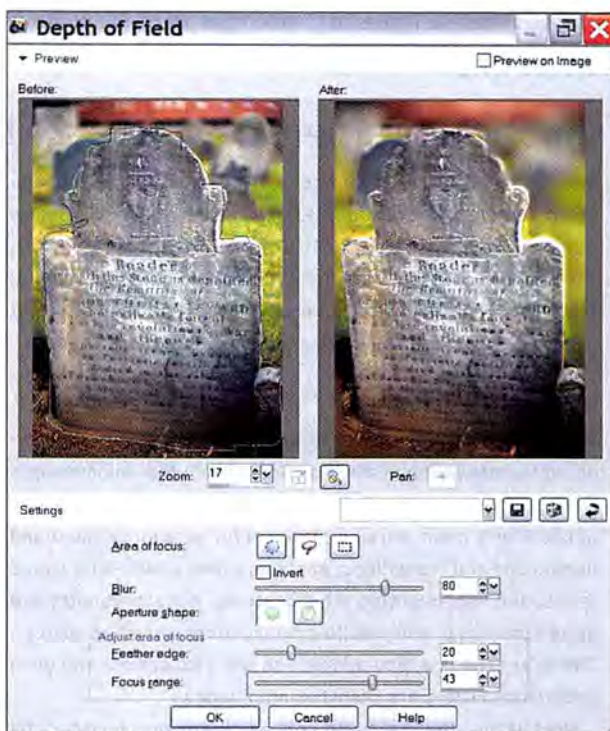
EDITING POWER

EDITING YOUR IMAGES is still important, of course, and both apps are very capable editors. But whereas Adobe tries to maintain some distinction between Photoshop Elements and its high-end Photoshop, Paint Shop Pro is a Photoshop wannabe, packing in tons of tools—many more than Elements has—and this version adds even more, making the interface increasingly busy. For example, Paint Shop Pro offers a One-Step Photo Fix and a Smart Photo Fix; they do different things, but why not just combine them into one tool? Elements presents a much more elegant interface, made more so thanks to a minor

makeover in this version.

Elements 5 adds a couple of new tools to its inventory. One is Curves, an editing tool that has long been a mainstay of Photoshop. Curves gives you a graphical way of adjusting an image's color and contrast at the same time. The version found in Elements is weak, however: You can't adjust a curve directly, and you don't get a histogram, which would allow you to adjust settings more accurately. The results were adequate, but inferior to what you could accomplish with Photoshop.

Paint Shop Pro has offered Curves in previous versions, but this latest release enhances the feature. It includes a histogram, and it allows you to manipulate a curve directly. But you can't click directly on your image with eyedroppers to set dark and light points (thereby setting the parameters by which the tool makes



PAINT SHOP PRO XI offers a new Depth of Field feature that lets you emphasize the foreground of an image by blurring the background.

adjustments). Also, as with many Paint Shop Pro functions, you're working in a dialog box with minuscule "before" and "after" pictures.

Paint Shop Pro has a new Depth of Field command that allows you to emphasize an object in the foreground—say, someone's face—by blurring the background of the shot. Pulling this effect off, howev-

er, requires a careful selection of the foreground object, and the only tool for doing so is a freehand lasso—a poor choice when you have to work in one of the application's tiny dialog boxes; in addition, you can't modify your selection in this box, so if you make a mistake, you must start over.

Paint Shop Pro's new Color Changer feature, which ►

Paint Shop Pro Photo XI

Corel

PCW Rating **83** Very Good

This application has powerful image editing tools, but its two organizers are clumsy and weak.

Street: \$100

find.pcworld.com/55313

Photoshop Elements 5

Adobe

PCW Rating **94** Excellent

This elegantly designed consumer image editing program makes managing photos even easier.

Street: \$90

find.pcworld.com/55312

changes the color in a high-contrast area, works very well. A new Skin Smoothing tool, though, is extremely slow. I tried it on two different PCs, and making an adjustment required 30 seconds to show results—per adjustment.

Elements has a nice new tool that corrects camera-lens distortion, eliminating image bulges and other problems. The application also adds an Adjust Sharpness tool. Adobe says this new tool works better than the old Unsharp Mask, and I believe it does in

many instances. But I'm still more comfortable using Unsharp Mask—which is one reason Adobe left it in. Nevertheless, I don't like having to worry about which sharpening tool is going to work best.

MAPPING IT OUT

BY FAR THE coolest tool included with either program is Elements' Mapping: You plot images on a Yahoo-powered map, and the GPS data from the map is then written to your images' metadata. You don't get all of the controls

you would if you were using Yahoo Maps in a browser—you don't have full zoom control, and instead of entering an address in the map, you have to do it by right-clicking on a picture—but this feature is yet another way that Elements helps organize your photos.

You can also share those maps online by uploading them to your own FTP site or to Adobe's new online PhotoShop Showcase (find.pcworld.com/55535), a sort of photo blog. In addition, you can create Flash-based Web galleries.

The galleries themselves are pretty snazzy, but the online gallery site is unimpressive—it's ad-supported, though you get 100 ad-free viewings before the ads kick in.

Elements feels like a bargain: It gives me 90 percent of what I use in Photoshop, but at a much smaller price. Paint Shop may offer a bit more of Photoshop's power than Elements does, but it does a very poor job of hiding its complexity, and its organizational tools just don't compete.

—Alan Stafford

MOVIEMAKER

Adobe's Inexpensive Video Editor Becomes Even Easier

PEOPLE UPLOAD MORE than 65,000 videos to the YouTube video sharing site every day. But with the release of Adobe's new Premiere Elements 3 (\$100; find.pcworld.com/55314), YouTube may want to brace itself for an even bigger onslaught. This video editing application is so good and so easy to use, it may well encourage still more people to share their videos.

BUILDING WITH STORYBOARDS

THE MOST OBVIOUS update to the application is a new storyboard feature (Adobe calls it a "Sceneline") that supplements the application's standard timeline. Each can serve as the application's main working platform for arranging video and audio clips and transitions, applying effects, adjusting sound levels, and implementing other features, but storyboards are more common in video editing applications aimed at novices. The Sceneline is a nice addition to the application, and even experienced users are likely to find it handy.

Most of the other improvements are relatively minor, but still welcome. You can now import and edit high-definition video. A new stop-motion capture mode lets you capture still images from your camcorder at regular, adjustable intervals (think Claymation). You just plug in your camcorder and set two parameters, and the application will automatically insert the still images into the Sceneline. I found that the feature works best on video footage that doesn't change much; otherwise, the shifts in movement from frame to frame are too jarring.

TELLING YOUR STORY

CLICKING A NEW button near the top of the Premiere Elements screen lets you record voice narration if you have a microphone attached to your computer. When you're finished recording, the application automatically inserts the recording



ADOBE'S PREMIERE ELEMENTS 3 adds a new easy-to-use storyboard feature that runs across the bottom of your screen.

into a new "narration" track within the Sceneline or timeline.

Want to add a title screen to your composition? With previous versions, you had to create a title and drag it into the timeline. Elements 3 lets you click a button and begin typing; all the usual font styles and controls are easily accessible.

One feature that's missing is a link to online video-sharing sites. Adobe has a new sharing site that's accessible from its Photoshop Elements 5 app, but I'd rather see some integration with YouTube and other popular sites—a one-touch "upload to video site" button would be a nice addition.

If you use Premiere Elements 2 and you're comfortable with its timeline, you may not consider Elements 3 a significant upgrade. After all, its predecessor was excellent to begin with. But Premiere Elements 3 is just that much better.

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Iomega's 70GB Rev Drive Outperforms DAT

STORAGE

TEST Center THE HANDIEST AND most affordable desktop backup device is currently an external hard drive. But to back up critical workstations and servers, you need high-capacity removable media that you can rotate and secure off-site. Iomega's next-generation Rev drive fills that need.

I tested a shipping USB 2.0

Rev 70GB Backup Drive

Iomega

PCW Rating **84** Very Good

Higher capacity and speedier performance make the new Rev a fast, viable alternative to tape for business backups.

Street: \$600

find.pcworld.com/55322

\$600 Rev 70GB Backup Drive (internal IDE and SATA versions are available as well) that successfully challenges the supremacy of old-fashioned tape drives and media (like DAT 72) still popular in the business backup market. The new Rev can handle 70GB of uncompressed data—twice as much content as its predecessor could—while retaining read/write compatibility with the older 35GB cartridges.

The Rev's cartridges use technology based on sturdy, reliable 2.5-inch hard drives, with the platter and motor in the cartridge and the head and electronics in the drive. One cartridge comes with the drive; a four-pack of cartridges



REMOVABLE BACKUPS GET a lift with Iomega's Rev 70GB drive.

costs \$250 more. The drive also includes EMC's backup software, Retrospect Express.

In our PC World Test Center tests, the Rev wrote 3.06GB of files and folders (a good indicator of backup performance) in 203 seconds. That's slower than the average of 152

seconds for external desktop USB 2.0 drives we've tested that don't use RAID to span multiple disks, but it's significantly faster than tape.

The Rev drive's strong performance boosts its appeal as a safe alternative to tape.

—Rex Farrance

Sleek Sony All-in-One Desktop Makes Its Mark

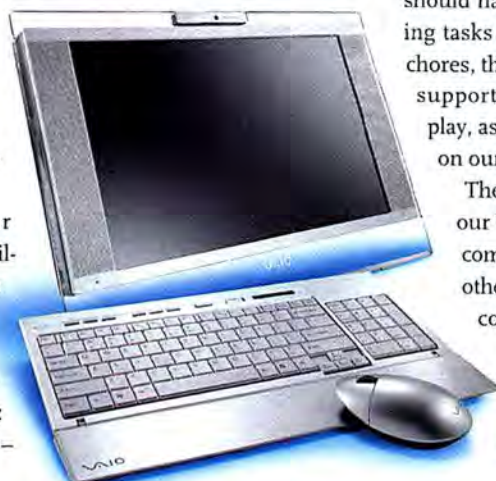
DESKTOP

TEST Center FASHION MAVENS and other demanding aesthetes should find little fault with Sony's latest all-in-one PC: The \$2100 VAIO VGC-LS1 is gorgeous. I looked at a shipping model, and its design was superb—trumping even the Apple iMac—but our tests indicate that it's no powerhouse. (The unit arrived too late to be considered for our Top 5 Power Desktop PCs chart on page 72.)

Suspended in a clear frame, the VGC-LS1's brilliant, 19-inch wide-screen LCD perfectly hides the guts of the computer. Sony backs the high style with some substance, too: This XP Media Center-

based system includes 2GB of DDR2 memory, nice features (a 250GB hard drive; a slot-loading, multiformat DVD burner mounted behind the LCD; and a Sony MotionEye

SONY'S VAIO VGC-LS1 shows attention to design aesthetics.



Webcam on the LCD's frame), and S-Video, composite A/V, cable-in, and TV-in ports.

Unfortunately, the VGC-LS1 falls short on raw processing power. Though the 1.83-GHz Core Duo T2400 processor and the integrated 950GMA graphics chip set should handle most computing tasks and video playback chores, they lack the power to support demanding game play, as the system's scores on our tests indicate.

The PC earned a 97 on our WorldBench 5 tests, comparable to the marks other systems of similar configuration got, but about 20 percent behind that of our Best Buy value desktop, which

costs about half as much. Its gaming scores were low on all measures. The VAIO VGC-LS1 comes in only one configuration, and its closed design means that you can't upgrade later to a more powerful CPU or better graphics.

Given its lackluster performance, the VGC-LS1 is somewhat pricey: Sony certainly got the handsome design right, but you pay for it dearly.

—Anush Yeghazarian

VAIO VGC-LS1

Sony

PCW Rating **70** Good

Handsome, expensive all-in-one PC meets today's computing needs, but lacks power and high-def features for the future.

Street: \$2100

find.pcworld.com/55332

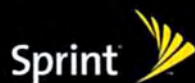
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TOP 10 DESKTOP PCs

HP's Powerful Media Center Tops the List

TEST Center A NEW, AFFORDABLY priced Media Center PC from HP, the Pavilion d4650y, earns Best Buy honors on the power side of our chart this month. The full-featured d4650y turned in a solid WorldBench 5 performance score of 142 and offers maximum versatility for storage, thanks to HP's Personal Media Drive—an external hard drive that slides into a bay on the front of the case.

The Systemax Sabre, an extremely powerful PC, lands in the third spot on the power list. It produced the third-fastest WorldBench 5 score that we've recorded to date.



THE HP PAVILION d4650y provides excellent performance for a reasonable price.

On the value side, two new systems make the cut. HP's Pavilion a1510n is a basic but well-rounded system, while Systemax's Vitality DH463 turned in superb performance and has a roomy interior that is open for upgrading.

—Kalpana Ettenson

ONLINE

FOR MORE INFORMATION about the desktop PCs we reviewed, including details on how we test them, go to find.pcworld.com/55262.

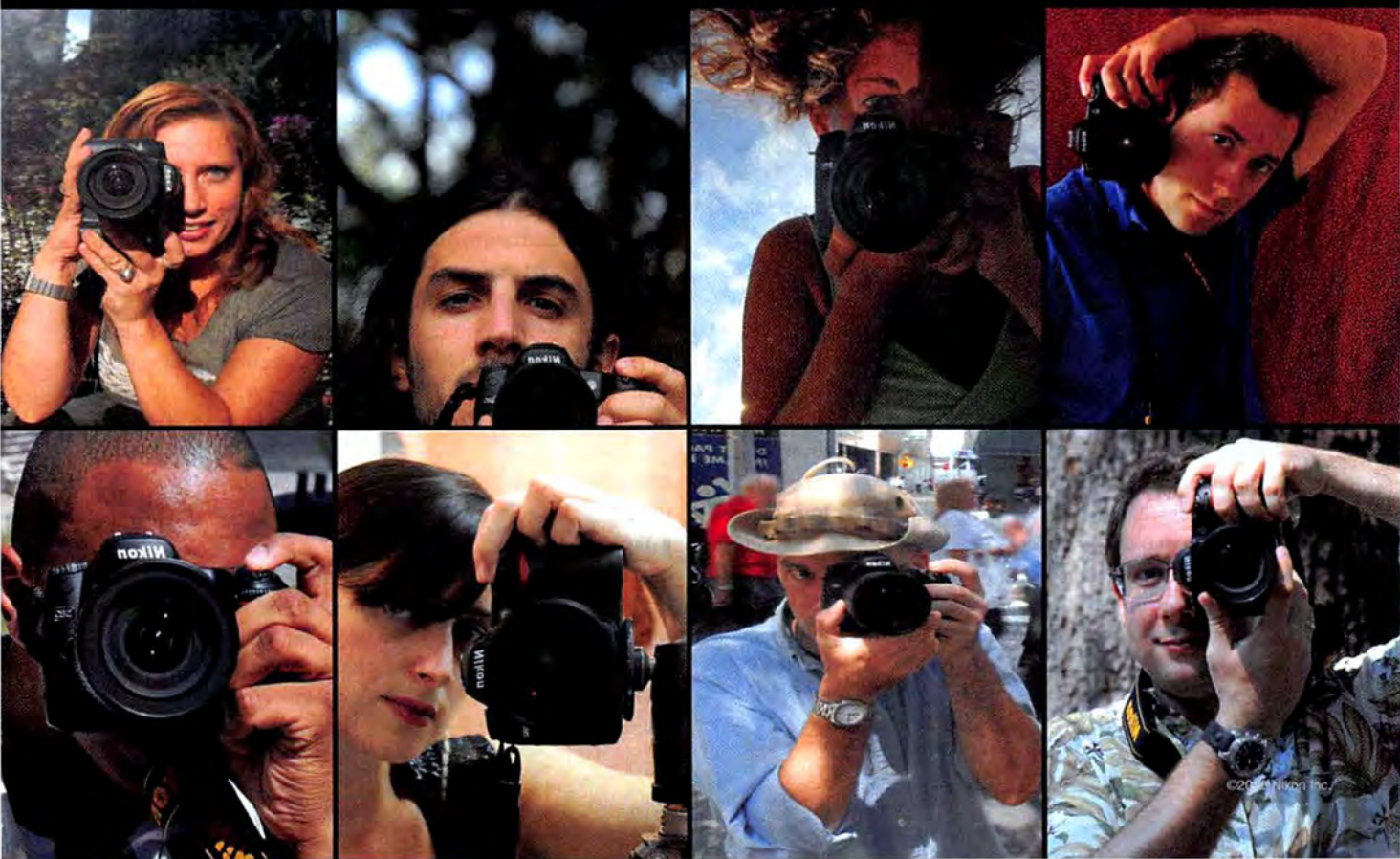
	POWER DESKTOP	PCW Rating	Performance	Features and specifications
1	HP Pavilion d4650y Best Buy \$2000 NEW find.pcworld.com/55256	84 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 142 WorldBench 5 rating: Good Overall design: Good Graphics: Good 	<ul style="list-style-type: none"> 2.4-GHz Core 2 Duo E6600 500GB (RAID) drive capacity 19-inch HP 1955 LCD 512MB ATI Radeon X1600XT
▶ Bottom line: The Pavilion d4650y is a fast system that can handle just about any demanding task. It's easy to upgrade, too.				
2	CyberPower Gamer Infinity SLI Ultra \$3299 find.pcworld.com/54494	83 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 167 WorldBench 5 rating: Superior Overall design: Good Graphics: Superior 	<ul style="list-style-type: none"> 2.93-GHz Core 2 Extreme X6800 398GB (RAID) drive capacity 19-inch ViewSonic VX922 LCD 1024MB XFX 7950 GX2 Dual-GPU
▶ Bottom line: The powerful Gamer Infinity SLI Ultra delivers high-end dual-GPU graphics at a lower price than others.				
3	Systemax Sabre \$3700 NEW find.pcworld.com/55259	83 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 165 WorldBench 5 rating: Superior Overall design: Very Good Graphics: Superior 	<ul style="list-style-type: none"> 2.93-GHz Core 2 Extreme X6800 300GB (RAID) drive capacity 19-inch Hanns G LCD 512MB ATI Radeon X1900 XTX
▶ Bottom line: Gamers and power users who are enamored with speed should take a good look at the reasonably priced Sabre.				
4	Dell XPS 410 \$2350 find.pcworld.com/54504	83 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 138 WorldBench 5 rating: Good Overall design: Good Graphics: Very Good 	<ul style="list-style-type: none"> 2.4-GHz Core 2 Duo E6600 640GB (RAID) drive capacity 20-inch Dell 2007WFP LCD 256MB nVidia GeForce 7900GS
▶ Bottom line: This well-built system packs a strong performance punch. Its expansion options are limited to add-in cards or a 3.5-inch drive.				
5	Dell XPS 700 \$3985 find.pcworld.com/54492	81 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 153 WorldBench 5 rating: Very Good Overall design: Very Good Graphics: Superior 	<ul style="list-style-type: none"> 2.67-GHz Core 2 Duo E6700 640GB (RAID) drive capacity 24-inch Dell 2407WFP LCD 1024MB nVidia GeForce 7950 GX2 Dual-GPU
▶ Bottom line: Well-heeled gamers who want to be able to expand their system will find room to grow in this stylish, powerful PC.				
	VALUE DESKTOP			
1	Velocity Micro Vector GX Campus Edition Best Buy \$1099 find.pcworld.com/54498	88 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 117 WorldBench 5 rating: Superior Overall design: Good Graphics: Superior 	<ul style="list-style-type: none"> 2.13-GHz Core 2 Duo E6400 250GB drive capacity 17-inch ViewSonic VA702b LCD 512MB EVGA e-GeForce 7600 GS
▶ Bottom line: This well-constructed, moderately priced model proves that you don't have to pay much to get a PC with strong performance.				
2	HP Pavilion a1510n \$860 NEW find.pcworld.com/55257	86 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 97 WorldBench 5 rating: Very Good Overall design: Good Graphics: Poor 	<ul style="list-style-type: none"> 2.4-GHz Athlon 64 3800+ 200GB drive capacity 17-inch HP vx17e LCD 256MB nVidia GeForce 6150 LE
▶ Bottom line: With its user-friendly design and thorough documentation, the Pavilion a1510n makes a good entry-level PC.				
3	CyberPower Gamer Ultra 7500SE \$999 find.pcworld.com/54566	86 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 98 WorldBench 5 rating: Very Good Overall design: Good Graphics: Superior 	<ul style="list-style-type: none"> 2-GHz Athlon 64 X2 3800+ 250GB drive capacity 19-inch Optique 09 LCD 256MB EVGA e-GeForce 7600GS
▶ Bottom line: A gaming system for buyers on a budget, this model provides fairly good performance at a very attractive price.				
4	Systemax Vitality DH463 \$1199 NEW find.pcworld.com/55260	84 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 108 WorldBench 5 rating: Superior Overall design: Good Graphics: Good 	<ul style="list-style-type: none"> 1.86-GHz Core 2 Duo E6300 250GB drive capacity 19-inch Hanns G LCD 256MB ATI Radeon X1600 Pro
▶ Bottom line: The Vitality DH463 is a strong performer among value systems and offers lots of room for future upgrades.				
5	Shuttle XPC G5 2100 \$1049 find.pcworld.com/54574	81 Very Good	<ul style="list-style-type: none"> WorldBench 5 score: 104 WorldBench 5 rating: Very Good Overall design: Fair Graphics: Superior 	<ul style="list-style-type: none"> 2.2-GHz Athlon 64 X2 4200+ 200GB drive capacity 17-inch Shuttle XP17 Lite LCD 256MB EVGA e-GeForce 7600 GT
▶ Bottom line: This toaster-size model packs a lot of functionality into its highly portable case, but it offers little room for expansion.				

CHART NOTES: Prices and ratings as of 10/6/06. Drive capacity may represent total space on multiple hard drives.



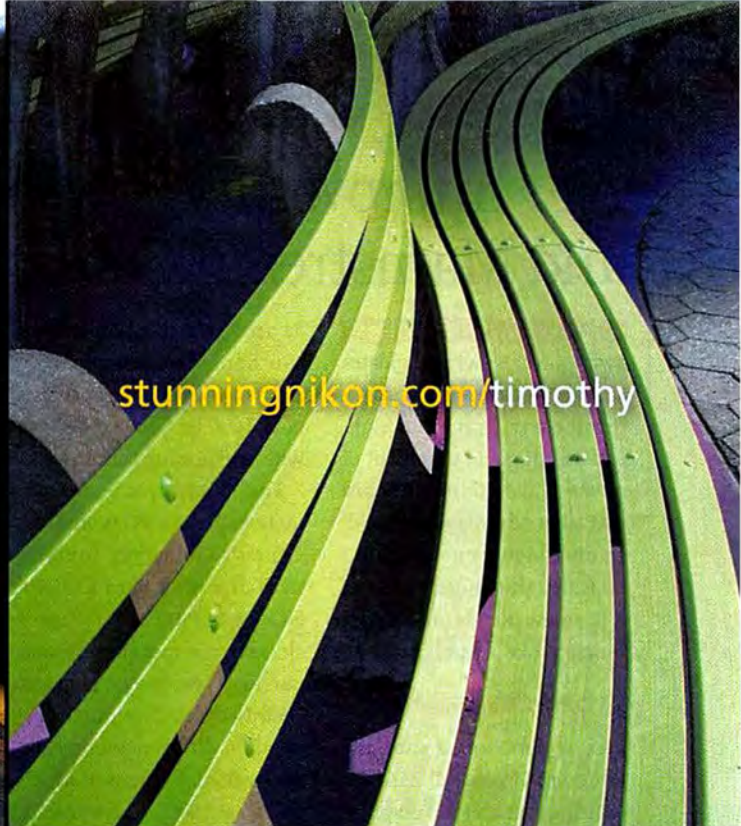
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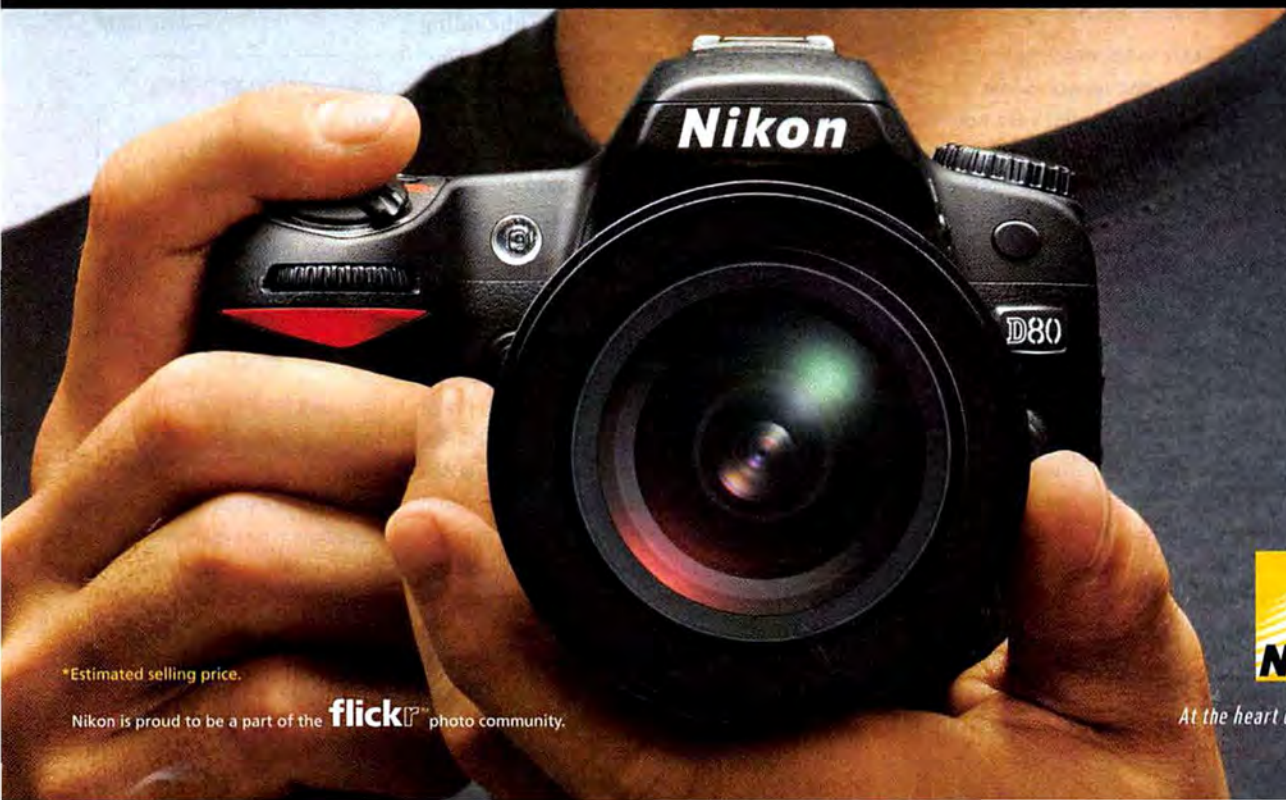
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ATI Improves Its Power and Mainstream Cards

GRAPHICS BOARDS

TEST Center ATI'S LATEST updates to its graphics boards include a refresh of its high-end offering and the debut of an attractive midrange board that takes advantage of an older, once higher-end chip set.

I tested shipping versions of ATI's new boards, and found much to like about both.

TOP PERFORMANCE

THE MAINSTREAM card, the Radeon X1900 XT 256MB, uses the same X1900 graphics chip found in the higher-end X1900 XT released earlier this year. But it carries 256MB of memory—as opposed to the previous iteration's 512MB—and an appealing price (\$279).

This new graphics board makes a strong case for itself

as an affordable add-in that can handle complex games nearly as well as a power model at 1600 by 1200 resolution with antialiasing turned on.

The 256MB card performed quite well in our PC World Test Center's evaluation, running neck-and-neck with EVGA's e-GeForce 7900 GT KO Superclocked, the speediest unit on our *Top 5 Mainstream Graphics Boards* chart. The most perceptible difference emerged in our Battlefield 2 test, which we ran at 1600 by 1200 resolution with antialiasing turned on; there, the ATI board managed a frame rate of 73 frames per second, to the EVGA's 61 fps. The e-GeForce 7900 GT KO Superclocked listed for \$349 at press time, making the ATI board a better value.

TECH TREND

Cord-Free Skype Calls

YOU DON'T NEED to be attached to your PC to use Skype's free Web-based phone service. Some new Skype-compatible phones let you roam around your house—or even farther

afraid—while talking up a storm.

The Polycom Communicator (\$130) USB speakerphone supports better sound quality than most PC headsets do. U.S. Robotics' USR9630 Cordless Skype Dual Phone (\$120) has a base station that links to your PC's USB port for accessing Skype and to your phone jack for landline calls. The handset's LCD lists your online and offline Skype contacts.

NetGear's Wi-Fi Phone for Skype (\$250) doesn't need your PC at all. It can connect directly to Skype from 802.11b/g Wi-Fi hotspots. For more info, see find.pcworld.com/55582.

—Liane Cassavoy



ATI'S NEW RADEON X1900 XT (left) and Radeon X1950 XTX boards.

GPU PIXEL POWER

IN TERMS OF GPU hardware, the Radeon X1900 XT 256MB has just as many pixel and vertex pipelines as the costlier Radeon X1950 XTX 512MB.

The X1900 XT 256MB, however, runs at a slightly slower clock speed and packs less memory. Both of the new Radeons feature a cooling fan that is two PCI slots wide and runs reasonably quietly, even during 3D operation. In addition, both boards provide HDCP-ready dual-DVI ports, and both can process high-definition video (including Blu-ray Disc and HD DVD).

Besides having more memory than its mainstream cousin, the high-performance X1950 XTX board offers the potential to graduate to a dual-graphics setup via two X1950 XTX boards in a CrossFire configuration. ATI's most significant tweak to its newest high-end board is the addition of GDDR4 memory to boost the memory clock to 1GHz. With that bandwidth at its disposal, the X1950 XTX posted impressive performance numbers, though it wasn't the fastest performer we've seen (EVGA's \$580 e-GeForce 7950 GX2 outperformed the X1950

XTX on some test measures).

Either of these ATI Radeon boards can ably handle any challenging graphics tasks you might throw its way. If you are gaming on a 30-inch wide-screen monitor or want the flexibility of expanding to a dual-graphics CrossFire configuration, you'll appreciate the power that ATI's X1950 XTX delivers—and for significantly less than its competitors cost. If your graphics needs are more modest, consider the X1900 XT 256MB, which impressed me with its performance and overall value.

—Eric Dahl

Radeon X1900 XT 256MB

ATI

PCW Rating **79** Good

Terrific budget model edged out a costlier, overclocked eVGA unit to rank as the fastest mainstream board we've tested.

List: \$279

find.pcworld.com/55334

Radeon X1950 XTX 512MB

ATI

PCW Rating **83** Very Good

Top-of-the-line single-GPU performance; for even more power, add a second CrossFire board in a dual-card setup.

List: \$449

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TOP 5 NETWORK-ATTACHED STORAGE DEVICES

Networked Hard Drives Get Media Friendly

TEST CENTER A NUMBER OF the 11 network-attached storage (NAS) drives that we tested for this month's chart retain business-friendly features such as multiple RAID options and easy-access bays for swapping out drives. Several new models, however, target home users, with built-in media servers and software dedicated to organizing music, photos, and movies.

Our top performer and Best Buy, Infrant Technologies' ReadyNAS NV, combines fast read and write speeds and a feature set including a print server and compatibility with UPnP media-streaming devices. This model supports RAID 0 (for striping your data across drives quickly), RAID 1 (for

mirroring your data on two drives so you don't lose it), RAID 5 (for striping your data across multiple drives while reserving some space for fault tolerance), and proprietary X-RAID technology (for expanding the RAID's capacity on the fly when you buy and install individual hard drives). Data redundancy does cut down on the hardware's usable storage, though: X-RAID lets you use only 660GB of the ReadyNAS NV's 1-terabyte capacity.

Maxtor's Shared Storage II ranked second both overall and in performance. It has a one-touch backup button and



MAXTOR'S SHARED STORAGE II combines fine performance with media-friendly features.

a slick software interface for creating and managing user accounts and folders. By default, the device sets up nine folders designated for backup,

music, documents, photos, and movies, among others.

HP's first NAS for consumers, the Media Vault mv2020, took third place. It offers an empty drive bay, has consumer-friendly print and media-server capabilities, and can automatically set up file, backup, and media folders.

Maxtor's speedy consumer NAS offering, Fusion, placed fourth. Its media-oriented software guides you in importing and sharing multimedia.

In fifth, the low-cost Ximeta NetDisk NDU10-500 was reasonably fast, but it and Plector's PX-EH40L were the only drives we tested that lacked gigabit ethernet networking.

Among chart missers, Buffalo Technology's TeraStation Pro and TeraStation Home Server shipped with RAID 5 default settings, sacrificing speed to protect data. Likely for the same reason, Iomega's StorCenter Wireless Network Storage 1TB was slow, too; but it came with a print server, a media server, and Wi-Fi access, and let us automatically download pictures directly from a USB-equipped camera.

—Narasu Rebbapragada

ONLINE

FOR MORE INFORMATION about all 11 of the network-attached storage devices we reviewed—including details on how we tested them—go to find.pcworld.com/55290.

	NETWORK-ATTACHED STORAGE	PCW Rating	Performance	Features and specifications
1	Infrant Technologies ReadyNAS NV Best BUY \$1149 find.pcworld.com/52074	84 Very Good	<ul style="list-style-type: none"> Overall performance: Superior Copy files: 292 seconds File search: 301 seconds 	<ul style="list-style-type: none"> 1000GB 7200 rpm Gigabit ethernet Cost per gigabyte: \$1.15
▶ Bottom line: Superfast multibay 1TB NAS has lots of features, but its RAID configuration limits usable capacity to 660GB.				
2	Maxtor Shared Storage II \$800 NEW find.pcworld.com/55239	83 Very Good	<ul style="list-style-type: none"> Overall performance: Very Good Copy files: 333 seconds File search: 245 seconds 	<ul style="list-style-type: none"> 1000GB 7200 rpm Gigabit ethernet Cost per gigabyte: \$0.80
▶ Bottom line: Superb performer with backup button, print server, and media server helps you organize media files.				
3	HP Media Vault mv2020 \$549 NEW find.pcworld.com/55243	82 Very Good	<ul style="list-style-type: none"> Overall performance: Good Copy files: 366 seconds File search: 291 seconds 	<ul style="list-style-type: none"> 1000GB 7200 rpm Gigabit ethernet Cost per gigabyte: \$0.55
▶ Bottom line: HP bundles media server, printer server, and backup software in inexpensive, expandable package.				
4	Maxtor Fusion \$800 NEW find.pcworld.com/55231	74 Good	<ul style="list-style-type: none"> Overall performance: Superior Copy files: 283 seconds File search: 237 seconds 	<ul style="list-style-type: none"> 500GB 7200 rpm Gigabit ethernet Cost per gigabyte: \$1.60
▶ Bottom line: Good beginner's option comes with slick-looking (but not always intuitive) software for organizing media.				
5	Ximeta NetDisk NDU10-500 \$500 NEW find.pcworld.com/55242	71 Good	<ul style="list-style-type: none"> Overall performance: Good Copy files: 299 seconds File search: 122 seconds 	<ul style="list-style-type: none"> 500GB 7200 rpm USB 2.0, 10/100 ethernet Cost per gigabyte: \$1.00
▶ Bottom line: Basic, inexpensive unit doubles as a USB drive and requires that an applet be installed on each PC.				

CHART NOTES: Prices and ratings are as of 10/6/06. Drive capacity may represent total space on multiple hard drives. Media server capabilities do not include media players. All drives were retested for this story.

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E6500 1.86Ghz	\$765

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Sonos and Rhapsody: Beautiful Music Together

DIGITAL AUDIO

A FREE FIRMWARE update to the **Sonos Digital Music System** has opened up an innovative new way to use the Rhapsody online music subscription service with Sonos equipment. With this addition in place, Sonos distinguishes itself in the crowded field of music streaming services.

Version 2.0 of Sonos's software enables you to select any of the 2 million or so songs on Rhapsody and play them on your stereo, without even having your PC on. (For a complete review of the new Rhapsody 4.0, see find.pcworld.com/55557.) Previously, with Sonos—as with other media streamers—you had to have your PC turned on and logged in to the Rhapsody service to access music, and you could play only the tunes that you had previously loaded into your Rhapsody library.

These limitations made exploring new music a hassle. Suppose that you are sitting on the couch and want to try out the new Bob Dylan album. In the past, you'd have had to go to your PC, log on to Rhapsody, navigate to *Modern Times*, add it to your library, trek back to the couch, and queue it up



SONOS'S DIGITAL MUSIC System communicates better with Rhapsody.

with your Sonos controller. Though that hardly qualifies as one of the labors of Hercules, it's a pain just the same.

Now you never have to leave the couch. Using your Sonos controller, you simply navigate

to the new album and press play. If you like it, you can add it to your Rhapsody library with a few button presses.

The implementation is not flawless. The lists of artists—especially in a less popular

genre like classical music—can sometimes take 5 or 10 seconds to come up. The holdup, according to Sonos, relates to the task of pushing so much data to your controller. Similarly, finding a particular artist can take a while, again because you have so many choices.

But if you're satisfied with the not-quite-CD-quality music that Rhapsody delivers, and you don't recoil at the price (the Sonos equipment is \$999 for a two-room setup; a Rhapsody subscription is \$10 per month), you may never have to buy music again.

—Ed Albro

Sonos Digital Music System, Software 2.0

Sonos

PCW Rating **81** Very Good

Direct connection to Rhapsody music subscription service provides access to 2 million songs, with few hassles.

List: Software is free, equipment for two rooms starts at \$999

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HP Printer Has a Big Touch-Screen LCD

PHOTO PRINTER

TEST Center WITH A SIMPLE tap of the touch screen on HP's **Photosmart D7360**, you can print color photos in a snap. Insert your camera's media card in one of its reader's four slots, and the on-screen wizard will walk you through the printing steps.

The wizard lets you browse your images on the 3.4-inch color screen, perform simple editing operations, select which pictures to print, and choose the paper size. It also helps you print images stored on a USB device connected to the direct-print port.

The D7360's handy touch-screen menus also make setting up and maintaining the printer easy. You can even view animated demos of maintenance tasks, such as loading paper and cartridges, and clearing paper jams. The main paper tray holds up to 100 sheets of letter-size paper, and a second tray holds 4-by-6-inch snapshot paper. Options include an \$80 duplexer for double-sided printing, as well as a \$60 Bluetooth adapter for printing from camera phones and PDAs.

When you connect the D7360 to your PC and touch 'Save' on the screen, the bundled software launches and

helps transfer your images to the computer. The printer comes with the full version of HP's Photosmart Premier, a convenient package that lets you organize photos into albums, edit them, print them, and share them through HP's Snapfish Web site.

In our PC World Test Center tests, a shipping D7360 printed 5-by-7 photos at a moderately brisk 1.1 pages per minute. Most users will like its photo quality, but we've seen better. On photo paper, the darkest areas lacked some detail and exhibited a bluish tint, while skin tones looked



A ROOMY LCD touch screen accents HP's Photosmart D7360.

too bronzed. Black-and-white prints had very smooth tonal gradations, though. On plain paper, text and line art were slate gray instead of black, and color photos lacked brightness and shadow detail.

The printer comes with six individually replaceable ink cartridges that are separate from the printhead. HP calculates that 4-by-6-inch prints

cost as little as 24 cents each when you buy a \$36 value pack (a full set of ink cartridges and 150 sheets of photo paper).

At a street price of \$200, the D7360 is exceptionally easy to use and has the best software bundle in the business. But its image quality is merely good, and plain-paper printing is clearly not its strong point.

—Paul Jasper

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Windows
Mobile

Photosmart D7360

Hewlett-Packard

PCW Rating **82** Very Good

Large color touch-screen LCD makes printing photos easy, but image quality is only middling.

Street: \$200

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Samsung Player Carries Slide-Out Speakers

DIGITAL AUDIO PLAYER

TEST WRAPPED IN AN attractive black case, the Samsung K5 is a flash-based digital audio player whose unique design integrates slide-out speakers. I examined a shipping version of the \$210 (street) 2GB model; Samsung offers a similar 4GB model that costs \$50 more.

The player's 1.7-inch OLED screen displays icon-based menus and photos. To handle navigation it relies on touch-sensitive, flat-surface "button" controls (rather than on actual three-dimensional buttons that you have to depress) located on its front face. They look slick and contribute to the player's minimalist design, but I found these two-dimensional buttons annoying: Repeatedly, I got unintended results when pressing them—a problem exacerbated by the fact that the buttons are context-sensitive and handle multiple functions, depending on how firmly or gently you touch them.

The speakers that slide out from the K5's back turn it into a convenient, self-contained little jukebox, but they also double the thickness of the player. The speakers' audio quality and volume may suf-

fice in a pinch if you're sequestered in a hotel room, and the unit's 3D simulation effect broadens the stereo field impressively from its otherwise thin, lacking-in-bass default setting. I'd rather listen to my music through the included earphones—particularly since the pieces fit in-ear for effective sound isolation.

The K5 can deliver terrific-sounding audio. In PC World Test Center evaluations, the K5 earned the highest score to date on our suite of audio-quality tests. One annoyance I found, however, is that when skipping between tracks, the K5 took roughly a second to reach full volume, both on the



SAMSUNG'S K5
GIVES you slide-out speakers and touch controls.

earphones and speakers; as a result, the initial notes of some songs lost their impact. The Samsung K5 certainly looks cool—even if it's too thick to

fit comfortably in your shirt pocket—but its temperamental touch-sensitive controls overshadow its appeal.

—Eric Butterfield

K5

Samsung

PCW Rating **73 Good**

The K5 offers top-notch audio quality and sound-isolating earphones, but its built-in speakers seem gimmicky, and navigating with its touch-sensitive panel is frustrating.

Street: \$210

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TOP 10 DIGITAL CAMERAS

Point-and-Shoots: From Basic to Full-Featured

TEST A LOT OF point-and-shoot cameras offer fancy features, such as a big LCD, an antishake mode, or in-camera panorama stitching. The new \$400 HP Photo-smart R967 has all three, plus great image quality. In our tests the R967 earned the top score for exposure accuracy as well as high marks for image sharpness. But poor battery life and a high price caused its low chart ranking.

The new Kodak EasyShare C743 also turned in very accurate exposures—and it



THE INEXPENSIVE KODAK

EasyShare C743 has few features, but takes great shots nonetheless.

costs just \$200. The trade-off is in the features: The C743 lacks manual controls such as shutter-priority mode, and doesn't provide image stabilization or a panorama mode. Also, the camera's images showed more distortion than we saw in the test shots from some other models.

—Eric Butterfield

ONLINE

FOR MORE INFORMATION on the cameras reviewed in this month's chart, including testing details, see find.pcworld.com/55287.

	POINT-AND-SHOOT CAMERA	PCW Rating	Performance	Features and specifications
1	HP Photosmart R727 Best Buy \$225 find.pcworld.com/54050	82 Very Good	<ul style="list-style-type: none"> Image quality: Good Battery life: Good Overall design: Good 	<ul style="list-style-type: none"> 6.1 megapixels 39mm to 118mm zoom 12 scene modes 6.4 ounces
	▶ Bottom line: The R727 has a bright 2.5-inch LCD and features such as panorama stitching and image advice, but it gives no manual settings.			
2	Canon PowerShot A540 \$260 find.pcworld.com/54046	81 Very Good	<ul style="list-style-type: none"> Image quality: Very Good Battery life: Poor Overall design: Good 	<ul style="list-style-type: none"> 6 megapixels 35mm to 140mm zoom 16 scene modes 6.6 ounces
	▶ Bottom line: Low-priced model offers many manual controls, a generous 4X zoom, and a wide-screen mode. But it lacks exposure bracketing.			
3	Casio Exilim EX-Z600 \$265 find.pcworld.com/54048	80 Very Good	<ul style="list-style-type: none"> Image quality: Fair Battery life: Superior Overall design: Good 	<ul style="list-style-type: none"> 6 megapixels 38mm to 114mm zoom 33 scene modes 5.0 ounces
	▶ Bottom line: This camera provides lots of controls and scene modes. The 2.7-inch LCD is bright, but image quality is subpar.			
4	Fujifilm FinePix F30 \$350 find.pcworld.com/54144	79 Good	<ul style="list-style-type: none"> Image quality: Very Good Battery life: Superior Overall design: Good 	<ul style="list-style-type: none"> 6.3 megapixels 36mm to 128mm zoom 15 scene modes 5.5 ounces
	▶ Bottom line: Though a little pricey, the F30's sharp, bright LCD and very high ISO setting (3200) are pluses. It has some manual controls.			
5	Canon PowerShot SD630 \$350 find.pcworld.com/54056	79 Good	<ul style="list-style-type: none"> Image quality: Good Battery life: Good Overall design: Very Good 	<ul style="list-style-type: none"> 6.1 megapixels 35mm to 105mm zoom 13 scene modes 5.2 ounces
	▶ Bottom line: The SD630's compact body comes with a 3-inch LCD, a high ISO of 800, and a wide-screen mode, but it has no output for HDTV.			
6	Fujifilm FinePix E900 \$399 find.pcworld.com/52092	78 Good	<ul style="list-style-type: none"> Image quality: Very Good Battery life: Very Good Overall design: Good 	<ul style="list-style-type: none"> 9 megapixels 32mm to 128mm zoom 4 scene modes 9.2 ounces
	▶ Bottom line: This model offers high image quality and many controls. However, the price is steep and its image editing software is limited.			
7	HP Photosmart R927 \$350 find.pcworld.com/53582	78 Good	<ul style="list-style-type: none"> Image quality: Very Good Battery life: Poor Overall design: Very Good 	<ul style="list-style-type: none"> 8.2 megapixels 35mm to 105mm zoom 12 scene modes 7.0 ounces
	▶ Bottom line: The R927 has a 3-inch LCD and performs in-camera panorama stitching, though this can be slow. A camera dock is included.			
8	Nikon Coolpix S6 \$350 find.pcworld.com/54054	77 Good	<ul style="list-style-type: none"> Image quality: Very Good Battery life: Good Overall design: Very Good 	<ul style="list-style-type: none"> 6 megapixels 35mm to 105mm zoom 15 scene modes 4.9 ounces
	▶ Bottom line: Thin model supplies Wi-Fi, a sharp 3-inch LCD, and a handy selector dial and thumb pad, but it omits some common controls.			
9	Kodak EasyShare C743 \$200 NEW find.pcworld.com/55188	77 Good	<ul style="list-style-type: none"> Image quality: Very Good Battery life: Good Overall design: Poor 	<ul style="list-style-type: none"> 7.1 megapixels 37mm to 111mm zoom 13 scene modes 7.6 ounces
	▶ Bottom line: This basic model is intuitive to operate and offers high image quality, but lacks manual controls and advanced features.			
10	HP Photosmart R967 \$400 NEW find.pcworld.com/55186	76 Good	<ul style="list-style-type: none"> Image quality: Very Good Battery life: Poor Overall design: Very Good 	<ul style="list-style-type: none"> 10 megapixels 35mm to 104mm zoom 18 scene modes 7.7 ounces
	▶ Bottom line: Nearly identical to the R927, the R967 adds an antishake mode and slightly better battery life. A camera dock is included.			

CHART NOTE: All prices and ratings are as of 10/6/06.

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New Roxio, Nero Suites Expand Horizons

MEDIA CREATION SUITES

THE BATTLE OF heavyweight disc-authoring and -burning suites moves to the next stage with Roxio's \$100 **Easy Media Creator 9** and Nero's \$100 **Nero 7 Ultra Edition Enhanced**. In my review of shipping versions of each package, the changes tended to be incremental, evolutionary, or tangential to the essential burning functions.

Both suites have broadened their scope in a quest to become all-in-one multimedia handlers; but in doing so, they may have grown too large for their own good. (For more on these suites' features beyond disc burning—including media management and mobile device support—browse to find.pcworld.com/55556).

Suite-wide, the Roxio package's interface is easier on the eyes and simpler to use than Nero's. Unfortunately, having

to learn and navigate a suite containing 34 separate Start menu entries negates much of the advantage. Nero is no lightweight itself, though: Its interface has 23 Start menu entries, and though the suite has undergone some minor tweaks, it remains unintuitive in far too many spots.

Blu-ray Disc and HD DVD support is the most notable disc-burning addition: Both packages will write to single-layer and dual-layer Blu-ray data discs, though Roxio has the edge here because it also produces Blu-ray movie discs in the BD-AV format (Nero plans a future update to support BD-AV). And Roxio now matches Nero's support for high-definition video encoding and transcoding in the MPEG-4 AVC format, which it supplements with DivX 5 and DivX 5 HD support.

Both suites have tweaked their video-editing components to help you jump-start creative projects. New menus, filters (including gamma correction and sharpen), and special video-transition effects provide a significant boost to Nero's Nero Vision. Roxio's multiple video components—VideoWave, MyDVD, and MyDVD Express—have gained convenient video-processing features, including automatic color correction and noise removal, and VideoWave has added a 32-track timeline.

Roxio really outshines Nero in the video production realm by making it easier for users to create neatly packaged and professional-looking content



ROXIO'S INTERFACE OFFERS multiple ways to begin video projects.

and disc menus. And Roxio's automated movie production module, CineMagic—which the Nero suite has no equivalent for—has beefed up its snazzy movie intros.

On the other side of the ledger, Nero tops Roxio in audio handling, supporting both multichannel surround editing and editing up to 24-bit/192-KHz audio. It integrates MP3 Pro (formerly a \$20 add-on) and AAC conversion, too, bringing it abreast of Roxio's suite in these areas (though it still lacks support for FLAC lossless compression).

Roxio's audio editing remains comparatively minor league. Roxio does work with Gracenote to identify music tracks, however; and the software allows you to create DVD

music discs (now with customizable themes and an option for shuffle play)—a nifty feature if you've packed 50 hours of music on a single DVD.

WHICH TO CHOOSE?

FOR PEOPLE WHO already use Nero, jumping to Nero's update makes perfect sense, as Enhanced is free to owners of Nero 7. But if you're a Roxio user, the decision to upgrade will depend on whether the new features appeal to you—the suite will cost you \$70 after a \$30 rebate. If you're buying your first suite, you'll find that Roxio produces slick-looking content more easily than Nero does. Nero is jam-packed with features, but its obtuse interface makes it tougher to learn.

—Jon L. Jacobi

Easy Media Creator 9

Roxio

PCW Rating **82 Very Good**

If you need professional-looking digital content in a hurry, choose Roxio's latest package. Street: \$100, \$30 rebate for previous owners find.pcworld.com/55339

Nero 7 Ultra Edition Enhanced

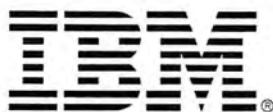
Nero

PCW Rating **82 Very Good**

The latest version of Nero offers plenty of power but lacks finesse. Even so, Nero remains a better deal for your dollar. Street: \$100, \$80 online, free to previous owners find.pcworld.com/55338



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TOP 10 COLOR LASER PRINTERS

Dell Laser Delivers High Quality at a Low Cost

TEST Center DELL MODELS HAVE topped our two previous color laser printer charts. This month the company keeps the streak alive with the new \$500 3110cn. The unit's print speed and output quality fall just shy of that produced by its predecessor, the discontinued 3100cn; however, its cost of operation is competitive, and it produced some of the best text and color output we've seen.

Oki Printing Solutions' \$400 C3400n debuts as well.



THE DELL 3110cn offers high-quality text and color graphics, and low operating costs.

It has very good text-printing quality, and its price is low.

Also noteworthy is Konica Minolta's \$300 magicolor 2500W, which missed the chart despite its appealing price—it's the lowest-priced color laser we've seen to date.

—Danny Allen

ONLINE

FOR MORE INFORMATION about the color laser printers reviewed in this chart, including details on how we tested them, go to find.pcworld.com/55225.

	COLOR LASER PRINTER	PCW Rating	Performance	Features and specifications
1	Dell 3110cn Best BUY \$500 NEW find.pcworld.com/55216	82 Very Good	<ul style="list-style-type: none"> Text quality: Very Good Graphics/photo quality: Fair/Good Tested speeds (ppm): 18.9 text/2.2 graphics 	<ul style="list-style-type: none"> 31 ppm text 17 ppm graphics 600-by-600-dpi maximum resolution
► Bottom line: This low-priced model is economical to run, and its optional duplexer is affordable. It's slow to print in color, however.				
2	Oki Printing Solutions C3400n \$400 NEW find.pcworld.com/55217	80 Very Good	<ul style="list-style-type: none"> Text quality: Very Good Graphics/photo quality: Fair/Fair Tested speeds (ppm): 15.0 text/5.3 graphics 	<ul style="list-style-type: none"> 20 ppm text 16 ppm graphics 1200-by-600-dpi maximum resolution
► Bottom line: This small entry-level laser is fast at printing both text and color graphics, though paper handling is limited.				
3	Oki Printing Solutions C5800Ldn \$799 find.pcworld.com/52626	79 Good	<ul style="list-style-type: none"> Text quality: Very Good Graphics/photo quality: Good/Fair Tested speeds (ppm): 19.5 text/6.1 graphics 	<ul style="list-style-type: none"> 28 ppm text 24 ppm graphics 1200-by-600-dpi maximum resolution
► Bottom line: Oki's GDI-based printer has a built-in duplexer, and turns in the fastest graphics and text performance on our chart.				
4	Brother HL-2700CN \$500 find.pcworld.com/45958	78 Good	<ul style="list-style-type: none"> Text quality: Fair Graphics/photo quality: Poor/Poor Tested speeds (ppm): 18.7 text/3.1 graphics 	<ul style="list-style-type: none"> 31 ppm text 8 ppm graphics 2400-by-600-dpi maximum resolution
► Bottom line: This model is fast at printing text. Letters looked fuzzy, and graphics were dark. Compact design prints only letter-size paper.				
5	Xerox Phaser 6120n \$499 find.pcworld.com/49742	78 Good	<ul style="list-style-type: none"> Text quality: Fair Graphics/photo quality: Good/Fair Tested speeds (ppm): 14.7 text/1.6 graphics 	<ul style="list-style-type: none"> 20 ppm text 5 ppm graphics 600-by-600-dpi maximum resolution
► Bottom line: Graphics quality was better than on most competing models, though pages printed slowly. It supports PCL and PostScript.				
6	Lexmark C522n \$499 find.pcworld.com/49738	78 Good	<ul style="list-style-type: none"> Text quality: Good Graphics/photo quality: Fair/Poor Tested speeds (ppm): 14.3 text/3.8 graphics 	<ul style="list-style-type: none"> 20 ppm text 20 ppm graphics 1200-by-1200-dpi maximum resolution
► Bottom line: The C522n delivers good performance at a low price. Toner cartridges are easy to replace. It supports PCL and PostScript.				
7	Lexmark C524n \$699 find.pcworld.com/52622	78 Good	<ul style="list-style-type: none"> Text quality: Very Good Graphics/photo quality: Good/Fair Tested speeds (ppm): 14.2 text/4.9 graphics 	<ul style="list-style-type: none"> 20 ppm text 20 ppm graphics 1200-by-1200-dpi maximum resolution
► Bottom line: You'll get good monochrome printing at a reasonable price. The control panel's LCD is big, but has no backlighting.				
8	Oki Printing Solutions C3200n \$399 find.pcworld.com/52624	77 Good	<ul style="list-style-type: none"> Text quality: Good Graphics/photo quality: Fair/Poor Tested speeds (ppm): 11.6 text/4.3 graphics 	<ul style="list-style-type: none"> 20 ppm text 12 ppm graphics 1200-by-600-dpi maximum resolution
► Bottom line: This low-priced GDI-based color laser sacrifices options and features, but not print quality—text prints looked good.				
9	HP Color LaserJet 3800n \$1000 find.pcworld.com/52618	77 Good	<ul style="list-style-type: none"> Text quality: Very Good Graphics/photo quality: Good/Fair Tested speeds (ppm): 16.5 text/5.3 graphics 	<ul style="list-style-type: none"> 22 ppm text 22 ppm graphics 600-by-600-dpi maximum resolution
► Bottom line: This model has a small footprint and is easy to maintain; however, it is comparatively expensive. It supports PCL and PostScript.				
10	Ricoh Aficio CL3500N \$700 NEW find.pcworld.com/55218	76 Good	<ul style="list-style-type: none"> Text quality: Fair Graphics/photo quality: Poor/Poor Tested speeds (ppm): 15.1 text/5.7 graphics 	<ul style="list-style-type: none"> 22 ppm text 22 ppm graphics 1200-by-1200-dpi maximum resolution
► Bottom line: Though this attractive printer offers excellent paper handling, its print quality—including text—was disappointing.				

CHART NOTE: All prices and ratings are as of 10/6/2006.

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Mapping Software Loses Its Way

MAPPING SOFTWARE

YOU CAN SAVE a couple hundred bucks by opting for one of the two most popular GPS-enabled mapping programs instead of for a stand-alone GPS device, but you'll lose a lot of simplicity—as well as some accuracy—in the bargain. When I took shipping versions of DeLorme's \$150 **StreetAtlas USA 2007 Plus With Earthmate GPS LT-20** and Microsoft's \$129 **Streets & Trips 2007 With GPS Locator** out for a spin, both of them proved to be a few turns short on accuracy compared with stand-alone GPS devices. (You'll need a laptop or a PDA to navigate with either mapping product.)

Unlike dedicated GPS systems (or StreetAtlas USA, for



GPS COMBO PACKS lead the way: transceiver-equipped mapping apps from DeLorme (left) and Microsoft.

that matter). Streets & Trips requires you to click a button to recalculate when you go off route—so you have to take your attention from the road as you find and select an on-screen button. The product's lack of automatic recalculation is reason enough to avoid Streets & Trips 2007.

StreetAtlas, by contrast, impressed me—not only with its no-touch navigation, but also with its straightforward interface. Plus, StreetAtlas includes a text-to-speech engine that pronounces street names.

FIRST-RATE GPS

INITIALLY, BOTH packages locked on to satellite signals with ease (this was a great improvement over the previous version of Streets & Trips).

Each program, with its respective GPS device (Earthmate LT-20 or SiRF III) connected via USB, acquired sufficient signals to plot my location in about 30 seconds initially, and nearly instantaneously thereafter. That's good, but not good enough: The gap between receiving the signal and getting the directions left me feeling as though the programs couldn't keep up with me. And I don't drive that fast (honest, officer).

Though both programs include applets that work with recent Palm OS and Windows Mobile PDAs (StreetAtlas USA's applet was formerly sold separately), the DeLorme program also permits downloading of static maps to

photo-enabled media players.

If you seek a budget GPS system, and don't mind balancing your notebook computer on your passenger seat, StreetAtlas USA 2007 is your best bet. The program can't match the clear maps, ease of use, and compactness of a stand-alone GPS, but its ability to recalculate routes automatically and to pronounce street names puts it miles ahead of Streets & Trips.

—Dennis O'Reilly

StreetAtlas USA 2007 Plus With Earthmate GPS LT-20

DeLorme

PCW Rating **76** Good

You get a great price and some advanced GPS features, but the driving directions always seem to lag a block or two behind.

Street: \$150

find.pcworld.com/55309

Streets & Trips 2007 With GPS Locator

Microsoft

PCW Rating **71** Good

Its inability to automatically recalculate your route makes the software difficult to recommend for in-car navigation.

Street: \$129

find.pcworld.com/55310

Security Software Wars

WE'VE WARNED YOU in the past not to run two antivirus products. Now the same advice may apply to antispyware apps.

Symantec's Norton Internet Security 2007 recommends that users uninstall antispyware competitors such as Safer

Networking's Spybot-Search & Destroy and Webroot's Spy Sweeper. Safer Networking has cried unfair competition, but Symantec says that its recommendation was prompted by software conflicts among apps with real-time protection. Spybot issues warnings about Registry changes made by Symantec's suite; and Spy Sweeper warns users about a Symantec Browser Helper Object (BHO) that,

if declined, disables Symantec's phishing protection.

The fix may come in the form of software updates. Both Safer Networking and Webroot plan to release patches that will add Norton Internet Security 2007 to a whitelist.

—Narasu Rebbapragada



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performance wireless network.

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speed for large spaces. This router is
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signal amplifier that
virtually eliminates
"dead spots".



Draft Pick #2

2006 STATS

NAME: Wireless-G 125* High
Speed Router

SPECIALTY: Share your internet
connection and create a high
performance wireless network.

PERFORMANCE: Ideal for most
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speed, security and easy setup, this
router is the perfect
choice for your
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BlackBerry Pearl a Real Gem

CELL PHONE

THE BLACKBERRY HAS long been synonymous with business. Compared with today's multimedia-savvy phones, Research In Motion's addictive devices have had something of a staid image; but that is about to change with the impressive **BlackBerry Pearl 8100**, the first BlackBerry to have a built-in camera, audio player, and video player.

Available from T-Mobile (for \$350 with a two-year contract), the candy bar-style Pearl has an attractive shiny black-and-silver finish. The handset is noticeably light and petite, though its compact size comes with a trade-off: The Pearl's keys are so tiny that even using a fingernail to dial is difficult.

Like BlackBerry 7100 series models, the Pearl features a SureType keyboard—a modified QWERTY keyboard that saves space by combining two letters on most keys. Once you start to type, the SureType system suggests words based on the letters that you've entered. When SureType guesses correctly, the system is a wonderful time-saver; when it doesn't (which happens often), typing is a time-consuming chore.

For navigation, an incan-



THE BLACKBERRY PEARL supports trackball menu navigation (upper left); its SureType system combines two letters on most keys (lower left). The microSD slot (right) is inconveniently located behind the battery.



descent pearl-white trackball sits on the face of the phone, immediately below the display. (The trackball replaces the standard BlackBerry jog wheel.) While the effect is aesthetically pleasing, I found the trackball somewhat harder to use than the jog wheel.

In my tests call quality was mixed: On some calls voices sounded loud and clear, but on others I noticed a slight echo. The device's talk-time battery life was excellent, however: The Pearl lasted 8 hours, 34 minutes in our tests, earning a score of Very Good.

Among the Pearl's biggest attractions are its multimedia capabilities. The included 1.3-megapixel camera is easy to use, though it lacks a dedicated shutter control (instead, you press the trackball to capture shots, and roll the track-

ball to zoom in or out). The built-in flash is handy for low-light shooting. Picture quality was about average: Bright colors looked washed out, and snapshots sometimes lacked crispness. The Pearl doesn't capture video, unfortunately; but it does play video clips, which look fantastic, if small, on its 240-by-260 TFT display.

LISTEN TO TUNES

THE PEARL IS the first BlackBerry to be equipped with a music player. You can transfer AAC, MP3, and .wav files to the device via the included Desktop Manager software. You can store music files on a microSD Card (not included), but the card slot is inconveniently situated on the device behind the phone's battery.

Die-hard BlackBerry fans will be glad to hear that the ad-

dition of all these consumer-friendly features hasn't lessened the device's messaging prowess. The Pearl supports the RIM push e-mail technology that has made the BlackBerry so popular, and adding a POP3 e-mail account is a snap. You simply enter your e-mail address and password, and within minutes your messages will be delivered to the device. It also supports AOL, ICQ, MSN, and Yahoo instant messaging networks.

None of the new features on the Pearl qualifies as truly innovative. And the phone suffers from rough spots in audio quality and key design. Nonetheless, when you combine its well-executed features with RIM's messaging capabilities and the device's sleek look, the BlackBerry Pearl is a winner.

—Liane Cassavoy

BlackBerry Pearl 8100

Research In Motion

PCW Rating **82 Very Good**

Though not flawless, the Pearl offers a strong combination of features and BlackBerry's already terrific e-mail and messaging capabilities.

Street: \$350 with a two-year

T-Mobile contract

find.pcworld.com/55333

Resting its case on an AltiGen IP phone solution

Legal aid office wins back valuable IT staff time while gaining greater functionality.

The IT department at the Legal Services Society (LSS) in British Columbia faced a classic challenge—an aging telephone system that had reached its capacity to support its call center activities. LSS had to find better ways to manage its telephone advice and application services.

The answer turned out to be an IP phone solution from AltiGen, installed and deployed by Optinet Systems, Inc. of Vancouver. The solution not only gave LSS immediate relief from phone administration that had required extensive IT oversight, but LSS also gained new features that will allow the society to develop strategies around staffing, scheduling, and call management to improve overall efficiency. In addition, the system offers the potential for future service developments such as expanding call center capabilities.

LSS settled on the AltiGen solution "because the price was right and the features and functions were just what we were looking for," says David Mathews, supervisor of Computer Services at LSS.

While the former phone sys-

tem met most of LSS's needs, it was very difficult and costly to make any changes to the system. Either the LSS IT staff was summoned to the task, or LSS had to pay the service provider to make the changes.

COMPLETE EASE OF ADMINISTRATION

By contrast today, any and all changes to the AltiGen IP phone system are made by LSS staff, with the majority made by the users themselves rather than the IT staff. Mathews says a new "junior-level help desk staff person" became proficient in handling many changes on her own with very little training—and without having to bother the IT staff.

The actual installation of the system and cutover from the old to the new "went very smoothly," Mathews says. Working with just

one IT person from LSS, Optinet ported all the major existing phone functions to the AltiGen solution in one week. Included in this work was a porting of all multilingual voice prompts from the old system, which meant LSS didn't have to pay interpreters and foreign language specialists to rerecord the prompts, notes Suzanne Sherrod, president of Optinet.

"We just unplugged the old system and we were up and running on the AltiGen system," Mathews recalls. "We had allowed some six weeks to field what we thought would be many support calls about the system. In fact, we dealt with all of them in less than three weeks." The initial deployment included some 200 phones.

While LSS is only starting to scratch the surface of the new features of the AltiGen system, the lawyers are already using its embedded software to monitor call queue statistics and leverage caller ID information. And most importantly to Mathews, his IT team now has more time to work on strategic projects instead of worrying about the phone system.



AltiGen's IP 710 Phone

AltiGen Communications, Inc.

AltiGen Communications, Inc. (NASDAQ: ATGN) is a pioneering manufacturer of VoIP business phone systems and call center solutions. Founded in 1994, AltiGen was first to market with self-administration, and recently received *Internet Telephony Magazine's* 2005 Product of the Year for its IP 710 telephone.



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HARDWARE SECRETS

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PC Perk-Ups

BY ANDY RATHBONE

Add Memory—And Save

MICROSOFT SAYS WINDOWS XP requires 64MB of RAM, which is plenty—if you're running simple programs such as Notepad. To run larger apps, Microsoft recommends 128MB of RAM, but your system will likely bog down without at least 256MB. For PCs less than two years old, 512MB is a reasonable total amount (the forthcoming Windows Vista Premium mandates at least this much), though 1GB will give you a much smoother ride. (For instructions on adding memory, go to find.pcworld.com/55230.)

Bonus tip: To save a few bucks on your memory upgrade, ask your local memory retailer for a trade-in: Some computer

USA's \$25 Removable 9-in-1 Flash Media Reader/Writer (find.pcworld.com/55367; see **FIGURE 1**). If all your bays are in use (and you don't feel like adding yet another external device to your desk), swap out your floppy drive. Personally, I couldn't bear to part with my treasured floppies, so I chose Mitsumi's FA404M seven-in-one media card reader (find.pcworld.com/55224). The device, which costs about \$25 online, positions the memory-card slots just above the floppy slot.

Other manufacturers slip a USB 2.0 or FireWire port onto their readers for easy, up-front access. The most expensive models—some priced over \$100—add Serial ATA ports, speaker and microphone jacks, or even a tiny LCD screen to display your CPU's temperature.

Expand With SATA

IF YOUR NEW memory-card reader didn't come with an external SATA drive port, pop in a card with a few external SATA connections to accommodate the

fast new generation of portable hard drives.

The 2-Port eSATA PCI controller made by Addonics (\$29; find.pcworld.com/55227) can be used to power any

standard 3.5-inch

SATA hard drive through your computer. If you're converting an internal hard drive into an external one, you'll probably want to use a drive enclosure; visit find.pcworld.com/55324 for step-by-step instructions.

Back Up Externally

EXTERNAL DRIVES AREN'T cheap, but boy, they sure come in handy for backups. With an external drive attached to your PC, you can use Windows XP's Backup and Task Scheduler programs to automate the chore (browse to find.pcworld.com/55228 for instructions). An external drive also facilitates the transfer of large files between PCs, if you've configured the unit as a shared drive on your

network (browse to find.pcworld.com/55326 and scroll to the bottom tip for instructions). Or leave one drive attached to your network for unattended backup of all your PCs. To restore files, simply connect the drive directly to the PC that needs the data, and you're in business.

Upgrade to a DVD Burner

IF YOUR PC has only a CD burner, consider adding a DVD burner to the mix. The latest DVD burners handle the popular DVD+R/RW and DVD-R/RW formats, support both single- and dual-layer recordable discs, and can store up to 8GB of data on a blank dual-layer DVD (browse to find.pcworld.com/55232 for more on DVD formats). Certain models also handle the less-common DVD-RAM format that some users favor for data and backup applications. Since the devices burn CDs as well, adding a second optical drive to your system simplifies copying those discs. With DVD-burner prices falling below \$50, there's little reason to wait.

Bonus tip: If you have a lot more money to spare and need more capacity, consider upgrading to a Blu-ray high-def DVD burner (the rival format, HD DVD, won't have high-capacity burners out until next year). Visit find.pcworld.com/55328 for more on the DVD format wars.

Wring Out More Power

WHEN CPU MANUFACTURERS set the speed of their devices, they look for the sweet spot between reliability and performance. But you can drive your CPU a little harder by overclocking it, inducing it to crank out more performance for free.

Some graphics cards can be overclocked as well (see "Wind Up Your Graphics Clock" on page 104 for more). You can get the performance boost by changing the clock speed or voltage setting in your PC's setup program, or by tweaking the motherboard directly. The hard part is figuring out exactly how much faster the clock should go. Most overclockers start by increasing the speed or voltage in their BIOS incrementally, backing down a notch as soon as they



FIGURE 1: EXPAND YOUR MEMORY options by adding CompUSA's removable flash memory reader.

stores buy back old memory or give discounts on new RAM for your old modules. You won't get rich from the trade-in, but it's more than you'd make by stashing the old chips in a shoe box.

Include a Media-Card Reader

GETTING STUFF OFF your media cards is a lot easier if you don't have to connect your camera or other device to your PC with a USB cable. Fill your PC's unused 5.25- or 3.5-inch drive bay with an internal memory-card reader, such as Comp-



FIGURE 2: D-LINK'S DBT-120 Bluetooth adapter enhances your system's wireless capabilities.

spot any system instability or other glitches. For further information about overclocking your CPU, read "Secret Tweaks" (find.pcworld.com/55234), or drop by one of the many sites dedicated to the topic: Overclockers.com, Extreme Overclocking (www.extremeoverclocking.com), and Overclock.net all provide detailed, step-by-step instructions. Be sure to read their sections on cooling, as overclocked chips run hotter than their stock cousins.

If you bought your PC from Dell, Gateway, HP, or another big-name manufacturer, you may be out of luck. These firms often lock down their CPU speeds to keep experimenters from frying the chips and then tying up tech-support lines.

Swap Your CPU

IF OVERCLOCKING JUST won't deliver the speed boost you crave, a new processor might be the answer. Pull out your motherboard manual (or visit the vendor's Web site) to find the CPU speeds it supports. The fastest chip you can upgrade to is likely more affordable now than it was when you bought your PC. Browse to find.pcworld.com/55235 for instructions on replacing your CPU.

Clean Up to Speed Up

A PC DOESN'T run at its peak when it's overheated, so give your system a good, regular dusting to clear blocked vents and clogged heat sinks. First, vacuum the dust balls out of the front and rear vents on the outside of your PC's case. Then pop off the case and blast your vents, fans, and heat sinks with a careful spritz

from a can of compressed air (available at any electronics store for about \$7). The closely spaced prongs and fins on the heat sinks are dust magnets, and dusty components can lead to freezes, unpredictable shut-

downs, and other bouts of PC unfriendliness. Clean the heat sink on your graphics card, as well: It's just as vulnerable.

While inside, route your PC's cables along the case's inside edges to maximize air circulation. (Wear a grounding wrist strap, or ground yourself by touching the case beforehand, to avoid damaging components with static electricity.) Make sure the newly cleaned vents aren't blocked by a wall or the side of a desk. Go to find.pcworld.com/55226 for more PC cleaning tips in our "Gunk Busters!" feature.

Make a Sound Decision

UNLESS YOU'RE RUNNING a 5.1-channel home-theater or gaming rig, you're probably piping your PC's audio from its generic sound card (or the audio chip integrated on its motherboard) through a pair of nondescript speakers. To soup up your PC's sound, plug a low-cost amplifier into your audio-out ports. I connected a vintage Radio Shack SA-700 amplifier that I salvaged from my mother-in-law's garage and a pair of 1980s-vintage Radio Shack Minimus 7 bookshelf speakers to bolster my PC's not-so-dulcet tones. Visit find.pcworld.com/55236 to read instructions for other low-cost PC audio upgrades.

Go for Bluetooth

BLUETOOTH IS a great technology for connecting wireless headsets and making data transfers. However, while plenty of cell phones and

handhelds have Bluetooth built in, most desktop PCs and many notebooks lack support for the technology out of the box. The solution: a USB Bluetooth adapter about the size of a thumb drive that you can plug into your PC when you need it, yet is small enough to throw into a laptop bag. I went with D-Link's DBT-120 (find.pcworld.com/55237; see **FIGURE 2**), which costs about \$30, but cheaper models are available online and at your neighborhood computer store. And browse to find.pcworld.com/55536 to read about Nokia's new Wibree technology, which the company claims enhances Bluetooth.

Andy Rathbone is the author of *Windows Vista For Dummies* (find.pcworld.com/55369).



Notebook Helpers

BY MICHAEL S. LASKY

Listen to Music and Take Calls

USING YOUR NOTEBOOK PC to listen to music or watch a movie in public may leave you tethered to the PC by the headphone cable. And when your cell phone rings, you have to take the head- ▶



FIGURE 3: USE YOUR USB ports even when the notebook is off with Targus's docking station.

TOOLS

HELPER APPS

1 PSP-Vault Stuck Pixel Fixer wipes out an LCD's persistent dots. Free; find.pcworld.com/55280

2 Loki Wi-Fi finder fixes on your location automatically and identifies nearby hotspots. Free; loki.com

3 PictureCode Noise Ninja digital-image enhancer wipes the static from your photographs. \$35; find.pcworld.com/55289

4 MusicIP Mixer generates playlists from your audio library. Free; www.musicip.com/listener

5 eRightSoft Super converts YouTube .flv files to other formats. Free; find.pcworld.com/55293

phones off to get the call—that is, if you heard the ring tone. You need to use a dual-purpose wireless headset that exploits Bluetooth's multiple-connection capability. Jabra's BT620s (\$83; find.pcworld.com/55245) incorporates a microphone directly in the stereo headset, so with the touch of a button you switch between listening to audio playing on your laptop and taking calls on your Bluetooth-enabled phone. When you get a call, whatever is playing automatically pauses. Touch a button on the side of the headset to accept or refuse the call; when your conversation ends, the PC sound returns. The headset's battery life is about 14 hours for listening and talking.

Print Without Your Printer

NOTEBOOKS FREE YOU from the office, but they also take away easy access to your printer. Short of schlepping around a portable printer, getting hard copies on the road involves transferring documents to external memory—usually a USB key or a flash card—and then taking it to a

hotel business center or a copy shop.

A number of Internet-based services take the drudgery out of printing on the road. PrinterOn (www.printeron.net) directs you to a nearby network printer and lets you print files in over 100 different formats, including Office files, PDFs, and JPEGs. The service has partnered with major hotel chains such as Doubletree, Embassy Suites, and Hilton to let guests send free print jobs to their in-house business center. Free downloadable software from FedEx Kinko's (www.fedexkinkos.com/fpfk) lets you send print jobs to a virtual printer on your PC, and then either redirects the job to the FedEx Kinko's location you choose or delivers the printout to you via FedEx. You can preview the printout in your browser, and pay online (the cost depends on the file's size and the paper you use).

This Dock's Got You Covered

YOUR NOTEBOOK IS designed for mobility, yet most of the time it sits on a desk in your office or home. A docking station (also called a port replicator) provides ports for such essential external devices as a keyboard, mouse, monitor, speakers, and printer. The Targus Universal Notebook Docking Station with Video (find.pcworld.com/55247; see **FIGURE 3**) lets you connect all your devices through a single USB port on your laptop. Two of the docking station's four USB ports have power even when the notebook is off or in sleep mode, making the device handy for recharging your phone, PDA, or wireless mouse; it costs about \$120 online.

Bonus tip: If your notebook has a large screen, the \$100 Logitech Alto docking station (find.pcworld.com/55550) transforms it into an external monitor. The Alto's unique stand lifts the notebook screen to desk-top-monitor height.

Contributor Michael Lasky is a freelance writer based in Northern California.



Printer Optimizers

BY PAUL JASPER

Stretch Your Ink Budget

MOST PRINTERS LET you extend your ink cartridges or toner by setting a draft mode that produces gray text, which is still perfectly readable. You'll also save by turning off color printing; black ink and toner are usually cheaper than their color counterparts. Save paper by printing two pages side-by-side on a single sheet. If your printer has a duplexer, set your draft profile to print on both sides. (The location of these settings varies from printer to printer, but look in the device's properties dialog boxes.) Set this profile as the default printer, so you won't forget to use it. Save your original profile for times when high quality is important.

Create Virtual Printers

NOT ALL PRINTOUTS are created equal: Sometimes you want quality, other times you want speed; sometimes you want color, other times you don't. For each type of output, you must change the settings in Windows' Print Properties dialog box. While some printers let you

FIGURE 4: PRINT JUST THE WAY you want by creating printer profiles with settings for specific types of output.



set up profiles for each of your common printing tasks, you usually have to hunt through Print Properties to find the settings you need to tweak. To get the same result more easily, create separate printer profiles for each set of properties you require. Open Control Panel's *Printers and Faxes* applet, select *Add a printer*, and step through the Add Printer Wizard. Next, select the printer and click *Set printer properties* in the right pane (or right-click its entry and choose *Properties*). Assign the "printer" a meaningful name, such as **Inkjet Draft** or **Laser Letterhead Paper**, and click *Printing Preferences>Advanced*. Set the printing preferences to match (the options available vary from printer to printer, but most let you adjust the print resolution for higher or lower quality, for example). The next time you print, select the icon for your printing task from the list at the top of the Print dialog box (see **FIGURE 4**).

Choose the Right Paper

IF YOUR PRINTER has multiple paper trays, load one with inexpensive, multi-purpose paper, set your draft-print profile to use it, and put your high-quality paper in the other tray. When you need quality, select the latter tray in your Print Properties. For sharp text from inkjets, use paper stock designed specifically for them—paper intended for laser printers and photocopiers soaks up ink like a sponge, making inkjet text look fuzzy.

Bonus tip: For best color accuracy and prints that last a lifetime, go with your printer manufacturer's recommended paper—usually its own brand. Some printers, such as recent models from Canon, won't even let you select the highest quality mode if it detects you're not using the vendor's own specialty paper.

Buy Ink and Paper in Volume

WHEN WE TESTED the ink yields of photo printers (find.pcworld.com/55264), we found that the cost of printing a 4-by-6-inch photo ranged from 23 cents to 97 cents. Many printer vendors now offer multipacks of ink and paper. For

example, HP's value pack for its Photosmart 375 and Photosmart 385 combines one tricolor ink cartridge with 50 sheets of snapshot paper for \$20—less than the \$25 cost of the cartridge alone. Although HP also sells packs containing more ink and paper, this smaller size is actually a better bargain, based on the 49-sheet yield recorded in our original tests.

Stock Up on Toner, Too

BUYING LASER TONER in bulk also saves you big bucks. Brother is typical of laser-printer manufacturers that offer their toner cartridges in several capacities. Cartridges rated to output 3500 pages for the Brother HL-5250DN (currently our Best Buy monochrome laser) cost \$74 on the company's site. You can buy cartridges with double that capacity for \$100, which saves you \$48 over the life of the higher-yield cartridge. Going big on toner capacities can reduce your cost per page by more than half a penny. Regrettably, few laser-printer vendors offer large-capacity cartridges for their budget models.

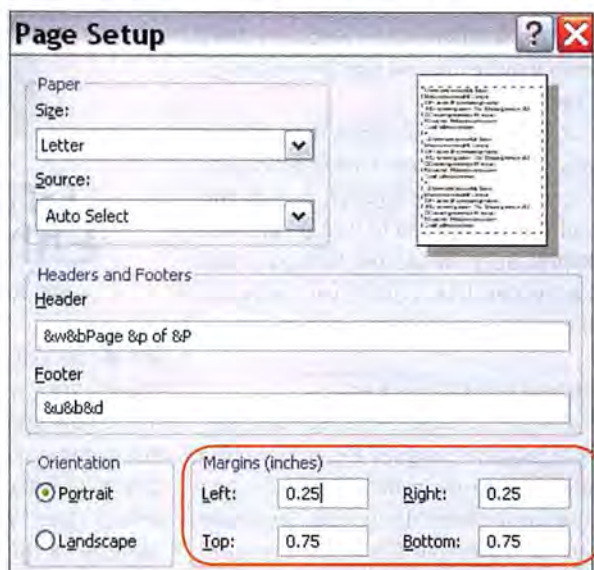
Make a Direct Connection

MOST OF TODAY'S photo printers have a front port for printing photos straight from a digital camera without using your PC. The camera uses the PictBridge standard to link to the printer through what is essentially a USB port. Many printers let you connect other USB devices, usually flash-memory drives, to the port.

Printers featuring a color LCD often let you browse and print photos stored on a flash drive, too. For example, the Epson PictureMate Deluxe Viewer Edition lets you transfer image files from your camera's memory card to a USB drive, which

can be handy for archiving files from the camera while you're away from your PC. Several HP printers, such as the portable Photosmart A616, can print photos stored on an iPod. But don't expect the transfer speeds you'd get with a USB 2.0 port on your PC: Most PictBridge ports, including those on the PictureMate and the A616, run at the slower USB 1.1 speed.

All new PCs come with USB 2.0 ports that are capable of the highest speeds, but the devices you connect to them can run at either Hi-Speed (up to 480 megabits per second) or Full-Speed (up to the



old USB 1.1 limit of 12 mbps, or 40 times slower). If you have a 1GB memory card full of images in your camera (like I do), that makes a big difference in how long it takes to download your photos when connected to a PictBridge printer instead of directly to a PC. Of course, most cameras still use USB 2.0 at the slower speed.

Performance issues aside, direct printing is convenient, and now you can get that same convenience with your camera phone or handheld. Canon offers several printers with IrDA interfaces that let you beam your photos to them. And Canon, Epson, and HP offer Bluetooth adapt-

FIGURE 5: SEE THE ENTIRE Web page on your printout by adjusting the margin settings in IE's Page Setup dialog box.

ers that plug into the direct-print port on their printers for printing images wirelessly from a Bluetooth-equipped device. Prices start at \$39 and run to over \$80.

Print Full Web Pages

IF INTERNET EXPLORER slices off the right side of the Web pages you print, check your printer vendor's site for free software that will enable you to print the entire page. For example, Canon's Easy-WebPrint, Epson's Web-To-Page Utility, and Lexmark's downloadable Toolbar each provide an alternative-print function that neatly scales a Web page to fit your paper size. Some of the programs don't even require that you use the company's brand of printer.

A less-elegant solution is to tweak IE's page settings. Select *File•Page Setup* in Internet Explorer and set the left and right margins close to 0.25 inches (see **FIGURE 5**). Your printed Web page will look wider than it did in your browser, but at least you'll get the entire thing.

Browse for Freebies

YOUR LOCAL COMPUTER store has plenty of products designed for such printing projects as party invitations, posters, and specialty business documents. But before you hand over your \$20 to \$100 for one of these brightly colored boxes, see what you can find for free. Many printer manufacturers give away tools and templates to encourage you to use your printer more (and buy more paper and ink).

Photo printers from Epson and HP ship with material for creating greeting cards and photo albums. Canon's Creative Park (find.pcworld.com/55265) and Epson's CreativeZone (find.pcworld.com/55266) provide templates and instructions for many different projects. HP's Activity Center (find.pcworld.com/55267) and Lexmark's Project Center (find.pcworld.com/55268) walk you through the steps to design greeting cards, scrapbooks, and more; in both cases you first upload your photos to the site, and then use its tools to manipulate the images. Both the HP and Lexmark

sites deliver the finished results as PDF files, so you can print them with any printer. HP's site even helps you design complex items like your softball team's roster, contact info for team members, the season schedule, fundraising letters to potential uniform sponsors, personalized T-shirts, player trading cards, and invitations to the championship party.

Paul Jasper is a technology consultant and freelance writer based in San Francisco.



Graphics Enhancers

BY KIRK STEERS

Wind Up Your Graphics Clock

HARD-CORE GAMERS AND PC power users squeeze every drop of performance out of their systems by pushing their CPU's clock frequency beyond the factory settings (see "Wring Out More Power" on page 98 for more on this). You can do the same to your graphics card.

The two leading graphics card vendors, ATI and nVidia, both offer utilities for speeding up their cards' graphics processing unit (GPU). ATI's Overdrive and nVidia's Coolbits programs are included with the graphics drivers that install along with the cards. (You might need to unlock the Coolbits utility to make it visible in nVidia's Forceware configuration program; to do this, see Jim Aspinwall's

"Secret Tweaks" feature at find.pcworld.com/55272 for instructions on changing Windows' Registry settings.)

Note that overheating can destroy your graphics card's delicate circuitry. The Overdrive app monitors your ATI board's temperature to prevent overheating, and using it doesn't invalidate your warranty. But overclocking an nVidia board via Coolbits—or with a third-party utility like the free RivaTuner 2 (find.pcworld.com/55274)—does invalidate your warranty.

Teach Your Monitor Who's BIOS

IF YOUR PC uses AGP graphics—which it probably does unless you recently purchased a midrange or high-end system—then its BIOS settings offer several low-level tweaks that can improve graphics performance. (Altering your BIOS is risky, so browse to find.pcworld.com/55275 to read "Tweak Your PC's BIOS Settings the Safe Way" for instructions.)

Open your PC Setup program by pressing the key you're instructed to use prior to Windows' loading (<Delete> is most common). Look for these settings:

AGP Mode: Adjust this item to the maximum value your card supports—2X, 4X, or 8X (check the card's documentation or the vendor's Web site to identify its maximum AGP speed). This tweak can improve your system's graphics performance.

AGP Fast Write: Enabling this option often speeds up graphics cards that are not overclocked.

AGP Aperture Size: This ▶

FIGURE 6: SEE THE MOST accurate colors possible on your monitor by using Colorvision's Spyder2express.



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setting governs the flow of graphics data in and out of system RAM whenever the memory on your graphics board runs low. For graphics cards with 32MB or less of memory, increasing the aperture to 128MB or higher can enhance the performance of texture-laden games.

Fine-Tune Your Display

THE FASTEST AND simplest way to get the most out of your CRT or LCD monitor is by adjusting its brightness, contrast, and other controls; a few simple fixes can make a big difference in your on-screen view. For techniques and utilities to help you tune a CRT, see "Get the Best View Possible From Your PC's Monitor" (find.pcworld.com/55269); and for tips on adjusting your LCD, read "Improve Your Image With 13 Simple Graphics Tweaks" (find.pcworld.com/55270).

Stop Unwanted Glare—and Glances

GOT GLARE? IMPROVE your view—and reduce eyestrain—by purchasing an anti-glare screen that fits over your display. 3M (find.pcworld.com/55276) and Fellowes (find.pcworld.com/55277) make

you're working on. Privacy filters from 3M are priced between \$40 and \$100 online (find.pcworld.com/55278).

Show Your True Colors

COLORS VARY FROM monitor to monitor: What looks like puce on one display may appear as burnt umber on another (you can tell I've been looking at paint swatches, can't you?). If you want your digital photos and other graphics to look as true to life as possible, you need to calibrate your monitor. Calibration software can help, but to really gauge a monitor's color accuracy, you need a device designed specifically for sampling and analyzing a monitor's hues.

Colorvision's Spyder2express (find.pcworld.com/55279; see **FIGURE 6**) does just that. The device, which costs about \$70 online, uses a hockey puck-size USB scanner that hangs over the front of your monitor to sample the light it emits, and to calibrate the colors automatically. The Spyder2express scanner is the same one used by the company's more expensive calibration products. A \$200 software upgrade adds the company's PrintFix Plus utility, which color-matches printer and monitor output.

Unstick Your Pixels

SOMETIMES, YOUR LCD's pixels get stuck, requiring a mild jolt to get them operating again. If you have an annoying pixel that just won't let go of one color, try using your fingertip wrapped in a soft, clean cloth to massage the pixel very, very gently for 10 to 15 seconds.

If that doesn't unstick it, download the free Stuck Pixel Fixer video file from PSP-Vault, and run it for a couple of hours (find.pcworld.com/55280; look for the download link at

GEAR

BEST ADD-ONS

1 Mitsumi's FA404M internal seven-in-one memory-card reader saves you a USB port. \$25; find.pcworld.com/55224

2 Jabra's BT620s USB Bluetooth stereo adapter lets you listen to music and answer phone calls. \$83; find.pcworld.com/55245

3 Colorvision's Spyder2express samples your monitor's colors and corrects them automatically. \$70; find.pcworld.com/55279

4 Lensbaby adds professional perspective effects to your images. \$150; www.lensbabies.com

5 V-Moda's Bass Fréq in-canal earphones bring out the bass in all of your media-player files. \$50; find.pcworld.com/55291

the bottom of the description). The video's rapidly flashing colors have fixed several of my stuck pixels. To play the video, which was originally designed for the Sony PlayStation Portable, you need QuickTime (www.quicktime.com) or another media player that supports MPEG-4 files. Note that this technique works with stuck pixels, but not dead ones, which typically appear black.

Improve Your Driver Skills

IF YOU'RE NOT satisfied with the performance of your display, try tweaking your graphics driver. Check to see if you have the latest release installed. (Note, though, that changing your system's graphics driver is an invitation to trouble. Remember the sage advice: If it ain't broke, don't fix it.) While you're in the driver's properties, get to know the features and settings. ATI's Catalyst and nVidia's Forceware utilities allow you to tweak many 3D, ►

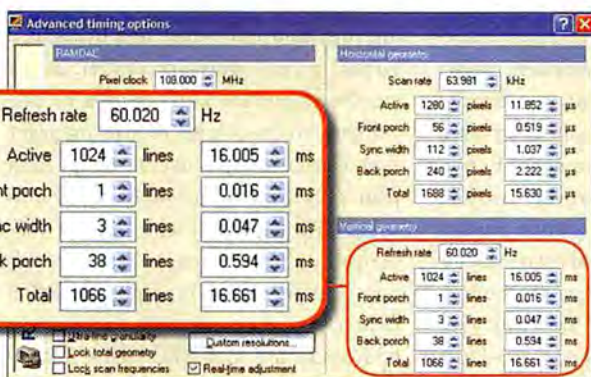


FIGURE 7: POWERSTRIP'S TWEAKS FOR your graphics card include custom screen resolutions and various graphics timing settings.

filters that cost from \$25 to \$60 online, depending on the type and size of your display.

Of course, there are probably times when you would like to make your screen more difficult to read. A screen-privacy filter will not only reduce glare but also will limit your display's viewing angle so that nosy neighbors and passers-by can't see what

color, and other advanced image settings. See the Catalyst and Forceware sections at TweakGuides.com for the details.

Experimenting with your card's gamma settings, for example, can significantly lighten up a game that's otherwise too dark to play comfortably. Many power users also swear by EnTech Taiwan's \$30 PowerStrip (free trial; find.pcworld.com/55281), a configuration utility that offers a huge collection of advanced graphics-card tweaks, including many settings that are not available in the manufacturer's configuration utilities. Customized screen resolutions, for instance, give HDTV and wide-screen LCD viewers more options, and custom refresh-rate settings let you bypass the 60-Hz limitation that causes screen flicker on some display/graphics card combinations (see **FIGURE 7**). One caveat: Most LCDs work best at their default refresh rate.

Contributing Editor Kirk Steers writes the monthly Hardware Tips column (find.pcworld.com/31511).



Wireless-Network Boosters

BY BECKY WARING

Set Your Peripherals Free

ANY DEVICE WITH an ethernet port can be untethered via a simple Wi-Fi-to-ethernet bridge, which lets you move it around the house or place shared peripherals in a central location. The bridges cost about \$50 to \$100, and are available from Belkin, D-Link, Netgear, and other vendors. They're used primarily as wireless game adapters for GameCubes, PlayStations, and Xboxes, but they work with other ethernet-equipped products, such

as printers and external hard drives.

If your Wi-Fi network is configured to use DHCP, there's a good chance that your wireless bridge will work right out of the box. Otherwise, you'll have to connect the bridge to your PC, and then assign it an IP address manually by opening the machine's network settings. Some older game consoles need a separate network adapter with an ethernet port. Also, the Xbox 360 has a USB port, for which Microsoft sells a Wi-Fi adapter.

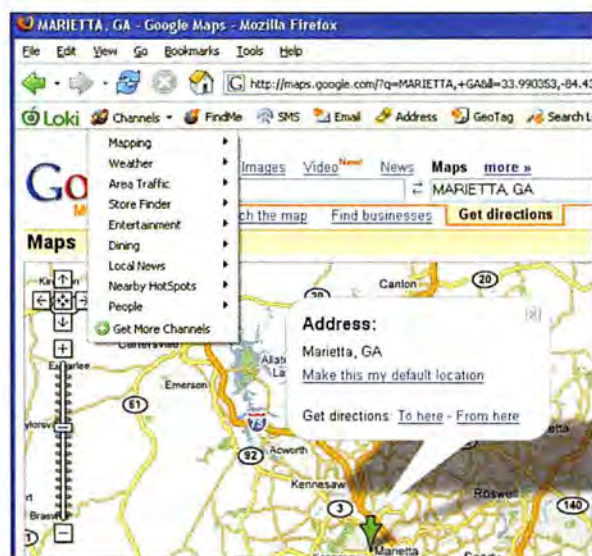
Find Nearby Services

WHO NEEDS GPS when you have Wi-Fi? The Loki service (loki.com) has mapped out the Wi-Fi networks in most major U.S. cities, letting you use your Wi-Fi-equipped PDA, smart phone, or notebook to pinpoint your location. Loki installs as a toolbar in Internet Explorer or Firefox, which allows you to look up nearby movies, stores, restaurants, weather, traffic, and other information. My two favorite Loki services are driving directions (see **FIGURE 8**) and the location of Wi-Fi hotspots. Other channels provide Amtrak train schedules, a radio-station finder, apartment rentals, and real-estate values.

A nice touch: At the press of a button, you can send an e-mail or SMS with your location to a friend, who then clicks a link to look at a map and get directions to join you. Another way-cool feature lets you create "geotags" to attach to blog entries, Flickr uploads, and other Web-based content, showing the location at which it was created. Best of all, Loki is free!

I Spy Wi-Fi

UNFORTUNATELY, WI-FI HOTSPOTS are not always secure. Whether you're using a public Wi-Fi connection at a coffee



shop, a hotel, or some other public place, each time you log on, you're sending your ID and password over open airwaves. Nefarious Wi-Fi opportunists can set up pirate SSID names similar to what you expect to receive from the Wi-Fi router, such as 'wayport' or 't-mobile', and then capture your private data.

Outfox the would-be thieves by encrypting your data and e-mail, and by using a virtual private network (VPN). Many employers provide VPNs to their mobile workers, so check with your IT manager first. Casual hotspot users can opt for a paid VPN service such as Boingo's Personal VPN (free trial with hotspot subscription, \$30 to keep; find.pcworld.com/55284) or WiTopia personalVPN (\$40 a year; find.pcworld.com/55286); both are simple to install and use. Microsoft is beta-testing its new Windows Live WiFi Suite, which will include VPN service. Pricing is not yet set.

JiWire, noted for its free Hotspot Finder service (see the following tip), offers solid Wi-Fi security and e-mail encryption with its Hotspot Helper software. The free download automatically encrypts your inbound and outbound Internet traffic, and adds a firewall to prevent unauthorized access to your PC. The ►

FIGURE 8: YOU CAN GET there from here, and the Loki service will show you the way.

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program protects e-mail no matter which client you're using. Hotspot Helper incorporates JiWire's on-demand Hotspot Finder and is free for the first 10 days of use; it costs \$25 annually for unlimited use (www.jiwire.com).

Don't Pay for Hotspots

IT'S EASY to get sucked into the habit of heading for the nearest McDonald's or Starbucks when you need to find a Wi-Fi hotspot—but at \$5 to \$10 per connection, this quickly becomes expensive. Why pay latte prices for Wi-Fi when you can get it for nothing? Free public hotspots are proliferating in city parks, libraries, independent coffee shops, universities, and airports (including those in Las Vegas, Orlando, and Sacramento).

The problem is finding free hotspots when you're offline. The solution: Download hotspot directories *before* you travel. Free hotspot locators are available from AnchorFree (free locations only; www.anchorfree.com) and JiWire (both free and paid; www.jiwire.com). AnchorFree has a version for iPods, and both companies let you access their online directories from cell phones using a WAP browser.

Becky Waring is a freelance writer based in Northern California.



Digital-Camera Tweaks

BY DAVE JOHNSON

Shoot the Best Quality

GREAT PHOTOS START with the right camera settings. When you capture photos in JPEG mode, you can choose among several quality levels; the higher the quality, the fewer pictures you'll be able to fit on your camera's memory card. I prefer



FIGURE 9:
ELIMINATE NOISE
CAUSED BY high
ISO levels with
Noise Ninja's
custom noise
profiles for various
digital cameras.

to set my camera to its highest JPEG resolution and quality setting—memory cards are cheap, and I can always shrink a photo to e-mail it. Also, the lower the image's resolution, the less detail you have to work with later; that's important if you want to use your image editing software's crop tool to make an enlargement of some small detail.

For the ultimate control over your photos, shoot in RAW+JPEG mode (if your camera supports it). You'll get both a JPEG image you can share and a duplicate image in RAW mode that you can use to edit and print without sacrificing a single pixel of image quality. Browse to find.pcworld.com/55538 for tips on choosing the best image file type.

Don't forget your camera's sharpening setting. I add a small amount of in-camera sharpening to my shots, since most digital cameras tend to take slightly soft photos. In-camera sharpening also eliminates the need to perform a lot of post-shot tweaking of photos on the computer.

Reduce the Noise

IF YOU TAKE photos in low-light conditions, you probably know that you can increase the camera's ISO setting to help freeze the action. Unfortunately, higher ISO levels also increase digital noise, which is why messing with these settings is often considered a last resort.

Thankfully, if you need to bump up the ISO, help is close at hand. Noise-reduction software such as PictureCode's \$35 Noise Ninja (a free limited-function version is also available; find.pcworld.com/55289) reduces the digital artifacts that high ISO levels generate, making your photos as clean and smooth as if you had taken them at the default setting.

Noise Ninja comes with profiles of digital noise for many common cameras, and creating custom noise profiles for your specific camera at each ISO level is easy (see **FIGURE 9**). Just load a photo, point Noise Ninja at the profile for your model, and your photo will be polished in a blink. For tricky photos, I love the software's Noise Brush, which lets me selectively apply noise reduction to just certain parts of the image, preserving small details in the process.

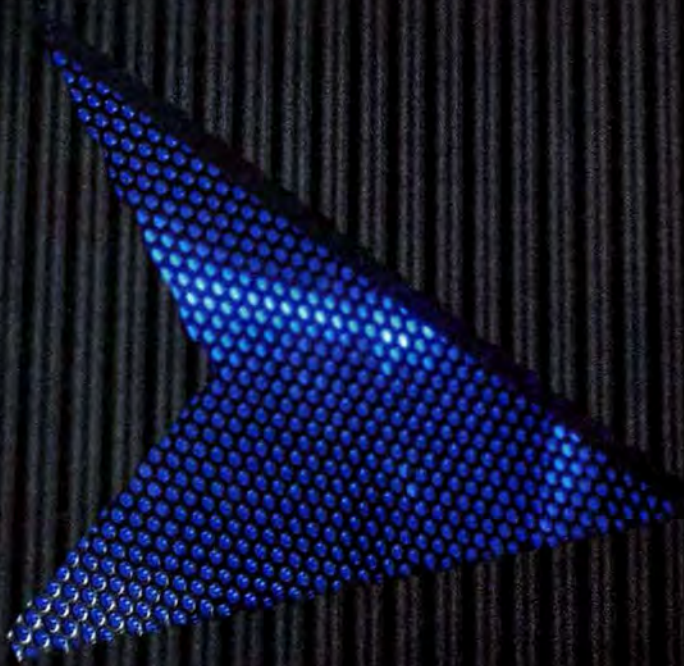


FIGURE 10: FLEX YOUR
PHOTOGRAPHIC skills
by using the Lensbaby
selective-focus lens.

Mask Stuck Pixels

ANY DEVICE CAN be marred by "dead" and "stuck" pixels—

including the sensor in your digital camera. (See "Unstick Your Pixels" on page 107 to read about a remedy for an LCD monitor.) Bad pixels become more likely as your camera gets older. Under most photographic conditions you might never notice them; but some kinds of photos—especially long night exposures of fireworks, cityscapes, astronomy, trails from car lights, and similar scenes—can really make the problem pixels stand out. ►



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The static appears because when you leave the camera's shutter open for an extended time, the cumulative effect of bad pixels can litter your photo with bright spots of digital noise.

You can subtract the bad pixels from your scene by using a program such as TawbaWare's \$15 PixelZap (find.pcworld.com/55288). The utility is smart enough to fill in the information lost by these bad pixels, eliminating the bright or dark dots scattered randomly around the photo. I've also used PixelZap to remove the fuzzy "halos" that sometimes appear around blips in my images that were caused by my camera's stuck pixels.

Flex Your Lens

LOOKING FOR A way to take some truly unusual photos? If your camera is a digital SLR model with interchangeable lenses, the \$150 Lensbaby (www.lensbabies.com; see **FIGURE 10**) might be just the ticket. Attach the Lensbaby to your Canon Digital Rebel, Nikon D50, or any other SLR camera, and use it to expand your photographic vocabulary.

The selective-focus lens is a flexible tube that you bend with your fingers as you prepare to take a photo. The result? One part of the photo is in sharp focus, while the rest of the picture looks blurry. It's like a cross between a soft-focus lens and a tilt lens (the sort of lens pro photographers use to correct perspective when shooting pictures of buildings).

Using Lensbaby takes some practice. More art than science, this gadget encourages finger gymnastics, as you move the flexible lens around with your fingertips until you like what you see through the viewfinder. The lens is compatible with such add-on lens kits as a wide-angle adapter, a telephoto adapter, and a macro filter. (Browse to find.pcworld.com/55540 for more tips on altering the perspective of your images using your image editing software's correction tools.)

Contributor Dave Johnson writes PCWorld.com's Digital Focus column (find.pcworld.com/55370).



Cell-Phone Assistance

BY GRACE AQUINO

Browse Faster on Your Treo

IF YOUR TREO'S Web connection is as slow as rush-hour traffic, here's one way you can speed things up: Use the fast mode on the browser, which blocks the phone from downloading Web graphics, thereby making pages load more quickly. Treo browsers place their "don't load images" option in various locations. For example, on a Windows Mobile Treo, open the *View* menu, select *Options*, and and deselect *Show Pictures* (see **FIGURE 11**). Although photos won't appear on the pages automatically, you can see them by selecting their placeholder box on the Web page. If you're looking for a simpler option, sign up for the free Mdog.com information service for mobile browsers. Log on to the site to see mobile-optimized versions of such news and information sites as the *New York Times* and the Internet Movie Database (imdb.com).

Customize Your Soft Keys

YOU CAN CHANGE the soft keys and four-way navigation keys on many cell phone handsets to the settings that you use most. On most phones, you reset these features by accessing the device's main settings menu. On the Motorola Razr, for example, select the *Menu* button, go to *Settings*, click *Personalize*, and

choose *Home Keys*. Scroll to the key you want to modify—such as *Up*, *Down*, *Left Soft Key*, or *Right Soft Key*—and then select the app for the shortcut (you can choose almost any of your phone's programs and features). To modify the shortcut keys for the four-way navigation soft keys on the LG VX8300: Click the *OK* button (also called the *Menu* button), scroll to the *Settings & Tools* tab, and select *Phone Settings*. Choose *Shortcut Key* and pick the key (such as *Left Key* or *Up Key*) that you want to change. Select the feature you want as a shortcut, and click *OK*.

Back Up Your Address Book

MOST BIG-NAME WIRELESS carriers offer apps that back up your cell phone's address book. But I found an even better deal: a free Web-based backup service called Zyb that supports a variety of phone models that have a Net connection.

To get Zyb on your phone, you simply create an account at zyb.com (see **FIGURE 12**). Some phones will automatically sync your contacts to Zyb's secure server, but others, such as Motorola's Razr phones, must have their address books uploaded

to the server manually: To do this, open the phone's *Settings* menu, select *Connection Sync*, and enter Zyb's setup details. The company's Web site provides step-by-step instructions based on your phone model.

If your phone is compatible with Zyb's automatic sync, the service sends configuration information to your handset. When you select this option, the company pops up a warning on screen, asking you to ►

FIGURE 11: LOAD WEB pages faster on your Treo by blocking images from downloading automatically.



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verify the phone number you entered (if you type the wrong number, your account details could be accessed by the person whose number you entered). The syncing process can take a while, depending on your connection speed and the number of contacts in your address book. After-

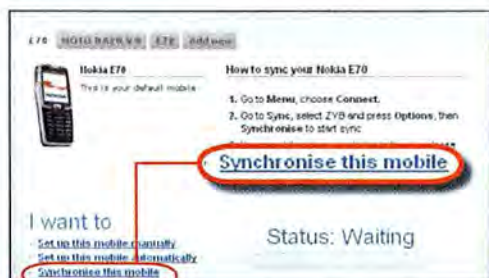


FIGURE 12: **AUTOMATICALLY BACK UP** your cell phone's address book—for free—at the Zydeco.com site. phones that Zydeco doesn't support, I recommend the free BitPim phone-contacts-backup program at www.bitpim.org.)

Create Shortcuts to Your Apps
YOUR CELL PHONE'S applications and features are often layers deep within menus, making them difficult and time-consuming to find. You can get to them faster by creating a shortcut, similar to those you put on your PC's desktop. Nearly all phones less than a year or two old support some kind of shortcut creation, although you may be able to make shortcuts only to navigation keys, as in the Nokia 8801 (shortcut options are usually found in your phone's settings menus). On the Motorola Razr, however, you can assign a shortcut to each number of the dial pad for quickly launching your favorite apps or for accessing the features you use most often. Navigate to and select the item that you want to jump to (for me it's the game Bejeweled). Hold down the Menu button—it looks like a hyphen or a minus sign and is located in the middle of the top row of keys—for about 2 seconds. When the 'Assign Shortcut for:'

window pops up, select the Yes hot-key. Next, you'll see the name of the app; make sure it's the correct one. In the Key field, select the number that you want to use, and then click Done. Now the next time you want to play Bejeweled, you simply press the Menu button plus your assigned shortcut number. This sure beats having to click your way through all those menus.

Add Shortcuts to Your BlackBerry

THE BLACKBERRY IS the original always-connected device. And its keyboard shortcuts can make you even more produc-

- tive. Here are my favorite ones:
1. Go to the top of your Message screen by pressing the letter T.
 2. Capitalize a letter by holding its key until the capital letter appears.
 3. Insert the @ sign and periods in any field of an e-mail message by pressing the spacebar.
 4. Move the cursor to the top of the page by pressing <Cap> and the spacebar simultaneously. To place the cursor on the bottom, just press the spacebar.
 5. Press the spacebar twice to capitalize the next typed letter.
 6. Type an accent mark or a special character by holding the letter's key, rolling the track wheel, and selecting the character you want to enter.
 7. Reboot the device by pressing <Alt>-<Cap>-<Backspace> simultaneously.
 8. Toggle between programs by pressing <Alt>-<Esc>. While holding the <Alt> key, select a program, and then simply release the <Alt> key to switch to the program you selected.
 9. Change the phone's signal strength from numbers to bars by holding down the <Alt> key and typing the letters NMLL on the device's Home screen.

Contributing Editor Grace Aquino writes the Dialed In column (find.pcworld.com/55553).



Media-Player Makeovers

BY CATHY LU

Upgrade Your Acoustics

THERE'S NO REASON to punish your ear drums with the crummy set of earbuds that came with your portable media player. Laying out a few dollars for a pair of higher-end earphones can enhance your listening pleasure tremendously by offering cleaner, more-detailed audio and a broader frequency range.


Bass fanatics on a budget need look no further than V-Moda's Bass Fréq in-canal earphones (find.pcworld.com/55291; see **FIGURE 13**). For \$50, these colorful buds—they come in eight hues—give you a decent amount of sound isolation with-

FIGURE 13: ROUND OUT YOUR Player's sound by replacing its stock earbuds with a pair of V-Moda's Bass Fréq in-canal earphones.



out requiring painfully deep insertion inside your ears. And yes, the earphones deliver on the promise of their name, giving tunes a mighty bass boost (though you'll

have to contend with some cord noise). Ultimate Ears' \$100 Super.fi 3 Studio earphones (find.pcworld.com/55292) provide greater clarity and more encompassing sound than the V-Moda set, which isn't such a big surprise considering that they cost about twice as much as the Bass Fréq earbuds. The sound iso- ▶



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lation is similar to that of the V-Mode models, but the Super.fi 3 Studio comes with a lot of nice extras, such as a metal carrying case and five different ear-tip fit options. If you're ready to take your earbud experience to the next level, try Ultimate Ears' \$249 Super.fi 5 Pro or \$200 Super.fi 5 EB (find.pcworld.com/55542).

Find Unrestricted Tunes

DESPITE CLAIMS TO the contrary by music-industry executives, you can download unprotected copyrighted music without breaking the law. Several sites offer digital rights management-free tunes on the up-and-up. You can play them on any device, whether Apple's iPod, Creative's Zen, Sandisk's Sansa, or other models.

At eMusic (www.emusic.com), you can download 40 songs each month for \$10, and all the tunes are unrestricted; just don't expect to find the latest or greatest hits. eMusic caters to independent musicians, though you will still find albums from such big-name artists as Barenaked Ladies, Santana, and Van Morrison. Another option, Audio Lunchbox (audiolunchbox.com), offers a slightly more eclectic selection than eMusic for similar pricing (\$10 for 40 songs).

The Internet Archive (www.archive.org) has royalty-free music at no charge from artists who have agreed to noncommercial distribution of their concerts (including bands such as the Grateful Dead and Blues Traveler). To download a concert track, right-click the link to that song, and select *Save Target As*.

Have an iPod? You don't have to go to iTunes for mainstream music. Rhapsody (www.rhapsody.com) gives you the freedom to transfer purchased songs to a number of devices—including Apple's

popular player. Use the Rhapsody software to buy songs, connect any supported player (www.rhapsody.com/devices), and drag purchased tunes to the Transfer window (see **FIGURE 14**).

Get Help With Your Playlists

IF YOU DON'T want to create your own playlists, the free MusicIP Mixer application (www.musicip.com/listener) analyzes your library and builds playlists for you by matching songs that have similar



FIGURE 14: CONNECT
YOUR iPod, or any other music player, to Rhapsody's music-download service.

acoustic characteristics. Import your music (click *Library•Add Songs*), or select *Sync With iTunes*, and then choose *Library•Start Analysis*. When the program finishes, select the song you'll base your playlist on, and then click *Mix*.

To tweak the way the program builds its playlists, select *File•Preferences* and adjust the Mix settings (for instance, you can control the number of times it repeats songs from one artist). The mixes the program created for me didn't always make sense on screen, yet when I listened to them, they flowed nicely. If you don't like one of its choices, just right-click it and select *Replace This Song*. Once you're happy with the mix, transfer it to iTunes or to Windows Media Player by clicking the *Send To* button.

Take YouTube With You

YOU DON'T HAVE to shell out dough to get good video content for your media player. Thousands of free and entertaining videos are posted on Google's popular YouTube service (www.youtube.com). Tweaking them to play back on a portable video device takes only a few minutes.

First, download the video to your computer's hard drive. To do this easily, use YouTubeX (www.youtubex.com): Plug the video's URL into the field on the You-

TubeX page, and click the *download* button to locate the video. When it appears, click the *Download* link just below it, and choose a folder to save the file in. You may need to add the extension *.flv* to the file name (this stands for Flash Video Format, which is the file type for YouTube videos). Unfortunately, you'll have to convert the *.flv* file to a format your portable player

can handle. A free utility from eRightSoft called Super (find.pcworld.com/55293) converts *.flv* files to such video formats as *.avi*, *.mp4*, and *.wmv*. The program even has dedicated iPod and PSP settings.

To convert the *.flv* file, you simply drag it into Super's window, and from the *Select the Output Container* menu, choose the format you want to convert it to. For an iPod, choose the *Apple - iPod* setting; for a Creative Zen Vision:M, select *WMV*, which is the format that's compatible with Windows Media Player, the application the Zen syncs to. Next, click the *Encode (Active Job-List Files)* button, and then look for the converted file in the Program Files/eRightSoft/SUPER/OutPut folder. Finally, transfer the file to your player. Note that this will work for any *.flv* file you download from any video sharing service, not just YouTube.

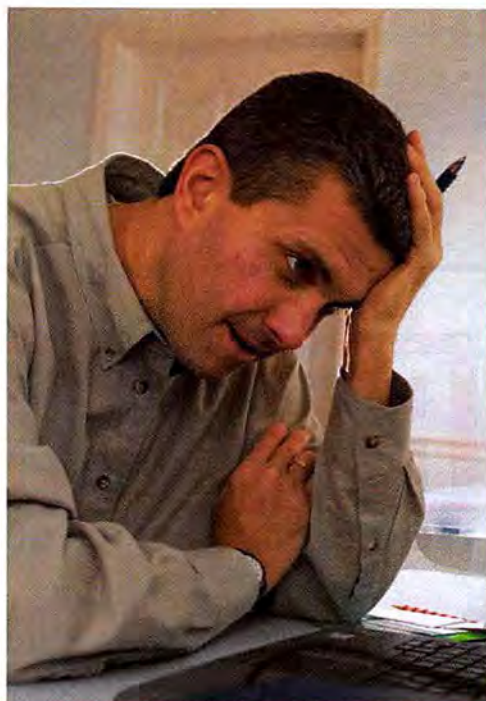
Cathy Lu writes the *Digital World Insider* blog (find.pcworld.com/55371).

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	ADVANCED CAMERA	PCW Rating	Performance
1	Canon PowerShot G6 Best BUY \$579 find.pcworld.com/44872	86 Very Good	<ul style="list-style-type: none"> Image quality: V Battery life: Sup Overall design: S
Bottom line: The chunky G6 won best in show by performing well in our image-quality test.			
2	Olympus C-7070 Wide Zoom Best BUY \$450 find.pcworld.com/48091	86 Very Good	<ul style="list-style-type: none"> Image quality: S Battery life: Sup Overall design: G
Bottom line: The C-7070 has been around a while, but it has winning image quality and a			
3	Canon PowerShot Pro1 \$699 find.pcworld.com/43164	81 Very Good	<ul style="list-style-type: none"> Image quality: V Battery life: Goo Overall design: G
Bottom line: The Pro1's compact case makes it a pleasant camera to tote. Its battery life			
4	Canon PowerShot S2IS \$499 find.pcworld.com/48088	79 Good	<ul style="list-style-type: none"> Image quality: V Battery life: Fair Overall design: G
Bottom line: This is Canon's only model with an optical image stabilizer—rare on a still ca			

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LCD, DLP, or plasma?
Big, bigger, or biggest? We lab-
tested 15 screens to find the best
values in next-generation TV.

BY ROY SANTOS | TESTING BY JEFFREY KUTA

TEST
Center NOW MORE THAN ever, both bargain hunters and luxury seekers can find an HDTV to satisfy their high-def needs and their budgets. Whether you want an LCD, plasma, or DLP HDTV set, you can choose from a wide range of prices, and even the high-end models aren't as expensive as you might think. And you'll find more high-def content—from network and cable broadcasts to HD DVD movies—than ever before.

Deals abound in every size and technology category. *PC World* tested a total of 15 TVs across three popular technologies ►





37"

THE \$2000
SHARP Aquos
LC-37D90U.

(LCD, plasma, and DLP) and three popular screen sizes (37 inches, 42 inches, and 50 to 52 inches). For a little over \$1000, you can buy an LCD or plasma TV with impressive picture quality. And today, thanks to DLP technology, a gigantic screen and even 1080p resolution may be within your reach.

To test each of the TVs, we played several high-definition clips, a couple of standard-definition clips, and scenes from two DVDs on each set. Our panel of judges scored each model based on its brightness, sharpness, and color clarity. Our verdict, after a thorough comparison of the sets: Lower-priced HDTVs frequently equal or better the performance of higher-priced sets. In addition to pinpointing which of the tested models are true screen stars, we have tips on how to shop for deals. Armed with this informa-

tion, you'll be able to tell whether the next bargain that catches your eye is a great deal—or just a snare for the unwary.

BIG: LCDs

IN OUR TESTS many cheaper HDTVs, including bargain sets from little-known brands like Olevia and Vizio, more than held their own against higher-priced models from makers such as Samsung and Sharp. In the 37-inch LCD category—a

the latter model the only LCD we tested that supports a 1080p resolution. Westinghouse's \$1299 LTV-37w2 and Olevia's \$1499 537H claim the fourth and fifth positions, respectively. Though not as well equipped as other sets, they provide enough of the basic features; and more important, their TV images earned decent scores in our image-quality tests.

Many consumers are familiar with the workings of LCDs, in the form of LCD



size that we've never previously evaluated—the Best Buy award goes to Vizio's L37HDTV, which climbed to the top with particularly high scores for brightness, color, and DVD content. At a street price of just \$1000, this set may be the one for shoppers on a limited budget. Not far behind, however, are the \$1299 ViewSonic N3760w and the \$2000 Sharp Aquos LC-37D90U,

FEATURES COMPARISON

**TEST
Center**

LCD HDTVs: GOOD VALUE IN MODERATELY PRICED SETS

VIZIO'S L37HDTV DELIVERS attractive image quality at a great price. ViewSonic's N3760w shows a pleasing picture, too.

	37-INCH LCD HDTV	PCW Rating	Performance	Features and specifications	Bottom line
1	Vizio L37HDTV Best \$1000 NEW find.pcworld.com/55208	82 Very Good	<ul style="list-style-type: none"> • HDTV: Good • SDTV: Good • DVD: Good • Overall design: Superior 	<ul style="list-style-type: none"> • 1366-by-768-pixel screen • Tuners: one NTSC, one ATSC • Inputs: one HDMI, two component • No CableCard slot 	Easy-to-use high-definition television offers a pleasing design and satisfying image quality, without breaking the bank.
2	ViewSonic N3760w \$1299 NEW find.pcworld.com/55207	76 Good	<ul style="list-style-type: none"> • HDTV: Good • SDTV: Good • DVD: Good • Overall design: Very Good 	<ul style="list-style-type: none"> • 1366-by-768-pixel screen • Tuners: one NTSC, one ATSC • Inputs: one HDMI, two component • No CableCard slot 	The first ViewSonic TV we've tested, this model impressed our jury with natural skin tones and an appealing picture.
3	Sharp Aquos LC-37D90U \$2000 NEW find.pcworld.com/55206	74 Good	<ul style="list-style-type: none"> • HDTV: Good • SDTV: Good • DVD: Good • Overall design: Very Good 	<ul style="list-style-type: none"> • 1920-by-1080-pixel screen • Tuners: one NTSC, one ATSC • Inputs: two HDMI, one component • No CableCard slot 	This HDTV's support for 1080p resolution is a rarity for a set of this size, but its performance didn't measure up to that of less pricey TVs.
4	Westinghouse LTV-37w2 \$1299 NEW find.pcworld.com/55209	74 Good	<ul style="list-style-type: none"> • HDTV: Good • SDTV: Good • DVD: Good • Overall design: Very Good 	<ul style="list-style-type: none"> • 1366-by-768-pixel screen • Tuners: one NTSC, one ATSC • Inputs: one HDMI, two component • No CableCard slot 	Cleverly designed television with all connectors located on a "spine" makes connecting cables to the wall-mounted set easy.
5	Olevia 537H \$1499 NEW find.pcworld.com/55205	73 Good	<ul style="list-style-type: none"> • HDTV: Good • SDTV: Very Good • DVD: Good • Overall design: Very Good 	<ul style="list-style-type: none"> • 1366-by-768-pixel screen • Tuners: one NTSC, one ATSC • Inputs: one HDMI, three component • No CableCard slot 	This model's color and image quality are a good deal for the money, but you'll have to boot up your PC to read the CD-only manual.

CHART NOTES: Prices and ratings are as of 10/6/06. For more information on how we test HDTVs, go to find.pcworld.com/54532.

monitors. For LCD TVs, the technology is the same: A matrix of cells contains liquid crystals that twist and untwist in response to the provided voltage, allowing light from the source to pass through and thereby creating color images.

A 37-inch LCD TV looks big in a small living room, and it's a good option if you want a wall-mountable model. If this is your ideal dimension for an HDTV, an LCD set is your only budget choice: Aside from Panasonic, no plasma TV manufacturer makes 37-inch models, and DLP televisions aren't made in this size at all.

BIGGER: PLASMAS

IN THE 42-INCH HDTV category, it's difficult to beat the value of a plasma. Among 42-inch models, the Vizio P42HDTV is our reigning champion; pleasing images and a

bargain price of \$1400 propel it to the top of the chart. On its heels is the \$2250 LG Electronics 42PC1DA, a premium HDTV that outscored others in the 42-inch plasma category thanks to a superior feature set and image quality that garnered raves from our judges. Philips's strikingly designed, \$1900 42PF9631D captures third. The newly tested Samsung HP-S4253

(\$1999)—an excellent performer—and the nicely priced AOC A42HD84 (\$1500) take fourth and fifth place, respectively.

We also evaluated Norcent's \$1899 PT-4291HD and retested Maxent's \$1600 MX-42HPM20 HD monitor, but neither of them reached the chart. The Norcent's so-so performance/price ratio left it short of the elite models, and the Maxent's skimpy

features and forgettable design knocked it out of contention.

Plasmas pack chemically stable gases (xenon and neon, normally) in pixel cells enclosed by glass panels. Electrodes excite the gases to produce light and color. Because each pixel generates its own light, plasma sets have wider viewing angles; as a result, more people can observe the action on the TV from oblique ►



FEATURES COMPARISON

TEST Center PLASMA HDTVs: 42 INCHES IS THE SWEET SPOT

THE BARGAIN-PRICED Vizio P42HDTV earns our Best Buy, but LG Electronics' 42PC1DA has the best image quality of the group.

	42-INCH PLASMA HDTV	PCW Rating	Performance	Features and specifications	Bottom line
1	Vizio P42HDTV Best \$1400 find.pcworld.com/53984	80 Very Good	<ul style="list-style-type: none"> HDTV: Good SDTV: Good DVD: Good Overall design: Good 	<ul style="list-style-type: none"> 1024-by-768-pixel screen Tuners: one NTSC, one ATSC Inputs: one HDMI, two component No CableCard slot 	A bright screen helps this budget-friendly model achieve competitive image quality at a cost that trounces rivals' prices.
2	LG Electronics 42PC1DA \$2250 find.pcworld.com/53998	80 Very Good	<ul style="list-style-type: none"> HDTV: Very Good SDTV: Good DVD: Good Overall design: Very Good 	<ul style="list-style-type: none"> 1024-by-768-pixel screen Tuners: one NTSC, one ATSC Inputs: two HDMI, two component CableCard slot 	This beauty delivered great sound and image quality, and its ports are easy to identify and reach—but all of the appealing tweaks add up on the bill.
3	Philips 42PF9631D \$1900 find.pcworld.com/54014	77 Good	<ul style="list-style-type: none"> HDTV: Good SDTV: Good DVD: Good Overall design: Superior 	<ul style="list-style-type: none"> 1024-by-768-pixel screen Tuners: one NTSC, one ATSC Inputs: two HDMI, two component No CableCard slot 	Elegant, well-designed plasma TV produced above-average image quality; the set's built-in ambient backlighting adds an unusual touch.
4	Samsung HP-S4253 \$1999 NEW find.pcworld.com/55200	77 Good	<ul style="list-style-type: none"> HDTV: Good SDTV: Good DVD: Very Good Overall design: Very Good 	<ul style="list-style-type: none"> 1024-by-768-pixel screen Tuners: one NTSC, one ATSC Inputs: two HDMI, two component No CableCard slot 	The slickly designed HP-S4253 impressed our judges with its nice image quality and excellent surround sound, but it's pricey.
5	AOC A42HD84 \$1500 find.pcworld.com/53982	76 Good	<ul style="list-style-type: none"> HDTV: Good SDTV: Poor DVD: Fair Overall design: Good 	<ul style="list-style-type: none"> 1024-by-768-pixel screen Tuners: one NTSC, one ATSC Inputs: two component No CableCard slot 	Attractive, low-priced model produced disappointing television image quality, but it would make a great conference room monitor.

CHART NOTES: Prices and ratings are as of 10/6/06. For more information on how we test HDTVs, go to find.pcworld.com/54532.

vantage points in the room. Not only is a 42-inch plasma appealingly large for a midsize room, it's good for ensuring that everyone watching has a clear view.

BIGGEST: DLPs

PER SQUARE INCH, DLP sets cost less, making DLP the lowest-priced large-screen HDTV technology. The latest sets run no smaller than 42 inches, and the 50- and 52-inch models we tested are an unbeatable deal. The Best Buy laurels go to the RCA Scenium M50WH185, a 50-inch low-priced beauty. Though it lacks some features of the more expensive DLPs we evaluated, it produced realistic images with natural colors that satisfied our judges—and at \$1599, it's a bargain. Samsung's 50-inch unit, the HL-S5087W, finished a close second overall. Priced at \$2499, it offers a raft of extras that the RCA model doesn't, including two HDMI inputs and support for 1080p resolution, which may make it a more attractive buy for shoppers with bigger budgets; it was our image-quality champ, too. The 52-inch WD-52631 from TV veteran Mitsubishi, on the other hand, fell short on performance, receiving cumulative scores of merely Fair in many tests. When set to vendor defaults and calibrated in the same way that *PC World* tests all HDTVs, it showed inaccurately colored images.

When we examined it later on, however, we manually tweaked the colors to make them more pleasing. With that fact taken into consideration, the WD-52631's fine color adjustments, plethora of connectors, and 1080p resolution could justify its \$2499 price for some buyers.

DLPs use a matrix of millions of micro-mirrors to project light through a lens and onto the TV screen. A high-intensity lamp shines through a color wheel to the micro-mirror device, which then rapidly turns the micromirrors on and off, producing images. Though this flat-screen technology doesn't yield HDTVs as thin as plasma or LCD models, DLP sets are still far thinner than traditional CRTs. (New, high-end Slim DLPs are even more slender than the budget models reviewed here.) If you

buy a 50- or 52-inch DLP to put in a large room, remember to factor in the space between the back of the screen and the wall.

Some DLPs now employ a six-color wheel, adding magenta, yellow, and cyan to the basic red, green, and blue (RGB) of the older three-color wheel. A six-color wheel enables users to control their set's color with great precision. The Mitsubishi DLP TV we tested, a 1080p set, possesses a six-color wheel. The Samsung DLP adds yellow and pink controls, for a total of five—up from the original three.

PLEASING PICTURES FOR PENNY-PINCHERS

MAKERS OF LOW-PRICED TVs are catching up to the bigger brands in set performance, for one main reason. Ross ►



FEATURES COMPARISON

TEST Center DLP HDTVs: MORE SCREEN ACREAGE FOR YOUR DOLLAR

RCA'S DLP HDTV wins our Best Buy award on the strength of its low price, while the Samsung delivers the highest image quality.

	50- OR 52-INCH DLP HDTV	PCW Rating	Performance	Features and specifications	Bottom line
1	RCA Scenium M50WH185 Best \$1599 NEW find.pcworld.com/55202	85 Very Good	<ul style="list-style-type: none"> HDTV: Good SDTV: Good DVD: Good Overall design: Superior 	<ul style="list-style-type: none"> 1280-by-720-pixel screen Tuners: one NTSC, one ATSC Inputs: two HDMI, three component CableCard slot 	This simple 50-inch, 720p model offers a pleasing picture and remarkably strong sound. At this price, "big HDTV" doesn't translate into "big budget."
2	Samsung HL-S5087W \$2499 NEW find.pcworld.com/55204	82 Very Good	<ul style="list-style-type: none"> HDTV: Very Good SDTV: Very Good DVD: Very Good Overall design: Superior 	<ul style="list-style-type: none"> 1920-by-1080-pixel screen Tuners: one NTSC, one ATSC Inputs: two HDMI, two component No CableCard slot 	Samsung's handsome 50-inch, 1080p DLP showed excellent color and minimal artifacting in tests. The unusually intuitive menu system is easy to master.
3	Mitsubishi WD-52631 \$2499 NEW find.pcworld.com/55201	75 Good	<ul style="list-style-type: none"> HDTV: Fair SDTV: Fair DVD: Fair Overall design: Very Good 	<ul style="list-style-type: none"> 1920-by-1080-pixel screen Tuners: one NTSC, one ATSC Inputs: two HDMI, two component No CableCard slot 	High-end 52-inch, 1080p DLP TV provides granular controls for six separate colors. You may need to tinker with them to get an attractive picture, however.

CHART NOTES: Prices and ratings are as of 10/6/06. For more information on how we test HDTVs, go to find.pcworld.com/54532.



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SUITABILITY FACTORS

WHICH HDTV MATCHES YOUR CRITERIA?

HDTVs AREN'T JUST about pretty pictures. Here are other factors that influence how well an HDTV set works in a room—and how much getting a TV up and running costs.

KEY FACTOR	37-inch LCD	42-inch plasma	50-inch DLP
Viewing angle	Contrast falls as you move away from the direct front of the screen (up to 160 degrees horizontal)	Superior viewing angles (up to 170 degrees horizontal with consistent contrast)	Consistent contrast (up to 160 degrees horizontal)
Weight (average)	58 pounds	87 pounds	69 pounds
Minimum thickness	4.8 inches	4.5 inches	15.3 inches
Wall mountable	Easy	Sometimes challenging; best done by a professional	Possible only with pricey Slim DLPs
Shipping	\$150 to \$300	\$150 to \$300	\$250 to \$350
Setup costs	About \$100 to \$200 for wall-mounting hardware	\$400 to \$500 for professional installation (recommended), plus \$100 to \$200 for wall-mounting hardware	Usually no setup costs; not wall-mountable
Life span	Rated at 60,000 hours to half luminance	Rated at 60,000 hours to half luminance	User-replaceable bulb rated at 5000 to 8000 hours to complete burnout (\$250 to \$500 to replace)



CHART NOTE: Measurements and shipping costs are based on the 37-inch LCD, 42-inch plasma, and 50-inch DLP HDTV units tested for this article.

Young, founder and president of market research and consulting firm DisplaySearch, thinks that the gap in panel quality between what he calls “top-tier” and “emerging” television vendors is narrowing. “Most companies produce A-grade panels, so then [the difference in the resulting products] becomes a function of the electronics that they put in them.” For example, Young says, top-tier vendors such as Samsung and Sony “customize with their own algorithms put into the panel’s chip.” But for the most part, he observes, the quality is very close, and our comprehensive TV tests confirmed this: Lower-cost HDTVs—such as those from Olevia, Vizio, and RCA—collected decent overall scores from our judges, spelling good news for buyers who want satisfactory images from an inexpensive set.

Prices are falling fast for HDTVs, and particularly for LCD TVs, says Young. LCDs predominate at sizes under 40 inches, holding an 84 percent market share in North America during the second quarter of 2006. Riddhi Patel, principal television systems analyst for research firm iSuppli, says that plasma makers are focusing

their marketing push on the 42-inch category, though they’ve been trying to make inroads in the 50-inch market as well.

Despite facing future competition in the 50-inch segment from plasmas, DLPs are likely to remain the price leader for a

comparable size—but only for models greater than 40 inches. For smaller sizes, like the 37-inch LCD HDTVs we tested, this technology is the most cost-efficient. Patel points out that price cuts for LCD panels have reduced the difference between LCDs and plasmas to about \$300, bringing them into dueling range. For medium-size to large sets, comparing models across technologies can be useful. If you want the biggest picture and the biggest bang for your hard-earned buck, though, DLPs such as the \$1599 RCA Scenium M50WH185 are hard to beat.

THE I’S AND P’S OF HDTV

IN THE TERMS that manufacturers use to describe TV or digital-signal resolution, *i* and *p* refer to *interlaced* and *progressive*. The two techniques govern how a TV set draws the vertical lines on its screen. In the interlaced method, the TV draws odd-numbered lines first, and then it draws even-numbered lines. The progressive approach draws all lines in succession.

All of the units we tested have a resolution of 1780 by 720 pixels (720p), 1366 by 768 pixels (also 720p), or 1920 by 1080 pixels (which can be either 1080i or 1080p). The pixel numbers alone don’t tell you

Prices are falling fast for all HDTVs—particularly for LCD sets.

while. Two of the three DLPs we tested—the Samsung HL-S5087W and the Mitsubishi WD-52631—already support the highest-quality HDTV format of 1080p, making them attractive to discriminating videophiles. Though 1080p support imposes an extra expense, the DLP technology’s lower base price per square inch makes its overall cost easier to manage.

Even with their fast and furious recent price cuts, LCDs are more expensive per square inch than plasmas and DLPs of

whether a television set uses interlaced or progressive scanning—to determine that, you must check the specs for an *i* or a *p*. In the 37-inch LCD category, only the Sharp Aquos LC-37D90U is compatible with 1080p, whereas both the 50- and the 52-inch DLPs from Samsung and Mitsubishi, respectively, have that resolution. Bear in mind, though, that many 720p sets can also accept 1080i content; they just can’t show it in its full glory.

Currently, much of the content ►

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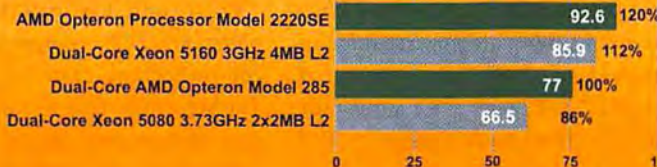
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available is 720p or 1080i; 1080p content is available now on HD-DVD and Blu-ray movie titles. But as we saw in our tests, HD content doesn't necessarily look best on the highest-resolution TVs. Consult test results and trust your own eyes, instead of being swayed by a vendor's spec.

THE EYE OF THE BEHOLDER

EACH OF THE three HDTV technologies has advantages, so picking one is a matter of your viewing preferences. But keep in mind that many formerly common problems are passing into history.

LCDs may experience motion blur, due to limitations in pixel response times. This is hardly a problem with plasmas and DLPs, and it's less pronounced with today's LCDs than with past models, but generally a fast pixel-response time is desirable to minimize the effect in an LCD TV. All but one of the LCDs we tested for

this review have a vendor-rated gray-to-gray response time of 8 milliseconds—speedy by industry standards. Sharp lists an even faster gray-to-gray response time of 6ms for its Aquos LC-37D90U.

A plasma TV's life span was a consumer concern during that technology's infancy. According to iSuppli's Patel, however, plasma tubes are now rated for an average life of 60,000 hours—so even if you watch 5 to 8 hours of TV a day, your plasma TV panel won't diminish to half its original brightness for 20 to 30 years. Burn-in on plasma TVs—wherein repeated, prolonged exposure to the same image causes the image to sear into the glass of the TV screen—has also become a rarity.

DLPs sometimes suffer from a "rainbow effect," in which some viewers see a rainbow trail when their eyes move from one part of the screen to another. Not everyone sees this, and Patel says that

manufacturers have tried to reduce the "margin of error" by adopting technological innovations such as the six-color wheel, color wheels that spin at double speed, and a color processing technology called BrilliantColor from Texas Instruments (which invented DLP technology).

Color control is important to videophiles, and DLPs equipped with the six-color wheel are unrivaled in this area. The Mitsubishi DLP we tested, for example, offers controls for red, green, blue, yellow, cyan, and magenta. Controls for RGB appear in some LCDs, but normally are included only in higher-end sets. Oddly, of the LCDs we tested, the value-priced Olevia 537H alone has one of these powerful RGB controls. Meanwhile, all of the plasma screens we tested except the Vizio P42HDTV have RGB controls; and its omission is likely a matter of cost-cutting by Vizio to reach the set's \$1400 price, ►

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FOR WEB-SAVVY BARGAIN hounds, the traditional brick-and-mortar experience is no substitute for deals a few mouse clicks away. Saving hundreds of dollars may be the biggest consideration for some HDTV hunters. Here's a guide to help you find hidden buys on the Web.

DEAL FORUMS: FatWallet (find.pcworld.com/55191) and DealCatcher (find.pcworld.com/55192), Web sites

for deals in many categories, often post special prices for HDTVs from different retailers. In addition to noting manufacturer coupons and sales, the sites' forums also post clever price-matching strategies and coupon "stacking" techniques (ways to use several coupons for a bigger discount). Techbargains (find.pcworld.com/55193) devotes an area specifically to TVs.

ONLINE OUTLETS: Going to an outlet mall used to mean driving a hundred miles for deals that turned out to be so-so. But online manufacturers' outlet stores don't require a car—and the deals they offer, if you don't mind refurbished sets, deserve a serious look. Philips's outlet site (find.pcworld.com/55194) presents a nice selection from the company's LCD and plasma lines, and the occasional DLP bargain. Sony's outlet store (find.pcworld.com/55195) also has refurbished or

closeout TV sets now and then. Dell (find.pcworld.com/55196) has a bigger inventory of LCDs and plasmas at its outlet and often sweetens the pot with special offers, such as free shipping.

PRICE-COMPARISON SITES: For ease of finding retailers that offer a specific model, few resources can match the efficiency of price-comparison Web sites. NexTag (find.pcworld.com/55198),

Pricewatch (find.pcworld.com/55197), and PriceGrabber.com (find.pcworld.com/55199) all

qualify as reliable favorites. (Note: PriceGrabber.com is PCWorld.com's longtime pricing partner.)

Keep in mind that return policies vary greatly. Getting service for an online-purchased TV may turn out to be more difficult than getting it for a model you bought at a local electronics store. But if you think the potential service loss is a risk worth taking for the savings you'll reap, a cheap HDTV may be just a click away.





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rather than of technological limitations. (Other, more-expensive plasma sets provide RGB—or even six-color—controls.)

Patel of iSuppli states that if you “put an LCD, plasma, and DLP set side-by-side, the LCD looks the best.” Nevertheless, she thinks that plasmas do well with movies, because “black levels are very nice and colors have a lot more warmth.” In addition, she notes that DLPs have a significant advantage with BrilliantColor, which adds brightness and color vibrancy.

whether you need to buy a separate one. On the set you’re considering, also look for an ATSC tuner, which accepts a digital signal and thus is the only way to receive over-the-air HD broadcasts. All of the TVs on our charts have such a tuner (in addition to an analog NTSC tuner) and can be called HDTVs. Some other models, such as the unranked Maxent MX-42HPM20, are actually HD monitors, meaning that you’ll need to obtain a separate tuner for them, which can add to

old deadline of January 2007 for moving TV content to an all-digital format “is long gone,” replaced by a newer deadline of February 2009. Fortunately, several providers are now rolling out at least some popular programming in HD. Patel says that “the majority of sporting events are broadcast in HD.”

The resolution of current HD programming varies by channel, but as of this writing most content is either 720p or 1080i. DisplaySearch’s Young points out that most of the networks broadcasting in high definition do so at 1080i resolution; the exceptions—ABC, ESPN, and Fox—use a 720p high-def signal. For instance, ABC broadcasts its HD-enabled shows, such as *George Lopez* and *Grey’s Anatomy*, in 720p, while NBC offers programs like *Law & Order* and *Late Night with Conan O’Brien* in 1080i. True 1080p compatibility, incorporated into a few of the models we tested, ensures that you’ll get the full experience when DVD movies and TV shows formatted at that resolution finally become widely available; very little 1080p content is currently on the market.

This holiday season, several Blu-ray players and a few HD DVD players will be on store shelves; but these devices and the compatible media they require are, as yet, hard to find. One popular game console, the Xbox 360, has many games available in 720p or 1080i, and the new PlayStation 3 likewise promises support for games and movies with 1080p resolution.

DEFINITELY HIGH DEFINITION

LOW-PRICED HDTV SETS keep getting more affordable, and our testing shows that some of them display good images. A few high-end features and adjustments are trickling down, too, so these days you can more easily obtain what you want without paying for irrelevant frills. If you are raring to see movies or the Super Bowl in high-def, check out these models—because “high-definition” no longer necessarily means “high-priced.” ■

Roy Santos is a freelance writer and Web designer in the San Francisco Bay Area.



HDTV image quality is best appraised by the person who will be viewing the picture regularly.



Young has a different take. He cites a test that DisplaySearch performed comparing the viewing angles of various LCD, plasma, and DLP sets. Although “LCD TV has improved,” he notes, “[plasma] is still superior.” Even better are DLPs, which, like other rear-projection TVs, “are much more consistent across the viewing cone” (referring to horizontal, vertical, and diagonal views), Young observes.

PC World’s test procedures entail direct comparisons of TVs that have screens of the same size. This approach prevents us from crowning any technology in this review as overall champion. Even among our panel of testers, and among experts like Patel and Young, personal preferences influence evaluations. HDTV screen quality is subjective and best appraised by the person who will view it regularly.

WHAT ELSE TO LOOK FOR

ALL OF THE units we tested have HDMI connections, which are necessary for an optimum HD picture. You also need to have an HDMI cable, which almost never comes with a set. Check to see whether your peripherals already have them, or

the total cost; if you already have a cable box with a tuner, buying a monitor can save you hundreds of dollars.

A few of the HDTVs we reviewed, such as the budget RCA Scenium M50WH185 DLP and the ritzier LG 42PC1DA plasma, have CableCard slots—an appealing extra. Shaped approximately like a PC Card slot, the CableCard option promises to someday replace bulky cable boxes with a slim card that’s hidden from view. For the present, however, cable providers do not widely support this feature.

Though none of the models’ built-in speakers produced home-theater-quality audio, many of them performed adequately in our tests, and a few—notably the RCA DLP’s speakers—rose above average. Some TV sets, like Samsung’s HL-S5087W DLP, offer more-unusual connections, such as USB ports to which you can attach a digital camera for viewing photos directly on the TV.

HDTVs NEED HD CONTENT

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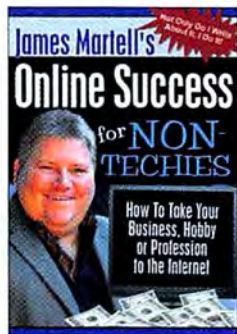
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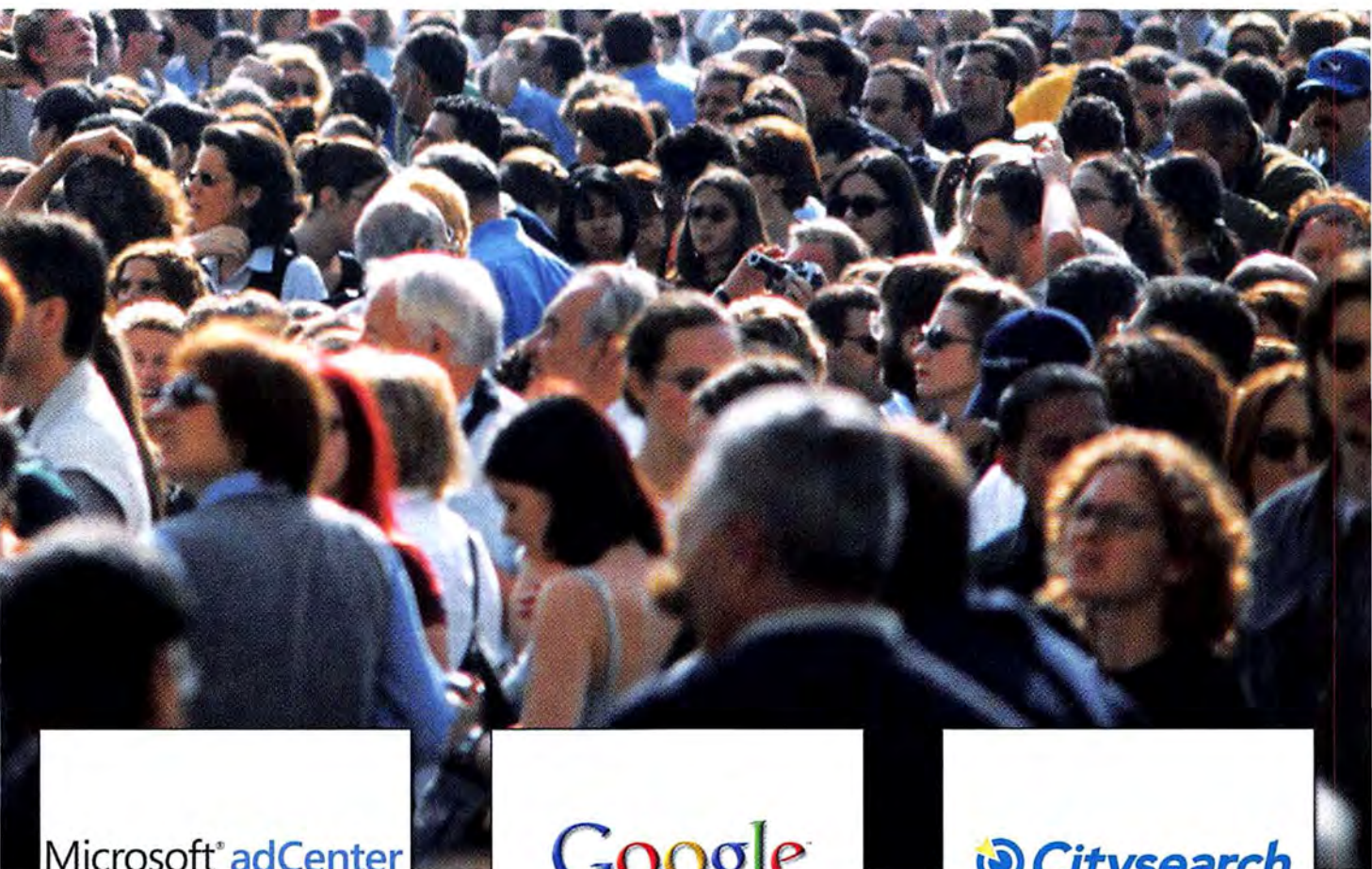
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visitors



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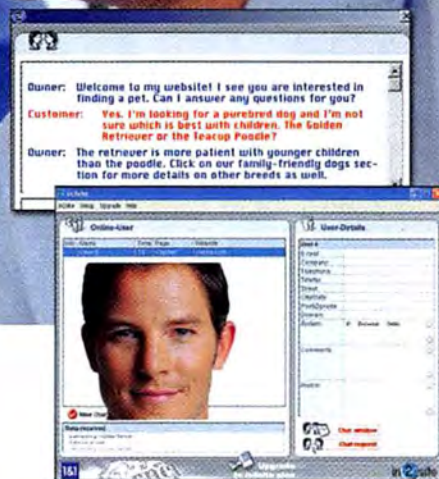
Provide a meeting place for your visitors to come together and talk. Unlike other chat programs, Chat Channels requires no software downloads, so people can check in from anywhere in the world and communicate freely, without the distractions of advertisements.



E-Mail Marketing Tool

Maintain relationships with your visitors

Build and maintain relationships with your visitors via e-mail newsletters with our E-mail Marketing Tool. Create and send professional looking e-mails – easily and with no programming hassles! Build your own mailing lists, manage recipients' addresses, track results and more.



In2site Live Dialogue

Converse with visitors – live and in real time

Receive notification as soon as someone visits your site. Observe your visitors' behavior or communicate with them instantly. Use this information to help you maximize your site's potential. In2site Live Dialogue is an ideal tool for sales, support and consulting professionals.

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Build your personal website. Ideal for creating an attractive Internet presence for your family or hobbies, the 1&1 Home Package includes everything you need to make your mark on the web. Our Home Package offers an exceptional value for your money.

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1&1's Starter Software Suite gives you everything you need to create, publish, promote and optimize a successful online presence. This exclusive bundle features our new GIF Animator 5, NetObjects Fusion 8, PhotoImpact 11 SE, search engine placement tools and much more.



*If you choose to receive the Starter Software Suite, you must commit to a one-year contract for the package you choose. \$6.99 shipping & processing fee applies.

1&1 Photo Gallery

Create an online photo album!

Add an online photo album to your website, quickly and easily. Choose from several eye-catching styles, select your favorite color scheme and layout, then import and organize your photos. Create slideshows with fade-in/fade-out transitions, background music and other professional effects. Now with more layouts, more sounds, more colors and adjustable sizes.

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Included Domains	2	1	\$1.99/year with purchase
Web Space	100 GB	5 GB	100 GB
Monthly Transfer Volume	1,000 GB	200 GB	1,000 GB
E-mail Accounts	1,000 IMAP or POP3	200 POP3	1,000 POP3
Mailbox Size	2 GB	2 GB	10 MB
Search Engine Submission	✓	✓	Extra charge applies
Website Builder	12 Pages	✓	Freeware
Flash Site Builder	12 Pages	—	—
Photo Gallery	✓	✓	✓
RSS Feed Creator	✓	—	\$4.99/month
Blog	✓	✓	\$2.99/mo. For ad-free blogs
Geographic Map	✓	✓	—
Dynamic Web Content	✓	✓	—
Web Statistics	✓	✓	✓
Chat Channels	✓	—	✓
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 Phone, E-mail
Price Per Month	\$4⁹⁹	\$11⁹⁵	\$6⁹⁹

Microsoft® adCenter*	Vouchers included	\$50 value
Google AdWords*		\$25 value
Citysearch		\$25 value

*See terms on page 6 for details.

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Exclusively from 1&1, the DynamicSiteCreator lets you build a professional-looking flash site in minutes, without the need for a professional programmer or web designer. Easily accessible through the 1&1 Control Panel, this flash animation tool takes your site to a new level with animated graphics, interactive menus and sound.



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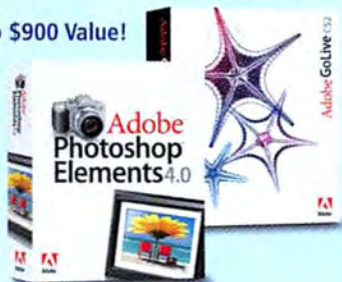
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1&1 Dynamic Content Catalog

Add real-time web content!

Enrich your site with real-time news and fresh web content with a wide range of topics such as news headlines, business reports, sports highlights, travel destinations, online games, weather forecasts and more. Integration is easy, no HTML knowledge is required, and thanks to automatic updates, your content is always current and completely maintenance-free!



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	BUSINESS	STANDARD	PREMIUM
Included Domains	3	1	\$1.99/year with purchase
Web Space	200 GB	10 GB	200 GB
Monthly Transfer Volume	2,000 GB	400 GB	2,000 GB
E-mail Accounts	2,000 IMAP or POP3	500 POP3	2,000 POP3
Mailbox Size	2 GB	2 GB	10 MB
Search Engine Submission	✓	✓	Extra charge applies
Website Builder	18 Pages	✓	Freeware
Flash Site Builder	18 Pages	—	—
Photo Gallery	✓	✓	✓
RSS Feed Creator	✓	—	\$4.99/month
Blog	✓	✓	\$2.99/mo. For ad-free blogs
Map & Driving Directions	✓	✓	—
Dynamic Web Content	✓	✓	—
Web Statistics	✓	✓	✓
E-mail Newsletter Tool	✓	\$10/month	\$3.99/month
In2site Live Dialogue	✓	—	—
Chat Channels	✓	—	✓
Form Builder	✓	✓	—
Premium Software Suite	✓	—	—
90-Day Money Back Guarantee	✓	—	—
Support	24/7 Toll-free Phone, E-mail	24/7 Toll-free Phone, E-mail	24/7 Phone, E-mail
Price Per Month	\$9⁹⁹	\$19⁹⁵	\$14⁹⁹

**Vouchers
included**

Microsoft® adCenter*	\$100 value
Google AdWords*	\$50 value
Citysearch	\$50 value

*See terms on page 6 for details.

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the Industry!

	1&1	Yahoo!
	DEVELOPER	PROFESSIONAL
Included Domains	5	1
Web Space	250 GB	20 GB
Monthly Transfer Volume	2,500 GB	500 GB
E-mail Accounts	3,000 IMAP or POP3	1,000 POP3
Mailbox Size	2 GB	2 GB
Search Engine Submission	✓	✓
Website Builder	25 Pages	✓
Flash Site Builder	25 Pages	—
Photo Gallery	✓	✓
RSS Feed Creator	✓	—
Blog	✓	✓
Map & Driving Directions	✓	✓
Dynamic Web Content	✓	✓
Web Statistics	✓	✓
E-mail Newsletter Tool	✓	\$10/month
In2site Live Dialogue	✓	—
Chat Channels	✓	—
Form Builder	✓	✓
Dedicated SSL Certificate	✓	—
Premium Software Suite	✓	—
90-Day Money Back Guarantee	✓	—
Support	24/7 Toll-free Phone, E-mail	24/7 Toll-free Phone, E-mail
Price Per Month	\$19⁹⁹	\$39⁹⁵

Microsoft® adCenter*	Vouchers included	\$200 value
Google AdWords*		\$100 value
Citysearch		\$100 value

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- 50 item product catalog
- Choice of 2 shipping methods
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- Premium software suite
- Free 24/7 phone, e-mail support
- Vouchers included:
 - Microsoft® adCenter: \$50 value*
 - Google AdWords: \$25 value*
 - Citysearch: \$25 value

\$9.99

PER MONTH

1&1 PROFESSIONAL

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- 30 GB monthly transfer volume
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- Unlimited item variants
- Choice of 5 shipping methods
- Hosting included
- Multi-currency support
- Accept secure online payments with PayPal or WorldPay
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- Premium software suite
- Free 24/7 phone, e-mail support
- Vouchers included:
 - Microsoft® adCenter: \$100 value*
 - Google AdWords: \$50 value*
 - Citysearch: \$50 value

\$29.99

PER MONTH

Total price per month. No set-up fee. 1&1 Developer eShop information is available online.

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Powerful e-mail for your home or business.

1&1 Instant Mail is ideal for private users and allows you to send and receive personalized mail using your own domain name. 1&1 Microsoft Exchange Hosting gives you or your entire business reliable, affordable, up-to-date access to your critical information – anytime, anywhere.

- ✓ Anytime web access
- ✓ Virus & Spam protection
- ✓ Powerful online communications



1&1 INSTANT MAIL

Mail in an Instant!

What does your ambiguous e-mail address say about you? Are you ready to take your personal e-mail to a more professional level? Then 1&1 has your solution. Simply sign up for 1&1 Instant Mail and then add on your domain. In just minutes you'll have the power to send and receive e-mail from your own domain name.

- 5 e-mail accounts with 1 GB space each – IMAP & POP supported
- Spam filter included for all 5 accounts
- Virus protection for all 5 accounts
- 400 e-mail aliases
- Includes 1&1 WebMail – access mail anytime from anywhere
- Send and receive e-mail from your domain
- Easy setup via the 1&1 Control Panel
- 24/7 phone, e-mail support

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PER MONTH

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Exchange made easy!

Your Microsoft Exchange Hosting Plan from 1&1 lets you enjoy the communication and collaboration features and benefits of Microsoft Exchange without the hassles of maintaining your own Microsoft Exchange server. Read, send and receive e-mail and access your public folders, contacts and calendars at anytime, from anywhere via Microsoft Outlook® or any web browser.

- Includes 1 Exchange account
- 1 GB e-mail storage space
- Group functionality tools
- Outlook® Web Access
- Synchronize your data with ActiveSync
- Virus Scanner installed on the Exchange Server
- Spam filter included in Outlook 2003
- 24/7 phone, e-mail support

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2003
INCLUDED***
WITH ALL EXCHANGE
PACKAGES

\$6.99

PER MONTH

* \$6.99 shipping & handling applies

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Choose a template and create a three page website in minutes – always ad free!

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Get your website listed on the leading search engines in a few easy steps.

1 GB E-mail Address

24/7 Support

Domain Forwarding

DNS Management

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.com .net .org	\$5.99	From \$8.95	\$9.95
Private Domain Registration (Optional)	Included	\$4.99	\$9.00
ICANN Fee	Included	\$0.25	Included
E-mail Account	FREE 1,000 MB Mailbox Size	FREE 25 MB Mailbox Size	NO Mailbox Included
Total Annual Cost	\$5⁹⁹	From \$14¹⁹	\$18⁹⁵

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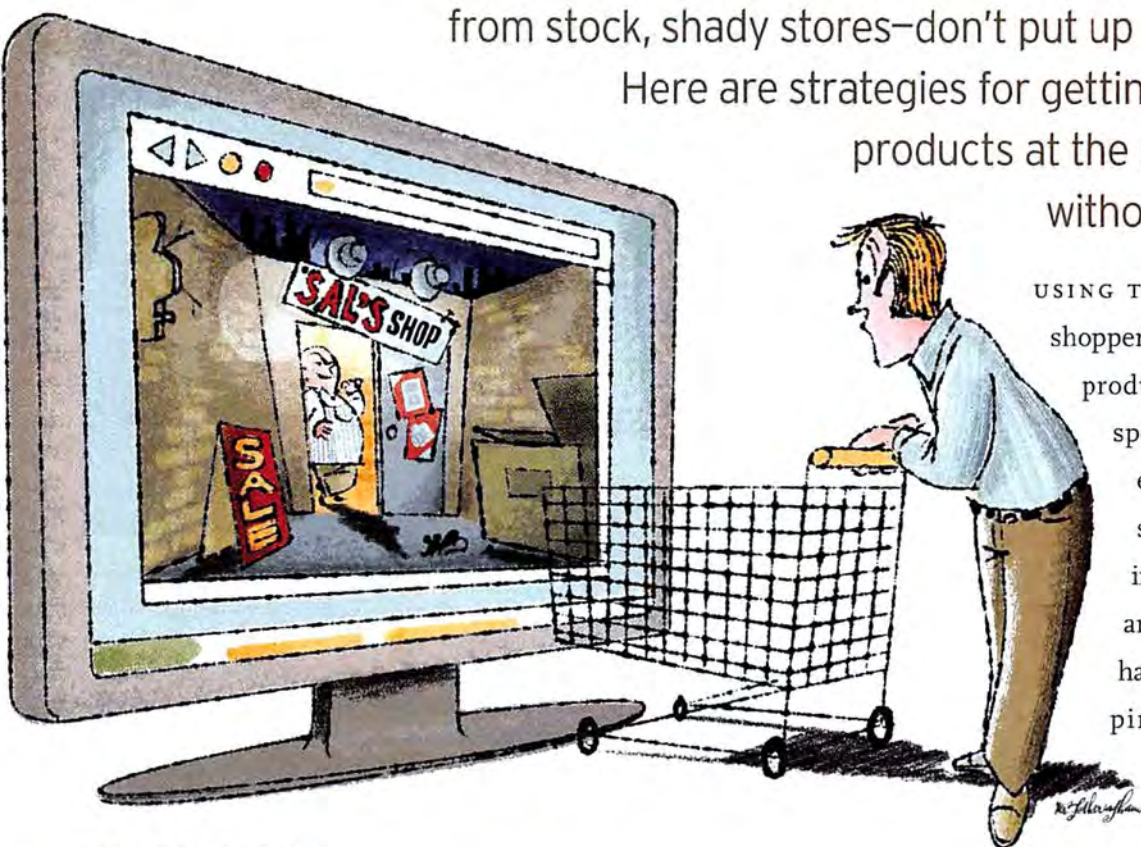
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How to Avoid the Biggest Web Shopping Annoyances

Hidden fees, products that suddenly disappear from stock, shady stores—don't put up with them.

Here are strategies for getting the right products at the right price, without hassles.

USING THE INTERNET, shoppers can locate the products they want, spot the best prices, and sidestep sleazy retailers—in short, speed up and eliminate the hassles from shopping. Right? Not necessarily. ►



BY TOM SPRING

ILLUSTRATIONS BY EDWIN FOTHERINGHAM

Purchasing digital gear isn't always as easy as point, click, and buy. Shopping annoyances are a lot like pop-up ads: They seem to spring up out of nowhere, and are a pain to get rid of.

For this story we researched the top shopping headaches facing consumers before they commit to a product, when they make a purchase, and after they buy—including artificially inflated merchant reviews, high-pressure phone sales tactics, charges that hit your credit card bill way before the item ships, and post-purchase freebies that turn out to be anything but.

Before You Buy

It's out of date before it's out of the box.

WHEN PESACH LATTIN of New York wants to upgrade his digital gear, he no longer gets caught up in what he describes as the model-name game. "Wait a week, and that Sony digital camera you're thinking about buying is yesterday's news," Lattin says.

Lattin is not imagining things. Product cycles for tech gear

have gotten shorter over the years as companies seek to stay competitive by quickly incorporating new features, says Jenny Pareti, spokesperson for the Consumer Electronics Association. Canon, for example, has cranked out more than 24 new digital camera models in the past 12 months.

An unfortunate side effect of accelerated product rollouts is that they increase the odds of accessories not working with older gear. Apple, for example, has introduced on average a new iPod model every two months for the past year, and people who have bought older iPod accessories such as speakers or docks can't always use them with the newer iPods.

Short technology-product cycles may be a fact of life, but some retailers aggravate the problem by knowingly foisting older gear on customers—or at the very least, by not making clear to buyers whether the items in stock are nearing obsolescence.

Lattin says that he's had enough with the alphabet soup of model numbers. But if you want to avoid getting stuck with older gadgets, check each product maker's Web site carefully to figure out what's old and what's the latest.

FIGHTING BACK

Score One for the Little Guy

WHEN THOMAS HAWK ran into strong-arm sales tactics from an online retailer, he didn't just get mad—he leveraged his popular Digital Connection blog and the power of the Web community to get even.

Hawk's tale, which has become something of a blogosphere legend, started in November 2005 when the San Francisco investment banker (Thomas Hawk is his pen name) ordered a Canon EOS 5D from New York-based Price Rite Photo for \$2900. Shortly thereafter a company representative called, ostensibly to confirm Hawk's credit card and mailing information, but also to aggressively pitch pricey accessories. When Hawk declined the add-ons, the salesperson said the camera was out of stock—even though the Web site had indicated that it was available.



SAN FRANCISCO
BLOGGER Thomas Hawk rallied readers when a camera purchase turned sour.

Hawk canceled the order. "When I told them I was going to write on my Web site about how badly I was treated, they threatened to have me arrested and told me that I didn't know who I was dealing with," Hawk says. Price Rite's sales

rep, Hawk adds, said he'd face a 15 percent restocking fee if the order was canceled.

Hawk says he couldn't believe he was hearing all this from a merchant that had high ratings and glowing user reviews on reputable shop-

ping sites, including PriceGrabber.com (which powers PCWorld.com's pricing engine) and Yahoo Shopping.

It turned out he wasn't the only unhappy Price Rite customer. The New York state attorney general, the New York

PHOTOGRAPH: THOMAS HAWK

You'll love our phony feedback.

IN THE hypercompetitive world of online commerce, sites for comparison shopping have unfortunately become popular destinations for rip-off artists seeking to lure customers with fake merchant and product reviews.

The problem of bogus reviews has arisen even at well-known sites such as Amazon.com. While Amazon is not a comparison engine, it does permit third-party merchants to hang a shingle at its site, along with inviting reviews from patrons. A positive merchant review can bring lots of business to a retailer: Forrester Research says that 40 percent of shoppers



Some sellers try to make themselves look good by posting glowing reviews under fake identities.

take retailer ratings into account when choosing where to buy. San Francisco blogger Thomas Hawk decided to purchase a digital camera at the Web site of Brooklyn-based Price Rite Photo in part because of a satisfactory merchant review on Yahoo Shopping. But his experience was not a happy one (see "Score One for the Little Guy," on the previous page).

Some sellers try to make themselves look good by posting glowing reviews under false identities. "It's a kind of stuffing the virtual ballot [box]," says Kamran Pourzanjani, CEO of PriceGrabber.com, a comparison-shopping site (PCWorld.com uses PriceGrabber.com for its pricing engine). He says PriceGrabber gives the boot to companies that manipulate their ratings.

Although Pourzanjani declines to say how many bad apples he's actually tossed out, he notes that PriceGrabber rejects 5 to 7 percent of submitted reviews for being suspected fakes. PriceGrabber and other pricing engines have automated the screening process—instantly rejecting, for example, groups of reviews that come from the same computer or network.

Amazon.com has addressed made-up merchant reviews through its Real Names program, spokesperson Drew Herdener says. To review an item or merchant on Amazon, you must have purchased something there under a valid user name.

All of the shopping-engine firms PC World spoke with say they have gotten so good at detecting fake comments that it's a non-issue. Some sites don't rely exclusively on technical means to spot phony reviews. Shopping.com, for one, has a community-policing element: You can see whether a reviewer is trusted by other Shopping.com users, and vote on new contributors.

Retailers that engage in questionable practices usually have online track records. Before forking over your money, try punching the company name into Google to see what others think.

City Department of Consumer Affairs, and the Kings County (New York) district attorney have all received complaints alleging that Price Rite used hard-sales tactics and bait-and-switch advertising. In a June 2005 complaint to the New York Better Business Bureau, a woman from Pennsylvania said that Price Rite charged her credit card \$700 and sent her a rock instead of the camera she ordered.

Despite the threats, Hawk wrote about Price Rite in a blog entry that was picked up by a member of the social news community Digg.com.

The story struck a nerve. Digg.com users posted Price Rite's aliases, phone number, and address; some also posted warnings about the store, including a link to Hawk's blog, on other sites. Hundreds of digital camera buyers began

posting similar complaints on Hawk's blog—and in a matter of days, PriceGrabber, Yahoo Shopping, and other comparison sites dropped Price Rite from their listings.

In December 2005, Price Rite Photo owner Edward Lopez sent Hawk a letter of apology, saying the phone sales representative involved had been fired and offering to sell Hawk the Canon EOS 5D for the originally advertised price of \$2900. (Price Rite has not responded to telephone and e-mail queries from PC World about Hawk's experience.)

Hawk declined Price Rite's belated offer. "Companies need to have good business practices and treat their customers well," he says. "If they don't, a customer like me is going to come along and write about their experience, and it's going to get around."

When You Buy

We'll match any price (maybe).

LOW-PRICE GUARANTEES AREN'T new, but with the Internet's unprecedented power to help people find rock-bottom prices, shoppers can more easily try to take advantage of them. Merchants, not surprisingly, are responding with strategies designed to make cashing in on these offers difficult.

"Merchants know that, thanks to the Internet, someone is going to find a store in Podunk, America, with a cheaper price," says Tim Storm, president and founder of FatWallet.com, a Web site for bargain hunters. If you do spot a better price, though, stores will often wriggle out of their promise to match it by enforcing the guarantee's fine print, which commonly includes exceptions for certain types of merchandise, prices advertised online, prices at stores not considered direct competitors, and prices at stores outside a certain geographic area.

However, we've also seen instances where brick-and-mortar stores have refused to match a price, even when all conditions of

Restrictions

The product must:

- Be an exact make and model of the one carried at Amazon.com.
- Be new (not refurbished or reconditioned) and in its original packaging with all accessories.
- Be in stock with the discount price currently advertised.
- Not be a closeout or clearance item (at Amazon.com or the third party's site).
- Price matching applies to most tools or equipment sold and fulfilled by Amazon.com or its third-party sellers.
- Price-match items cannot be gift-wrapped.
- The price considered will be the total price (including shipping charges, taxes, gift certificates, etc.).
- Only tools and equipment that are distributed by Amazon.com's Tools & Hardware Store will be price matched; your request qualifies.
- Price matching does not apply to membership clubs or auction sites.
- Amazon.com's Tools & Hardware Store cannot match prices at other Web sites, unless the company also has a catalog business.
- Amazon.com's Tools & Hardware Store is not able to price match products in Amazon.com Auctions and zShops.
- Price-match products are not eligible.
- Amazon.com's Tools & Hardware price.
- Typographical errors will not be matched.
- At this time, price matching will be honored.
- Offer limited to a maximum of one price match per item.
- Offer limited to stock on hand.
- All price matching is at the discretion of Amazon.com.

AMAZON.COM'S Tools & Hardware price-matching offer (below) has lots of fine print (left).

110% lowest prices guaranteed

If you find a better price elsewhere on any Tools & Hardware product offered by Amazon.com, we will match that price and beat it by 10% of the difference. [See details.](#)

the guarantee have been met. Complaints posted at gripe sites describe experiences similar to those we found in an investigation of rebates (see find.pcworld.com/55298): Some shoppers stop trying to realize the savings because they don't think it's worth the effort. A contributor to the consumer review site My3cents.com described how a CompUSA store manager had refused to honor a low-price guarantee that would have saved him \$5, saying a senior manager wasn't on hand to approve the price drop. Having made the trip expressly to get the product, the shopper paid the higher price.

Engineer Jim Neumiller of Copperas Cove, Texas, paid \$247 for a 27-inch Magnavox television at his local Best Buy. But while he was on hold with Best Buy's customer service to arrange for delivery of the set, Neumiller noticed the same set on Best Buy's Web site for \$199.

Neumiller demanded the lower price. A Best Buy representative initially agreed and said that he would be credited with the difference. The credit never showed up, however, and when Neumiller called to ask why it hadn't, he was told that the TV was no longer on sale at the lower price. Only after he filed a deceptive-advertising complaint with the Federal Trade Commission and griped on his blog did Best Buy issue him a \$50 credit.

To avoid such problems, a good rule of thumb is to review product marketing materials, look for asterisks, and scan the fine print for restrictions or anything else unusual.

It's in stock—until you place your order.

WHEN BUYING ONLINE, don't count on promised delivery dates or inventory representations. Katie Young, spokesperson for the Better Business Bureau serving Alaska, Oregon, and western Washington state, says that even well-intentioned companies sometimes overpromise. She should know: Her office mediates consumer complaints about Amazon.com.

Amazon's second-most-complained-about subject, after refunds and exchanges, is delivery service, Young says. "One of the common scenarios is, a consumer paid for overnight shipping and either never got the item or got it days late," she says. The good

news: Amazon usually issues a refund to consumers who complain to the BBB about shipping delays.

Depending on the merchant you're dealing with, online overnight shipping can mean several things. Dell charges \$109 for "next business day" delivery of new desktop computers. However, when I ordered a PC over the phone from Dell and added that I wanted to pay for next-business-day delivery, I learned that to Dell this means the system ships the day after it's actually built—which might take up to a week.

Online purchases may also arrive late because the retailer relies on drop shipping, meaning the retailer doesn't actually stock the product, but has the wholesaler send it directly to you. Such sellers may have the best of intentions, but can end up making

excuses when they find out that their supplier doesn't have the Civil War commemorative mouse you ordered.

The best way to avoid such problems is to look for red flags, such as a too-good-to-be-true price or user reviews that are either awful or excellent, with no middling evaluations. Also check out the Better Business Bureau's Web site (www.bbb.org), which has a searchable database of company report cards.

After You Buy

Good luck calling us.

IT'S TRUE: SOME companies hate it when you call. Why? Because they have to pay someone to answer the phone.

Video game producer Ellen Hobbs of Austin, Texas, knows how hard it is to get a living, breathing person from an online store on the phone. She had a problem with an Amazon.com order, but could not find a customer-service phone number on the giant e-tailer's Web site. So she combed the Internet and finally found it on the site of another Amazon customer.

"It's a shame that there are still some major retailers out there that just don't want to be bothered with answering questions over the phone," Hobbs says, no doubt speaking for many.

Hobbs reports that Amazon has gotten better about adver- ►

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tising its once-elusive toll-free phone number. Some other big sites still make calling difficult, however: I attempted to find a customer-service number for Apple's iTunes and gave up after 15 minutes of searching.

In a survey by the Virginia-based Society of Consumer Affairs Professionals in Business, not being able to talk to a human being topped the list of what people don't like about online retailers' customer service.

Businesses such as Apple and eBay say they prefer to receive customer questions by way of Web forms or e-mail; both companies say that they try to reply to all queries within 24 to 48 hours. By funneling inquiries through Web forms, the companies say, customers can sometimes get the answers they need without ever calling.

If having the option of placing a phone call to a company you do business with is important to you, don't buy from merchants that fail to post a phone number conspicuously on their Web site. But if you have already made a purchase, you can try looking up the firm's number by using an information or directory service such as Switchboard.com.

Money back is never guaranteed.

BILLIE GRAY, a Wallkill, New York, immigration attorney, says she has quit trying to take advantage of a 60-day money-back guarantee offered by InKline Global for its TVolution software. Gray paid \$30 for TVolution, which according to InKline's ads allows you to watch up to 1000 online video feeds. Within days she was dissatisfied, and she e-mailed the company asking to have her money refunded.

"It was a cinch to pay for the software," Gray says. "Trying to get it back was a horror show."

InKline Global representatives replied to Gray's e-mail by explaining that before the company could issue a refund she had to send a signed fax stating she had deleted the software from her PC. The real catch: The phone number was in Singapore and repeatedly failed to accept faxes, Gray says. After spending over \$30 in long-distance fax charges, she gave up.

InKline Global did not respond to *PC World's* e-mail inquiries regarding Gray's difficulties.

One of Gray's mistakes was that she paid for her purchase with a debit card instead of a credit card. Your credit card company may be able to mediate post-sales disputes.

Procedures for seeking refunds can be frustratingly elaborate. Edie Milliken, a resident of Lewiston, Maine, says she spent nearly a month trying to reclaim \$73 from McAfee for Internet Security Suite 8.0, which she had bought from a local retailer and could never get working properly on her PC.

Milliken says that she never thought she would have so much difficulty taking advantage of the company's "30-Day Money-Back Satisfaction Guarantee" pledge.

First, Milliken says, McAfee made her spend a total of 40 hours over several weeks using online tech support to verify that

"Some
retailers
just don't want
to be bothered
with answering
questions on
the phone."

—ELLEN HOBBS,
AUSTIN, TEXAS



she couldn't get the program to run on her machine. "I told them repeatedly I wasn't interested in trying to fix the problem, I just wanted my money back," she says.

She did eventually receive a total-refund check from McAfee, but not until 41 days after she had first called the company.

McAfee told *PC World* that its money-back guarantee doesn't work the way Milliken says it did. "A consumer can get a refund no matter what the reason if they contact us within 30 days," says Francie Coulter, McAfee spokesperson. Coulter declined to comment on Milliken's experience in particular, saying that she was unfamiliar with the case.

As for obtaining refunds from retailers, even when you regain your cash from reputable companies such as Best Buy, Sears, or Staples, you may get stuck with restocking fees of 10 to 15 percent of the purchase price.

What can you do to avoid the money-back guarantee run-around? Ask retailers about (or check their Web site carefully for) their refund policy. And if a product comes with its own money-back guarantee, make sure you read it closely, too.

Our freebies are anything but.

WHEN DOES A "free" cell phone cost as much as \$36? Welcome to the world of not-so-free freebies.

Cell phone companies often advertise phones as "free" but charge you for them nevertheless. Not to be confused with "activation fees" levied on new customers, phone-upgrade fees ►



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are charged to existing customers who request new phones.

Cingular, for example, says it charges an \$18 upgrade fee when customers get a new handset. Sprint/Nextel customers face as much as \$36 in handset-upgrade fees.

In posts on gripe sites such as My3Cents.com and Planet-Feedback.com, some customers say that they were never told about the fees at the time of purchase, and that they were surprised to see them surface on their phone bill as long as two months later. By then the window for cancellation of the purchases without termination fees had expired.

Cingular and Sprint/Nextel officials defend the imposition of these fees by saying that they cover service and administrative costs associated with upgrading customers to a new handset.

Officials for various carriers also insist that their sales representatives and Web sites make all fees clear to customers at the time they purchase a new phone.

To read more about cell-phone-related gripes, see "Why We Love to Hate Our Cell Phone Company" (find.pcworld.com/55299).

You'll pay for these gifts, again and again.

THE CELL PHONE industry isn't the only source of freebies that come with catches and generate consumer complaints, however.

Pitches for free \$25 gift cards or cash back on just-completed purchases are causing a tidal wave of discontent as hundreds of people receive unexpected credit card charges stemming from such offers. Many buyers who have taken advantage of the offers say that at the time, they didn't realize they were accepting trial memberships in shopping services that turn into monthly paid subscriptions if not cancelled. Internet searches reveal a flood of complaints against the firms behind the offers, including Vertrue (formerly MemberWorks), Trilegiant, and Webloyalty.com.

In a class-action suit filed against Webloyalty.com in U.S. District Court in Massachusetts, a Fandango.com customer says that after he bought a movie ticket he was charged a monthly fee for a discount-club membership he had never requested.

The suit, filed in September, alleges that after a customer made a purchase from one of Webloyalty's 75 e-commerce partners, a pop-up window appeared promising a \$10-off coupon for their next purchase. If the customer accepted the offer and gave an e-mail address to redeem the coupon, the customer's billing information was automatically transferred to Webloyalty.

Webloyalty would then automatically bill the customer's credit or debit card a \$9 or \$10 monthly fee for a membership in its Reservations Rewards discount club. And if the customer did not cancel the membership by contacting Webloyalty within 30 days, these monthly charges would continue.

Cell phone companies often advertise phones as "free" but then charge you for them nevertheless.

Webloyalty's CEO Rick Fernandes said in a statement, "The lawsuit is frivolous. It completely misrepresents the manner in which Webloyalty.com conducts its business."

Cures for Shopping Annoyances

YOU CAN AVOID or cure many online shopping headaches by being a careful consumer. Here are some general procedures for avoiding the sting of a good deal gone bad:

Review your credit card statement as soon as possible after your purchase—ideally, you should have online access to your statements, so that you can see new charges earlier. If you see anything that doesn't look right, address the problem immediately.

If things get nasty, the BBB has a free service that will attempt to mediate a dispute between you and a merchant.

Learn to complain effectively. If you have a gripe with a cell phone company,



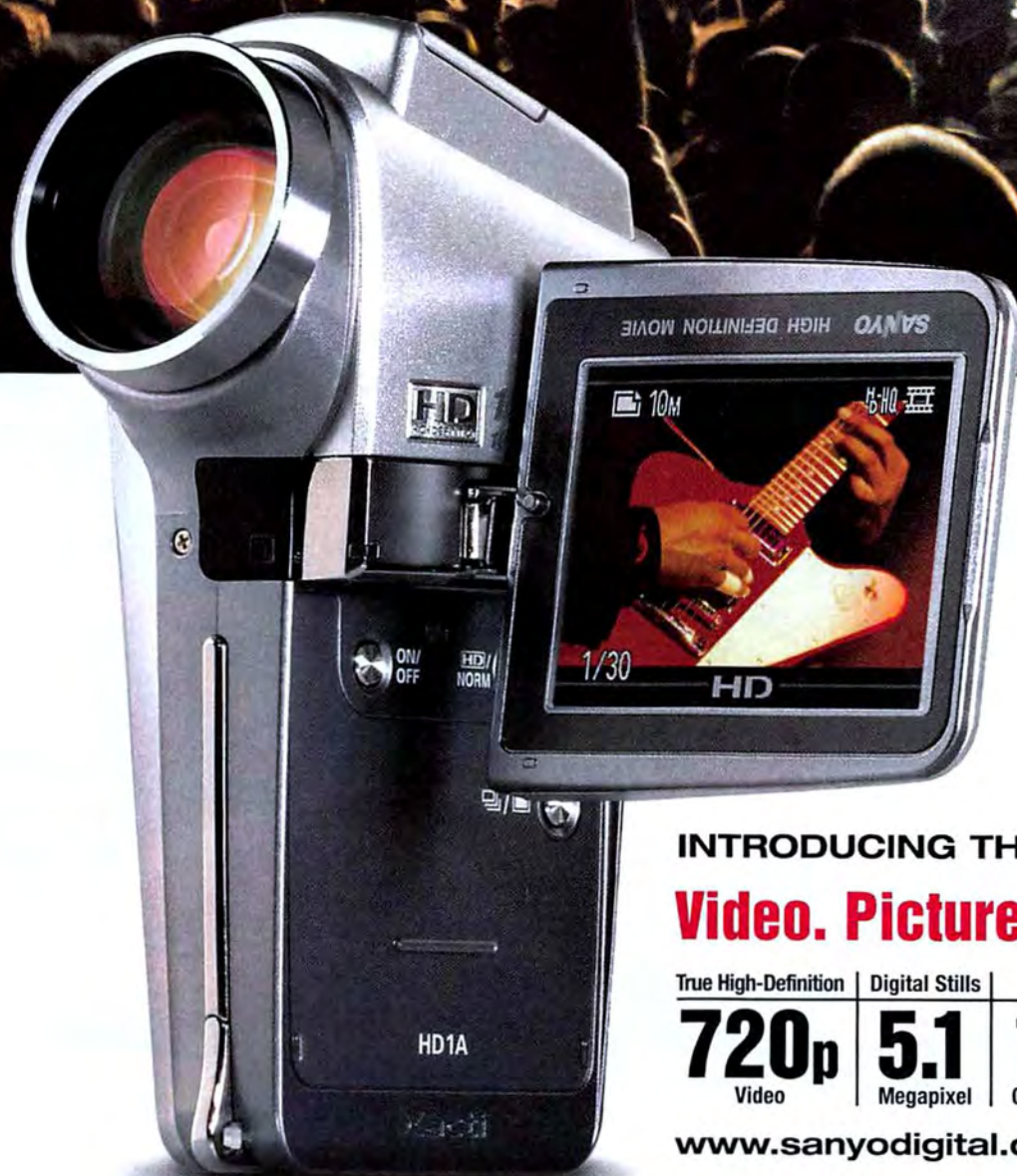
for example, file with the Federal Communications Commission and state authorities that regulate cellular providers. If it's a truth-in-advertising issue, write to the Federal Trade Commission.

Remember that often the most effective way to solve a post-shopping annoyance is to work with the company directly. When contacting the company, make sure you talk to someone who can actually issue a refund or correct the problem. Be as informed and as specific as you can, and don't lose your cool.

Shopping glitches—or worse—may not be entirely avoidable, but how you deal with one could mean the difference between a bad migraine and a nice refund check. Good luck. ■

Tom Spring is a senior reporter for PC World.

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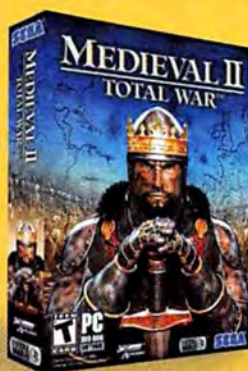
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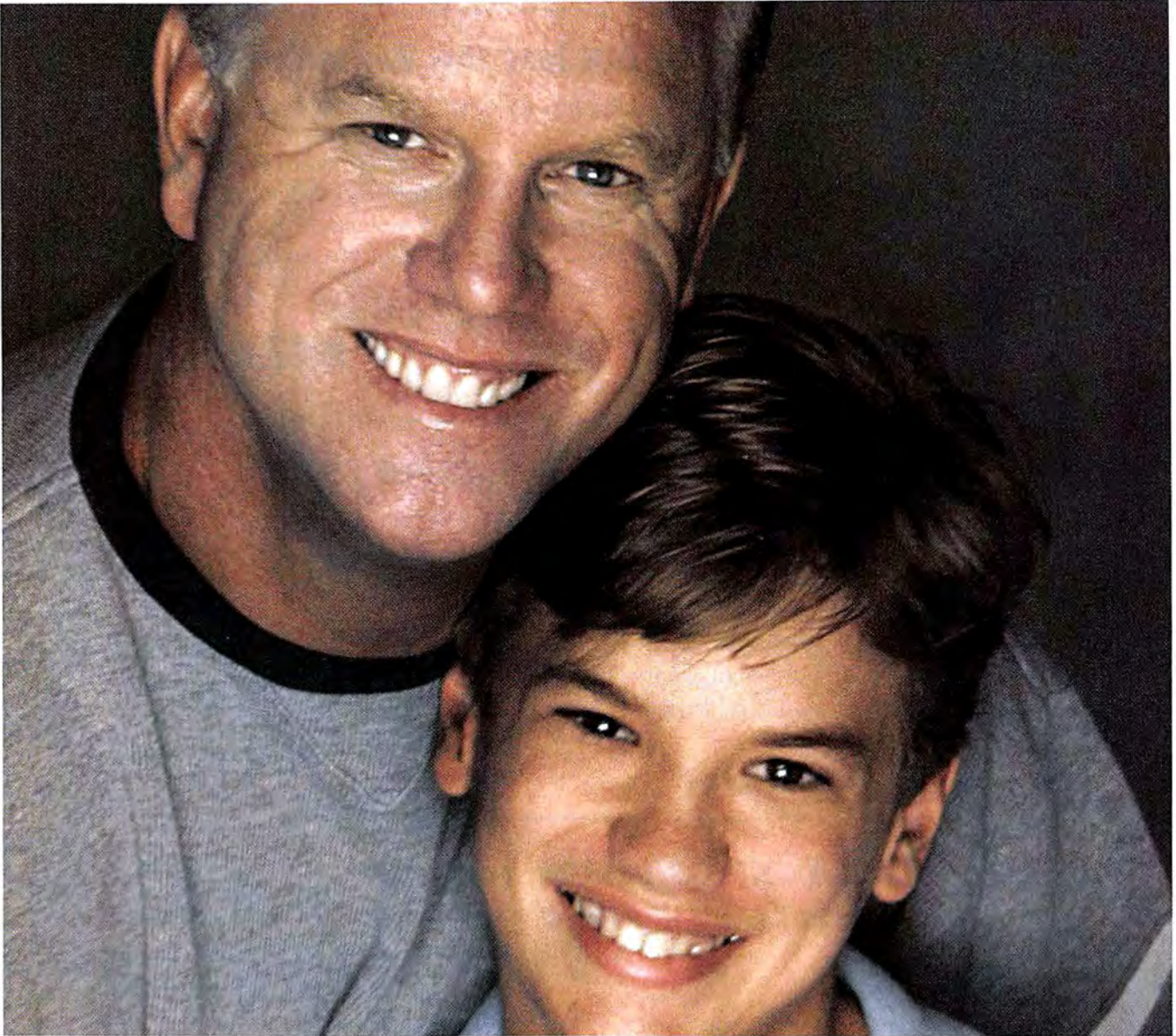


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Cures for Lost and Damaged Data

Newly released R-Studio 3.5 and other business continuity solutions from R-Tools lead the charge in restoring Windows-based data

IN A CLIMATE WHERE USERS MUST GET access to business-critical data to serve customers and stay ahead of the competition, **R-Studio 3.5** from R-Tools is proving to be the ideal solution for recovering vital data lost to viruses, attacks, hardware failures, or operating system crashes.

This affordable undelete and data recovery software features an algorithm that lets users increase the quality of file recovery and recover files not recognized in the file system metadata. Besides FAT, NTFS, Ext2FS, and Ext3FS, R-Studio 3.5 supports both UFS1 and UFS2 file systems as well as enhanced remote host scanning procedures that analyze data on the remote host rather than on the local host to speed up

data recovery and get users the information they demand.

Bundled with R-Studio 3.5 is **R-Studio Emergency Version**, allowing users to recover data even when Windows cannot be booted due to system file corruption or deletion.

R-Studio 3.5 is one product on a fast-growing list of business continuity solutions from R-Tools, a list that now includes **R-Mail for Outlook**. This handy utility restores deleted information and repairs damaged Microsoft Outlook files when Outlook cannot open them, allowing users to first preview recovered messages before recovering the information completely.

Meanwhile, R-Tools also offers



R-Mail for Outlook Express, which reconstructs accidentally deleted email messages or damaged .dbx files. Other exceptional business continuity solutions from R-Tools include **R-Word** to recover damaged Microsoft Word files; **R-Excel** to reconstitute valuable Microsoft Excel files that are corrupted or attacked; and **R-Wipe &**

Clean to automatically keep disks free and clear of data clutter.

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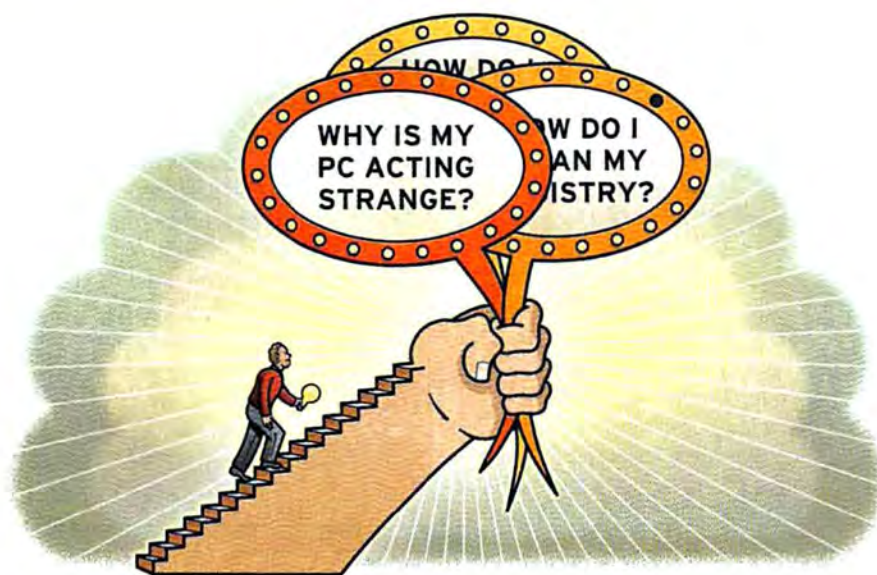
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ANSWER LINE

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Common PC Problems Solved: The Ultimate FAQ

EVERY MONTH I hear from *PC World* readers about the issues they're having with their machines. While I can't respond to everyone, I answer as many as possible. If I know the solution to a problem, or believe I can give some good advice, I'll reply. I don't have time to research questions other than the few that appear in print or on PCWorld.com. (But see "Advice for Resolving the Questions I Can't Answer" on page 170 for tips on conducting your own research.)

In my years of writing this column, I've seen some questions that readers ask repeatedly. The following tips solve the problems that nearly every PC user will encounter eventually, so if you don't need these answers right now, keep 'em handy: They'll be useful to you someday.

WHY IS MY PC ACTING ODDLY?

I GET A lot of variations on this question: "How come such-and-such hasn't loaded since I updated my whatsit driver?" or

"Why is my [brand name and model number] crashing every time I run [name of program]?" No matter the symptoms, certain diagnostic tricks are bound to help.

Before you do anything, back up your Windows Registry. If one of these fixes makes things worse (always a possibility), you'll be glad you took this step. Windows XP's System Restore automatically backs up the Registry and other important Windows files, but the program is famously unreliable (and Windows 2000 lacks the utility altogether).

A safer approach than relying on System Restore is to use Lars Hederer's free Emergency Recovery Utility NT, or ERUNT (find.pcworld.com/52208). After downloading and installing the program, XP users should create an initial ERUNT backup when their PC is running just the way they want it. Windows 2000 users should put a link to ERUNT in their Startup menu so that the utility loads every time they boot Windows.

Check for malware: It's always a good idea to make sure you have a clean machine. For cleanup instructions, see "How Can I Tell If My PC Has Caught a Virus?" at find.pcworld.com/54972, "Why Is My Hard Drive Slowing Down My PC?" at find.pcworld.com/54973, and "Prevent Viruses From Disabling Your Protection" at find.pcworld.com/54974.

Update your drivers: I don't believe in updating drivers as a part of regular maintenance. I figure, if it ain't broke, why fix it? Still, if something is broke—er, broken—a driver update can be a free and relatively easy solution.

The best place I've found for checking your drivers is TouchStone Software's Driver Updates page at www.driveragent.com. The site, which requires Internet

168 ANSWER LINE

Solutions to your most frequent questions about troubleshooting, data security, and Registry fixes.

172 WINDOWS TIPS

Prevent a bad Windows update from trashing your system; automatically update networked PCs with NetChk.

176 INTERNET TIPS

Broaden your e-mail access by switching from POP to IMAP; Novell's Evolution, a new Outlook rival.

178 HARDWARE TIPS

Prepare a hand-me-down PC for its new owner; make a geek fashion statement; a cordless/corded mouse.



178



FIGURE 1: DRIVERAGENT.COM'S SCANNER will tell you which of your PC's device drivers need to be updated.

Explorer, scans your hard drive and gives you a reasonably accurate list of your outdated drivers (see FIGURE 1).

Once you know that a driver needs updating, look for it on the vendor's Web site; every hardware manufacturer offers driver updates as free downloads. Or you can subscribe to TouchStone's \$30-a-year service and download the drivers directly from the scan-result list.

Stop the autoloaders: Autoloading programs, which start every time you boot Windows, cause much PC trouble. After you start Windows, take a look at the line of tiny icons in your system tray, which is on the right end of your taskbar (next to the clock). Those icons represent your autoloading apps, which suck up resources and can really gum up the works. Even worse, some problem autoloaders may not advertise their presence.

To see all of your autoloading programs, and turn them off, select **Start>Run**, type **msconfig**, press **<Enter>**, and click the **Startup** tab. (Windows 2000

lacks **msconfig**; Mike Lin's free Startup Control Panel is a good alternative. Go to find.pcworld.com/54975 for the download.)

Note which programs in your startup list are checked and which are not (you'll want to return to these settings after you've found the troublemaker). Then uncheck them all, reboot, and see if the problem persists. This setting disables your security software, so if your PC has a working

Internet connection, don't leave all the programs unchecked for very long, and be extremely careful about the sites you browse to.

If the problem disappears, one of the autoloaders is at fault. Use trial and error to find the miscreant: Check all but the first entry, reboot, and if the problem persists, recheck it, uncheck the next entry, reboot again, and so on. If the culprit is your firewall, antivirus, antispyware, or other security program, recheck it, and then complain to the vendor or consider a competing product. You can leave other apps unchecked.

There is a way to get more information

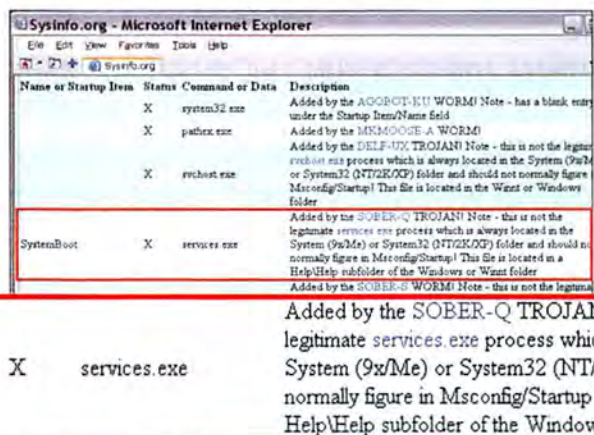


FIGURE 2: FIND A MORE THOROUGH DESCRIPTION of the items in your PC's Startup group by looking up details of your autoloading programs in Sysinfo.org's Startup Applications List.

about the programs appearing on this list: Visit Sysinfo.org's Startup Applications List at find.pcworld.com/54976 (see FIGURE 2). Or go to any search engine and enter the program name plus **msconfig**.

Like the monster in a bad horror movie, some unchecked autoloaders keep rising from the grave. The software "corrects" your "mistake" of turning off the autoloading module. To insert the virtual wooden stake, search the program's menus for an option to load at startup. When you find it, turn it off. If you find no such option, once again, inquire with the vendor or consider the competition.

It might not be Windows: The problem could be with your hardware. An easy way to take Windows out of the loop so that you can test your hardware is to boot from another operating system.

Yes, I just used "easy way" and "boot from another operating system" in the same sentence. Booting the small, free Puppy Linux from a CD involves little hassle. See "Boot Without Windows" at find.pcworld.com/54972 for details (scroll down the page to find the tip). ▶

If the problem persists in Linux, then it's likely to be something hardware-related. Browse to find.pcworld.com/54977 to read Kirk Steers's "Five-Minute Fixes."

WHAT'S THE BEST WAY TO KEEP MY DATA SAFE?

PEOPLE USUALLY DON'T ask me how to protect their machines until after something has gone wrong (and something always goes wrong). These tips offer steps you can take beforehand to minimize the damage when trouble strikes.

Back it up: When your system is running well, make a full backup of your hard drive, including your Windows settings. If Windows becomes unstable, restoring it from a backup is considerably easier than reinstalling the operating system from scratch. Visit find.pcworld.com/54978 to read instructions in Jon L. Jacobi's *Backup Tips* column.

Unfortunately, I've yet to find the perfect backup utility. I use Dantz Retrospect, which is wonderfully powerful, and once set up it requires almost no brainpower. The problem is the setup: Retrospect appears to have been designed at the "Can't We Make It Harder?" school of interface engineering. I also like NovaStor Nova-Backup and Acronis True Image, with some reservations. To read my rant on the poor state of backup software, see my PCWorld.com blog entry "We Need Better Backup Software" (find.pcworld.com/54981) for details. And if you don't have a floppy drive, see "Emergency Boot CDs for PCs Without Floppy Drives" (find.pcworld.com/54982).

Defend yourself: You've probably already

protected yourself against malware, but I'm going to recommend one more security program to augment the others: Webroot Software's \$30 Spy Sweeper (find.pcworld.com/54984). It's not only an excellent spyware catcher, but this application also warns you when an installation sets up an autoloader, and gives you an opportunity to stop that addition. Since autoloading programs—even when they come with legitimate software—cause a lot of performance and stability problems, this is a nice added feature.

Be prepared for the unbootable: If Windows won't boot, a good system backup might help. Then again, it might not. Even if it does help, there may be an easier solution than restoring a backup. In the days of Windows 9x, you'd simply create an emergency floppy that booted DOS (remember DOS?) and came with all sorts of diagnostic tools. No such luck with Windows 2000 or XP. DOS wouldn't even see an NTFS partition.

You can gather several tools for that dark day, however. See "What to Do When XP or 2000 Won't Boot" (find.pcworld.com/54979). For backup recommendations, see Danny Allen's *Top 5 Backup Utilities* (find.pcworld.com/54980).

HOW DO I FIX MY REGISTRY?

THE WINDOWS REGISTRY is a massive database representing your PC's unique configuration. Depending on who you ask, the massive code repository is either an invaluable reference tool for all of the software on your computer, or a garbage dump that stinks up everything around it. The truth probably lies somewhere between those two extremes.

In "Why Is My PC Acting Oddly?" on the first page, I noted that you can back up the Registry using the free ERUNT utility. Once you have a backup in place, you're ready to clear out some Registry refuse.

Clean house: My favorite utility for Registry cleaning is ChemTable's Reg Organizer (find.pcworld.com/54983; see **FIGURE 3**). The tool helps you examine all of your startup applications, file types, and other specific trouble spots. The program also has a fabulous search-and-replace function. You can either perform an automatic cleanup if you're not in a hands-on mood, or scrub the Registry manually. The bad news? The application is \$30. A free alternative is ToniArts' EasyCleaner (find.pcworld.com/54985), which does a reasonable job. ■

Send questions to answer@pcworld.com. Answer Line pays \$50 for published items. Visit find.pcworld.com/31577 for more Answer Line columns. You'll find Contributing Editor Lincoln Spector's humorous and other writings at www.theinkinspector.com.

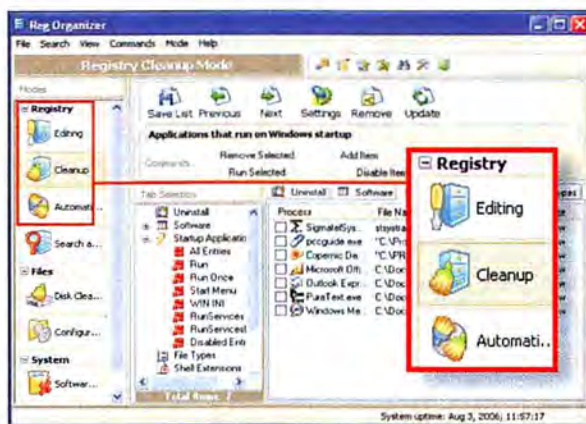


FIGURE 3: YOU CAN AUTOMATE YOUR Registry cleanups, or take a more hands-on approach, with ChemTable's Reg Organizer utility.

ADVICE FOR RESOLVING THE QUESTIONS I CAN'T ANSWER

WHY CAN'T I solve every problem you send me? Apart from there being only 24 hours in a day, the primary reason is that most of your questions are too specific: I don't know how to calculate Louisiana payroll taxes in a Microsoft Works spreadsheet, for example. And not enough readers have that concern to justify putting it in the magazine.

For suggestions on resolving your own tech problems, read *PC World* Editor in Chief Harry McCracken's "How to Help

Thyself" (find.pcworld.com/54986).

Also, enter the product name in the search engine of your choice, along with other words related to your problem. Restrict your search, at least initially, to the vendor's site by using the site: command. For instance, to learn how to calculate Louisiana payroll taxes in a Works spreadsheet, enter "Microsoft Works Louisiana payroll tax site:Microsoft.com." If you don't find an answer, remove the 'site:' portion and search the entire Web.

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WINDOWS TIPS

SCOTT DUNN

**UNSTICK A REPEAT
UPDATE REMINDER**
**USE MICROSOFT'S
SUPPORT SITE**
**REVEAL YOUR
PATCH HISTORY**

Don't Let a Windows Update Bring You Down

WINDOWS UPDATE SOUNDS like an excellent idea: Anytime Microsoft has a patch or other improvement for its ever-imperfect operating system, your computer lets you know, and even installs the fix for you. Privacy concerns raised by allowing Windows to make regular and unobtrusive phone calls home to Microsoft erupted into outrage, however, following the discovery that the updates included Windows Genuine Advantage, an antipiracy utility that many recipients deemed outright spyware (see find.pcworld.com/54950 for more details).

But acquiring an unwanted watchdog isn't the only risk associated with Windows updates. I don't have room to cover all of the problems that the many patches and add-ons Microsoft has released for the OS might cause. These tips will give you the upper hand on updates, and help you out when a patch goes bad.

DISABLE AUTO INSTALLS

THE BEST WAY to solve a Windows update problem is to prevent it from happening in the first place. If you are concerned about contaminating your system with Windows Genuine Advantage or some other questionable update, instruct Windows not to install anything automatically: First, open *Control Panel*, and in XP's Category View click *Security Center* and then *Automatic Updates*. If you're using a version of Windows prior to XP—or if you're using XP's Classic View—either double-click the *Automatic Updates* icon

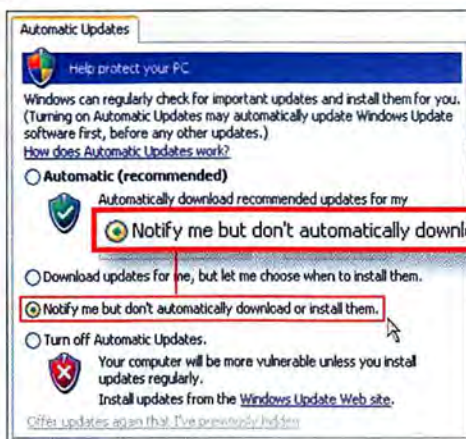


FIGURE 1: STOP AUTOMATIC updates by instructing Windows to notify you of—but not to install—your fixes.

or select it from the Control Panel menu.

Choose the option labeled *Notify me but don't automatically download or install them* (see **FIGURE 1**). That way, when you learn what updates Windows wants to install, you can read about them and check the latest opinions on the Internet before deciding whether they're worth the risk of installing. You can also ensure that your system won't reboot itself when you're not there, and, say, prevent your automated backup from running.



FIGURE 2: ANNOYED BY a genuine Windows disadvantage? Silence Microsoft's snoopy software validator by adjusting its settings.

UPDATE MICROSOFT APPS

IF YOU FIND Windows Update helpful, maybe you'd like a similar system for keeping Office and other Microsoft products up-to-date. If so, fire up Internet Explorer and surf over to update.microsoft.com. If you see a "Get Microsoft Update today!" headline, click the *Go* button; otherwise click the *Express* link just below the Windows Update banner. Follow the instructions to install the necessary software. Microsoft Update uses the same automatic settings as Windows Update.

MUZZLE WGA'S NOTIFIER

IF YOU'VE ALREADY installed the Windows Genuine Advantage update, and it thinks your version of Windows isn't authentic (whether correctly or not), you can at least prevent the program from annoying you further with its accusations.

To put an end to WGA's warning pop-ups, right-click the Windows Genuine Advantage logo in the system tray (the part of the taskbar that includes the clock), and choose *Change Notifications Settings* (see **FIGURE 2**). Select *Don't Notify Me Again*. Now save the settings, respond to the appropriate prompts, and restart your computer.

If you don't want your copy of Windows Genuine Advantage to contact Microsoft on its own, you may be able to adjust the permission settings of a third-party firewall such as ZoneAlarm to block WGA from making connections over the Net.

FIX BROKEN UPDATES

SOMETIMES A WINDOWS update tells you to patch your system, but things go awry. Other times you successfully install an update—but when you return, Windows informs you that you need to install the same update. Here's what to do.

Find the culprit: To identify the update that isn't working, revisit the Windows Update or Microsoft Update site. You can get there by choosing *Start>All ProgramsWindows Update* (or *Microsoft Update*) or *StartWindows Update* (or *Microsoft Update*). At the site, click *Review your* ►



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Go to find.pcworld.com/55422

update history on the left. The browser will display a green check next to the updates that you've installed successfully, and a red X adjacent to those that you haven't (see **FIGURE 3**). Problem updates will likely appear many times in this list.

Get the red out: In troubleshooting updates marked with a discouraging red icon, knowledge is power. Click the red X in the browser for suggestions. Note the installation error name or code, and then open Internet Explorer to Microsoft's Windows Update Troubleshooter site at find.pcworld.com/54951 (as when deal-

about it. If you can't find the error, see support.microsoft.com. Type the error code in the Search Support(KB) box, and then press **<Enter>**.

For more update-related strategies, visit find.pcworld.com/55294, or search groups.google.com to see how others have dealt with the problem.

Scan and clean: Sometimes an update shows a green icon in your update history but still asks repeatedly to be installed. First, browse to find.pcworld.com/54952

to download and install Microsoft's Malicious Software Removal Tool. The program is updated monthly, so even if you've used it before, you may need to get a new version. Download and launch the file, and follow the instructions on the screen.

If using this tool doesn't dispose of the repeated requests to update, scan your system for spyware and viruses. Go to find.pcworld.com/54953 to download our favorite free security tools.

Try Safe Mode: If security scans don't fix the persistent update nag, uninstall the

troublemaker and reinstall it in Safe Mode. Return to the Windows Update or Microsoft Update site, and note the six numbers following "KB" in the update's name in your installation history. Then choose **Start>Run**, type **appwiz.cpl**, and press **<Enter>** to launch Add or Remove Programs. If necessary, select **Name** from the 'Sort by' list. Make sure that the **Show updates** option is checked (see **FIGURE 4**). Select the update with the matching KB number, and click the **Remove** button on the right. Follow any remaining prompts to remove the update.

Next, browse to www.microsoft.com/downloads, and in the search box for All Downloads, enter the KB number for the problem update. Download it to your Windows desktop, but don't install it. Instead, restart your PC, and as it boots (but before Windows loads), press **<F8>** to display the Advanced Options menu. Use the arrow keys to select **Safe Mode** (if necessary), and press **<Enter>**. Install the update by double-clicking the file on your desktop, and again restart your PC.

As these resources make clear, the problems you'll encounter are often specific to a particular update. For example, Windows security update 819696 installs DirectX 9.0b (a Windows component that enhances its multimedia capabilities). In some cases, however, Windows Update may continually ask you to install this update even though DirectX 9.0b is already installed. If so, Microsoft recommends that you reinstall DirectX using the version at find.pcworld.com/54954.

Send Windows-related questions and tips to scott_dunn@pcworld.com. We pay \$50 for published items. Visit find.pcworld.com/31607 for more Windows Tips. Scott Dunn is a contributing editor for PC World.



FIGURE 3: TO GET MORE DETAILS on a problem update, click the red icon next to its entry on your update history page.

ing with Windows Update, you'll probably need to use IE, not Firefox or another browser). Press **<Ctrl>+F** to find the error's listing on this page. Click the link to read

WINDOWS TOOLBOX

Get an Update—and Then Some—With NetChk Protect

WINDOWS UPDATE isn't the only possible way to stay on top of the latest Microsoft patches (fortunately). Shavlik Technologies makes a number of products designed to keep your system updated. Perhaps the most economical is NetChk Protect, which combines spyware protection and patch management. The program scans all of the Windows machines on your network, tells you which ones need patching, and then downloads and installs the patches you select. Though not designed for beginners, NetChk's features are relatively straightforward. You can use the free trial version to protect up to ten machines for one year before you're expected to pay. Browse to find.pcworld.com/54956 for the download.

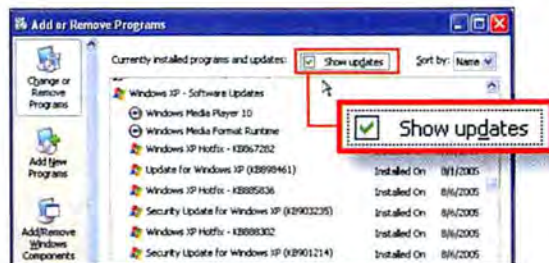


FIGURE 4: BE SURE TO check the 'Show updates' box in Add or Remove Programs to reveal your update history.

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INTERNET TIPS

SCOTT SPANBAUER

Drop POP E-Mail for the Freedom of IMAP Servers

WHETHER IT'S MICROSOFT Outlook, Mozilla Thunderbird, or something else, most people have a favorite e-mail app for storing messages in folders, filtering spam, and saving copies of sent mail. Chances are, the program talks to your ISP's mail server via the Post Office Protocol 3 (POP3).

But as computing becomes increasingly ubiquitous, many users need to access their e-mail from public terminals, branch-office workstations, loaner systems, or relatives' home machines. POP3 just isn't set up for that: Even if you tweak your mail program to leave read messages on the server, only your main PC contains your sorted, filtered inbox folders and sent mail. Another mail protocol, the Internet Message Access Protocol, or IMAP, is a much better solution for wandering e-mailers—but only if your ISP, employer, or other e-mail provider happens to support it.

KEEP IT ON THE SERVER

UNLIKE POP3, IMAP stores your folders and sent mail on a server rather than on your local PC. This approach lets you see the same messages and folders, including sent e-mail, regardless of which program or computer you're using to connect to your account. However, IMAP also creates a mirror of the server's contents on your local PC, which allows you to read and respond to mail offline. (Note that you set up an IMAP account the same way you create a POP3 account in most e-mail programs; see **FIGURE 1**.)

IMAP also permits you to use multiple e-mail applications, including Thunder-

bird and the new Windows version of Novell's Outlook-killer Evolution (see "Good-Bye, Outlook: Evolution Comes to Windows," below), to check your mail from the office, from home, or from the

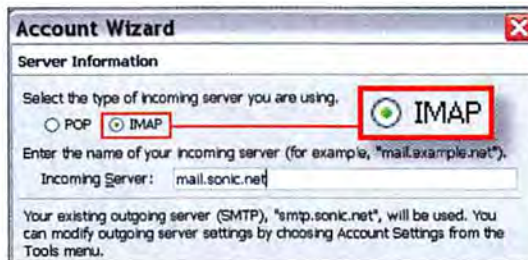


FIGURE 1: AN IMAP E-MAIL ACCOUNT keeps your sent and received messages available from any Web-connected PC.

road. Each mail client will show all of the account's sorted and sent mail, with all your changes reflected no matter which program you used to create the account.

Of course, there's a hitch. Although Outlook, Outlook Express, Thunderbird, Evolution, and most other e-mail apps work with IMAP servers, e-mail services that support IMAP are more difficult to find. Many big-name ISPs and services, including Comcast, Gmail, Hotmail, and Yahoo, still offer only POP3 access,

though indications are that Gmail and Yahoo may support IMAP eventually.

Nevertheless, just because you have an Internet provider that doesn't offer IMAP e-mail servers, that doesn't mean you must use that ISP as your primary e-mail service. E-mail programs allow you to check multiple accounts, so you can simply add a new IMAP account and migrate to using it as your main address. A few big players, such as America Online's AIM Mail, are IMAP friendly, but you're more likely to find local ISPs and such specialized e-mail sites as FastMail (www.fastmail.fm) offering IMAP service for a few bucks per month or for free. If you rely on e-mail as much as I do, switching to IMAP could free you from being tied to one computer, operating system, or e-mail program.

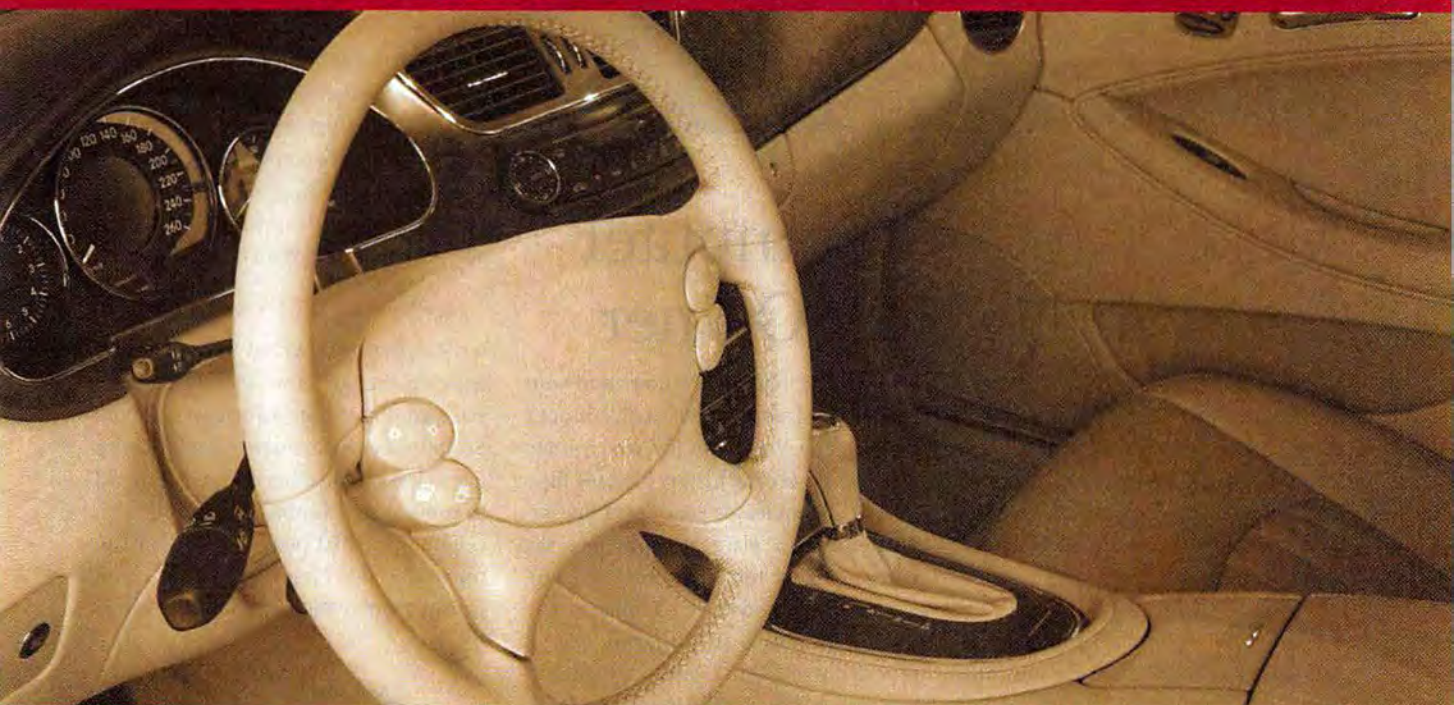
You have yet another option if it turns out that your e-mail server does not support IMAP. Simply configure your main mail program to leave all of your messages on the server, which will at least allow you to download your mail using another PC, location, operating system, or program (see the second tip in "Thirteen Simple Ways to Bring Order to Your Inbox" at find.pcworld.com/54958 for instructions). To make sure you have a copy of your sent messages, just cc: yourself—the copies will be waiting in your main PC's inbox when you return from your travels. ■

Send your questions and tips to nettips@spanbauer.com. We pay \$50 for published items. Go to find.pcworld.com/31523 for more Internet Tips. Scott Spanbauer is a contributing editor for PC World.

GOOD-BYE, OUTLOOK: EVOLUTION COMES TO WINDOWS

I LIKE BEING free to use the computer, operating system, and application that are the best for the job I'm doing. I use Macs and Linux machines along with Windows PCs, although I've mostly given up using Microsoft Office and Internet Explorer. Still, I remained a prisoner of Microsoft Outlook, because no other Windows program provided the same

killer combination of e-mail, calendar, task, and contact management. However, Novell's Evolution—long a Linux-only Outlook competitor—is wending its way to Windows. Though still pre-beta software at this writing, Evolution for Windows can already function well as an alternative to Outlook. Browse to find.pcworld.com/54959 for the download.



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HARDWARE TIPS

KIRK STEERS

Make Your Old Computer Ready for Its Next Owner

ARE YOU EXPECTING a new PC in your stocking this year? Then it's time to think about what you'll do with your old system. Repurpose? Recycle? Donate? Pass it on to a friend or relative? Here are ideas on how to prepare your PC for giveaway.

MOVING DAY

Transfer your files: To move your personal files from the old PC to your new one, install both systems on a network, or connect them directly with a file-transfer cable (browse to find.pcworld.com/54960 for instructions). Or use the free Pando online service (www.pando.com/beta) to e-mail all your files to the new PC. Pando uses BitTorrent peer-to-peer technology for fast transfers that bypass size limits on e-mail attachments. (The files are stored on Pando's servers for 14 days.)

Wipe your old data: Once your files are on the new PC, erase them on the old system if you don't plan to keep it. A hacker or identity thief won't be deterred by your simply deleting the files, or even reformatting or repartitioning the hard drive.

A BETTER MOUSE

THE CORDLESS CONVENIENCE of a Bluetooth mouse is compromised by the need to recharge the device's battery: Nothing is more frustrating than waiting for your mouse to recharge—and if you're at 35,000 feet, you probably don't have a charger handy. Targus's new \$70 Bluetooth Laser Mouse (find.pcworld.com/54971) solves this problem by including a detachable USB cord that allows you to continue working while the mouse recharges.

If you want to leave Windows and your installed software intact, use Webroot's \$30 Window Washer utility, which eradicates personal data, history files, log files, and so on, but leaves your operating system and apps in place (go to find.pcworld.com/54962 for the 30-day trial version). To erase the hard drive completely (the OS, applications, and all), overwrite it repeatedly with a disk-wipe utility such as the free Active@ Kill Disk Hard Drive Eraser (find.pcworld.com/54961).

Collect your docs: If you're handing down your system, include all of its manuals, OS and application CDs, and registration or license numbers. The motherboard or system manual is especially important for adding more memory—often the cheapest way to extend the life of an old PC—because it identifies the motherboard and compatible RAM. If you can't find your manual or access one on the PC maker's Web site, the free Belarc Advisor (find.pcworld.com/54965) will identify the motherboard's model number.

Give it one last tune-up: Give your old PC a final checkup and cleaning as a courtesy to its next owner. See "Complete PC Preventive Maintenance Guide" at find.pcworld.com/54966 for instructions.

Find it a new home: Most donation programs take any working PCs and monitors, as well as some nonfunctioning systems. Visit find.pcworld.com/54967 for more information on donating a PC.

Goodwill Industries (www.goodwill.org) is one of several charities that take all PCs and recycle those that can't be reused. (They may charge a small fee. For example, Goodwill's program is free only in Michigan; San Francisco, California;

Austin, Texas; and certain other areas. Check with your local Goodwill office.)

Don't dump it: Many recyclers charge from \$10 to \$40 per PC or monitor, but free recycling services abound, such as the Goodwill programs mentioned above and government-sponsored recyclers. Go to find.pcworld.com/55534 for more on Dell's free recycling program, which accepts equipment from all vendors.

A PLACE FOR EVERYTHING

WONDERING WHAT TO get the gadget geek on the go? How about a place to stash all those shiny, expensive gizmos? ScotteVest (www.scottevest.com) offers a line of jackets and other clothing designed to conceal and comfortably store PDAs, cell phones, MP3 players, and even laptops. The SeV Fleece 4.0 jacket (find.pcworld.com/54988)—about \$140 at this



FIGURE 1: KEEP YOUR GADGETS in reach—and earshot—via ScotteVest's fleece jacket.

writing—has 12 connected pockets that keep my usual digital payload well out of the way, but easily accessible when I'm on the road. I can even run earphones from any pocketed device through the jacket up to the collar, where loops hold the earbuds in place (see FIGURE 1). ■

Go to find.pcworld.com/31511 for past Hardware Tips columns. Send your tips and questions to kirk_steers@pcworld.com. We pay \$50 for published items. Kirk Steers is a PC World contributing editor and the author of PC Upgrading and Troubleshooting QuickSteps from McGraw Hill/Osborne Press.



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Toolbar Review

There has never been a better time to use a toolbar with your Internet browser. Toolbars can provide users with numerous features such as Pop-up Blocking, Driving Directions, Adult Content Filtering, Security Features, Spyware Detection, Games and more. Toolbars are a convenient and powerful addition to your browser, making it easier than ever to navigate the Internet.

The comparison chart below will help you decide which toolbar is right for you.

Toolbar Comparison Chart				
Toolbar Features:	Advanced Toolbar	Google	YAHOO!	msn
Search Engines	100+	1	1	1
Search Tabs	✓			
Blocks Pop-Up Ads	✓	✓	✓	✓
Calendar Application	✓			
RSS News Reader w/Ticker	✓			
Auto Form Filler	✓	✓		✓
Adult Content Blocker	✓			
Spyware Remover	✓		✓	
Homepage Protector	✓			
Browser Tracks Eraser/Cleaner	✓			
File Shredder	✓			
Add Buttons for Software	✓			
Add Buttons for Webpages	✓	✓	✓	
Screensaver Launcher	✓			
Games Links	70	0	10	10
E-mail Provider Links	52	0	1	1
News Provider Links	88	0	1	0

With its vast array of features and incredible ease of use, the Advanced Toolbar stands out from the competition. It's a powerful web tool that allows you to choose from over 100 search engines, 80 plus news sources, 50 plus email providers and can be completely customized to meet your needs. The Advanced Toolbar does not record any user data, has a very straight forward privacy policy and is totally spyware and adware free. You can get a free copy of the Advanced Toolbar at <http://www.advancedtoolbar.com> and take advantage of everything this incredible toolbar has to offer.



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environment for all phases of video, audio, DVD, and broadcast production. Edit and process DV, HDV, SD/HD-SDI, and all XDCAM formats in real time, fine-tune audio, and author surround sound, dual-layer DVDs.

SERIOUS MAGIC

Visual Communicator Studio version 2
Visual Communicator makes it a snap for anyone to create home videos, narrated photo slideshows, or personalized video greetings that can be sent over the Internet or on DVD. The award-winning software was designed specifically for users who know nothing about video creation, allowing first time users to create their first project in just 20-30 minutes. Live output adds the ability for you to self-produce live corporate broadcasts, conferences, distance learning courses, campus-wide newscasts and more.

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anyone to create home videos, narrated photo slideshows, or personalized video greetings that can be sent over the Internet or on DVD. The award-winning software was designed specifically for users who know nothing about video creation, allowing first time users to create their first project in just 20-30 minutes. Live output adds the ability for you to self-produce live corporate broadcasts, conferences, distance learning courses, campus-wide newscasts and more.

AZDEN

Azden WMSPRO Wireless Mic System
The "all-time" best selling wireless microphone for videography. This versatile system consists of the WM-PRO belt-pack transmitter, 2 plug-in electret condenser microphones, a lavalier (EX-503) and handheld (EX-413), and the WR-PRO receiver with both shoe-mount & veico.

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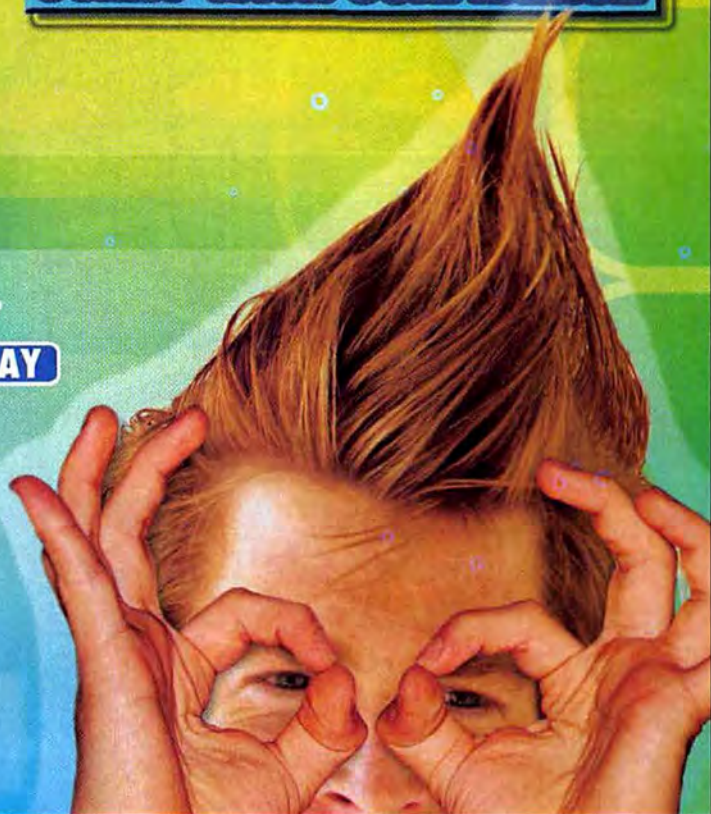
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John Michaels	Computer Room	03/20/2004 08:00:03 AM	Authorized
Evelyn Letler	West Entrance	03/20/2004 08:12:16 AM	
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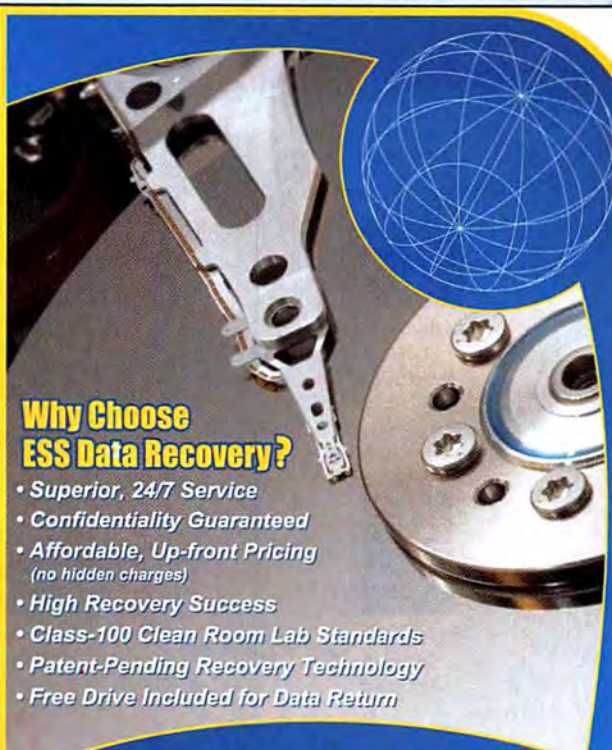
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17. I certify that the statements made by me above are correct and complete: Jeff Edman, President/CEO, 9/26/06



PCs vs. Stand-Alone Devices: No Contest!

NOT MANY YEARS ago, just about every home PC came with software that could turn the computer into a telephone answering machine. At first it seemed like a clever idea—who could complain about extra functionality at no extra cost? As it turned out, everybody: Getting the soft-

ware to work ended up being more trouble than it was worth, especially given the cheap stand-alone competition.

That particular idea went away, but the general concept has become a recurrent pattern. Why not replace product X—the answering machine, the phone, the CD player, the digital video recorder—with a program running on your PC? The computer on your desk has oodles of unused power; in theory all you have to do is harness it with software that, thanks to the PC's flexibility, can do *more* than any mere stand-alone device could.

But alas, there are always a couple of catches that make the PC-based replacement much harder to set up and much less dependable to employ than the simple, trustworthy original. And all that unused power never turns out to be quite enough to keep you from noticing when the extra software commandeers it while you're typing in your spreadsheet.

Now a different concept is beginning to catch on: PCs are cheap, so why not dedicate them to whatever task you might need done? Forget trying to manage your entertainment and do your work on a single machine in the den. Instead, install a Media Center PC right under the living-room TV—HP sells rack-mounted Digital Entertainment Centers—and devote it to play.

Need a remote control? Use an Ultra Mobile PC for the task. As HP and an outfit modestly named Exceptional Innovation showed at September's CEDIA home theater conference, you can even use a specially configured Media Center or Ultra Mobile PC to control things such



With computers, 'do it all' rarely equals 'do it all well.'

as your home's lights, thermostat, security system, and even its window blinds, all over your home network.

Excuse my skepticism, but I still see several big gotchas with this approach. As you may have noticed, Windows PCs are not exactly reliable beasts. What hap-

pens when you schedule your Media Center to record a rare late-night showing of some obscure film and it decides to download and install the latest security updates and reboot itself instead? What happens when antivirus software tries to block an intrusion (as mine did today) by completely disabling the computer's Internet access until you reboot? Maybe questions like these are one reason some proprietary media servers were tucked in a closet in the HP/EI demo.

And at a time when you can rent a decent high-def DVR from your cable company for \$10 a month, why would you want to mess with a PC that can't handle on-demand programming or, most likely, any kind of HD signal that doesn't come in over the air? True, some PCs can do certain things cheap stand-alones can't—like letting you network some kinds of content around the house

and send video captures to your friends—but you won't be doing all that stuff with the cheapest computer on the shelf anyway.

For now, at least, the dedicated entertainment devices I depend on aren't PCs. They're DVD players, a cable DVR, a game console, and a music player that docks with my stereo system. They may involve more wires and more cabinetry to manage, but in aggregate they're cheaper than a dedicated PC, and they do one thing PCs don't: They just work. ■

Contributing Editor Stephen Manes is cohost of PC World's Digital Duo (www.pcworld.com/digitalduo) on public TV. Visit find.pcworld.com/31595 for more Full Disclosure columns.

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