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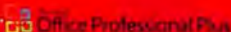
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Will the Next Web Revolution Leave the U.S. Behind?

SECRETS OF THE New Web

YOU COULD MAKE a strong case that the phrase "New Web" in this special issue's title is redundant. More than any communications medium before it, the Web is a permanent work in progress that's *always* new.

Its ability to reinvent itself on the fly stems in part from the way it continuously upgrades itself to take advantage of the latest advances in Internet access. For example, the arrival of speedy, persistent broadband in the late 1990s dramatically reshaped what the Web could do for us; so did Wi-Fi a few years later. Phone-based wireless data is doing the same thing right now.

This issue of *PC World* is bursting with evidence regarding where the Web is going, from the personal broadcasting tools in "Seize the Web" (page 105) to the phone-based services in "Best of the Mobile Net" (page 133). Technologies like fiber-to-the-house broadband and 3G and 4G wireless promise to deliver the even faster, more pervasive Internet that the next-generation Web will need.

But here's a secret of the New Web that's downright discouraging: On multiple fronts, the United States is no lon-

Slow. Spotty. Pricey. Right now, that's Internet access in this country. And the future of the Web is at stake.

ger among the most Web-ready places on the planet. Internet users in other countries—particularly Asian and Scandinavian ones—enjoy Internet access that puts ours to shame.

Consider these ugly facts:

- According to the UK-based Internet consultancy Point Topic, the U.S. ranked a desultory 24th in the world for household broadband penetration as of the first quarter of 2007, lagging behind countries large (South Korea, Japan, and Germany) and small (Luxembourg, Estonia, and Monaco).
- The Communications Workers of America says that the average broadband download speed in this country is 1.9 megabits per second—far pokier than in high-speed nations such as Japan (61 mbps), South Korea (45 mbps), Sweden (18 mbps), and Canada (7.6 mbps).
- In the U.S., according to the FTTH Council, just 1 percent of consumers have ultrafast fiber-to-the-home connections. That puts us 11th in its rankings,

trailing much of Asia and Scandinavia.

• The Information Technology and Innovation Foundation publishes broadband ratings of major countries based on penetration, speed, and cost to consumers. It relegates the United States to 12th place. (Once again, Korea and Japan are at the top of the heap.)

• In the U.S., about 15 percent of mobile phone users have the handsets and plans needed to use high-speed 3G data, says consultant Chetan Sharma; in Japan, more than 60 percent do.

The Competition Solution

The reasons behind these alarming statistics are complex and controversial. And I cheerfully admit to being a layman rather than an expert on stuff like communications policy and wireless spectrum allocation.

I do know that the consumers and businesses that pay for connectivity benefit from competition—between providers, business models, and technologies. So the utter domination of Internet access by a few monolithic companies depresses me, as do developments such as the 2005 U.S. Supreme Court decision denying small ISPs access to phone companies' DSL lines. I also believe that alternative providers need a shot at the wireless spectrum that will be freed up by the end of analog TV broadcasts in 2009.

As a consumer, I care about this stuff. As a voter, I'll be asking questions about it as we head toward the 2008 elections. And as a publication that aims to help smart people make the most of the technology in their lives, *PC World* will take stands on the state of Internet access in America. The country that invented the Internet shouldn't allow itself to become an also-ran in the Internet era—and it's not too late to get back on track.

Read Editor in Chief Harry McCracken's blog at blogs.pcworld.com/techlog. ●

PICK OF THE MONTH

BACK WHEN THE Web was new, period, it might not have gone anywhere without the help of Marc Andreessen, the co-creator of Mosaic and of Netscape Navigator, the first two popular browsers. Today, Andreessen is still making the online world more interesting, as a cofounder of Ning (www.ning.com), a site that enables anyone

to build highly customizable social networks for any purpose. Like Andreessen's pioneering creations of the early 1990s, Ning is inventive, practical, and easy to use; read more about this free service in Jeff Bertolucci's "Seize the Web" on page 105.



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PCW Forum



We got a lot of feedback on the spyware testing and ratings in the October issue. Many people thought we should be testing different programs, more operating systems, and different configurations. What would you like to see us do in future spyware stories? Tell us at find.pcworld.com/58961.

Die, Spyware, Die

In your October issue, the article on spyware detectors ["Die, Spyware, Die!"] gives PC Tools' Spyware Doctor 5.0 the top rating. What you didn't review is the performance hit. I think you should always note such products' effect on PC performance. Spyware Doctor 5.0 is the worst offender I have seen in a long time for bleeding off performance. This product makes my computer run—well, as Dan Rather would say, "slower than a constipated elephant."

Scott Stanley, Denver

I enjoyed the article "Die, Spyware, Die!" but I am puzzled as to why your tests were run only on Vista systems. I'm sure most readers are still running Windows XP and would like to know the state of the art for the more widely used OS. I couldn't find a reference in the article or online saying whether the results would be the same or different.

Jim Shaughness, Atlanta

As a consumer-level computer repair tech, I would be very interested in seeing different malware cocktails tested and reviewed. My company has in the past used a combination of Norton Internet Security, Ewido (now AVG), Windows

Defender, and SpySweeper with Antivirus to clean infected computers; however, we had to remove Norton IS because it bogs systems down so much. I would love to see *PC World* show different configurations for different security scenarios and show the results of testing. Is there a way to achieve a 100 percent identification and disinfection rate? What about a 99 percent rate?

Justin M. Frazier, Abilene, Texas

I can understand why you would test only 20 active spyware and adware samples. After all, a machine with more than that many infections might not even boot. But if there are at least 110,000 different adware/spyware programs in existence (the number of *inactive* samples you tested), how meaningful could it be to test only 20 live ones? For all we know, Windows Defender, which failed to detect or remove a single one of the 20, may do a superb job on the remaining 109,980.

charles1953, from the PC World forums

Is Apple the New Microsoft?

Regarding the online article "Is Apple the New Microsoft?" (find.pcworld.com/58959): Whenever a company behaves in its own interests, consumers claim "foul." They are companies, for crying

out loud—of course they want to lock you into their products!

There are alternatives to Apple devices and systems—plenty. But people like them. If people didn't like Apple so much, they would be making the same complaints that used to be made about Microsoft. If you don't like something a company is doing, vote with your wallet and don't buy its products.

dareyoutomove, from the PC World forums

You should compare how Apple runs its business with how Sony runs its PlayStation, or how Microsoft runs its Xbox. No one ever complained that Microsoft had a monopoly on the Xbox. The Xbox is Microsoft's own hardware, and the company has every right to do what it wants with it. Similarly, Apple can do what it wants with the iPod, because it is Apple's. When Microsoft made it difficult to run a competing browser or to install a third-party music player, well, that was downright wrong and bullying.

veggiedude, from the PC World forums

I was contemplating buying a Blu-ray DVD player because it looked like Blu-ray was winning the race. With Paramount's decision to go with HD DVD, we have an all-out war, and there is no way I'm buying a player anytime soon.

ecophoton, from the PC World forums

You act as if you stumbled upon a revelation about Apple being a monopolist. They always have been a monopoly. Macs are made by Apple Inc. for Apple Inc. and run Apple's OS and software. The difference between Microsoft's and Apple's monopoly is this term: *market share*. Microsoft's is over 85 percent.

digitizedsociety, from the PC World forums

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PCW Forum

The difference between the bundling of the iPod with iTunes and the bundling of Internet Explorer with Windows is that if Microsoft had succeeded, some important Internet standards would have become proprietary, for all intents and purposes. Nothing that important is riding on iTunes and the iPod.

kncumci, from the PC World forums

I have over 3000 songs on my iPod. Only 2 were purchased from iTunes. The rest were ripped to MP3 from my CDs, or were downloaded from other legal sites. I use iTunes for organizing and syncing and enjoy some of the radio stations, but you certainly don't need iTunes to get those stations.

dnharris14, from the PC World forums

Business Going Green

I appreciate your article "Going Green Is Good Business" [*Business Center*, October]; however, I was disappointed when the author did not mention solutions regarding software or paper retention. My company recycles batteries, cartridges, soda cans, and scrap paper. But paper retention is a must.

Pamela Duda, Chicago

Unnecessary Windows Discs

Regarding the story "Some Sales Reps Mislead to Sell Backup Discs" [*Consumer Watch*, November]: I am a former employee of Best Buy. It does not surprise me that customers were pressured to buy store-made recovery discs. Sales assistants were trained to up-sell everything from separate software to more RAM (which was to be installed by the Geek Squad).

Often when it came to technical details of computers, salespeople did not know what they were talking about. The primary focus was to get the sale and not to worry too much about a misstated detail or two.

1948, from the PC World forums

When I worked at CompUSA, we were highly pressured into selling these [recovery disc] services to our custom-

ers, even yelled at—because that is where the money is.

lydick1, from the PC World forums

I currently work for one of these companies, and while I cannot condone lying to a customer, these services can be a great help to many—especially those who do not wish to do the research, or spend several hours setting up their PC. You aren't buying the disc when you pay these companies. You are paying for labor. Making these discs can take a few hours. And while it is not difficult, some people would rather pay someone else to do it, and get it done right away. After all, I pay someone to do an oil change on my car. Could I do it myself? Sure, but I would rather have someone else take care of it. My time is much more valuable to me than the money I spend on the service.

prp1640, from the PC World forums

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

TELL US WHAT YOU THINK

RATE THIS ISSUE by going to www.pcworld.com/pcwininput—you could win a \$300 Amazon.com gift certificate. The site explains the official rules and offers an alternate method of entry into the prize drawing.

CORRECTION

THE ARTICLE "NEW Attack Can Evade Antivirus Applications" in November's *Security Alert* should not have been accompanied by a logo for Sun's Java programming language. The attack described in the story uses JavaScript, an unrelated scripting language.

PC World regrets the error.

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Intel's New Quad-Cores Show Modest Gains

BY JON L. JACOBI

PCW Test Center

THERE'S A NEW high-end desktop chip in town—namely, Intel's Penryn family of CPUs, which are the first built on a 45nm manufacturing process developed by the chip giant. Our first WorldBench 6 tests with the new chip showed only a minor performance gain for the 45nm, 3-GHz QX9650 Core 2 Extreme versus the 65nm, 3-GHz QX6850 Core 2 Extreme chip that it is supplanting. (See "Penryn Speed: Minor Gains in Mainstream Apps," page 24.) However, none of the applications in our test suite utilize the QX9650's new SSE4 instructions, which can greatly speed up tasks such as some key operations in video encoding in apps that use SSE4. (Intel's in-house benchmarks, and the demonstrations we saw at this fall's Intel Developer Forum, back up that claim.)

Let's Get Small

For now, the real news is that the 45nm manufacturing process Intel uses for Penryn should allow the company to keep churning out superfast desktop chips



CYBERPOWER'S POWER INFINITY Pro is the first system we've tested with Intel's 45nm, 3-GHz QX9650 Core 2 Extreme chip.

In our lab tests, Intel's 45nm Penryn CPU didn't blow away the previous generation, but the tech behind it should keep Intel ahead.

for the foreseeable future.

If Intel were to have its own TV show, it would probably be entitled *Honey, I Shrunk the Chips*. The Penryn family of CPUs, set to launch on November 12, are built on a manufacturing process that shrinks the features of

the chip down to a mere 45 nanometers (or about 1/18000 the width of a human hair). That's down from the 65nm process the company has used for its current Core line and the 90nm process it used on some Pentium 4s. The com-

pany has already demonstrated a 32nm process that it intends to begin using to produce chips in two years.

By shrinking the size of the transistors in its chips, Intel can produce more CPUs from the same amount of silicon, or build more-complex chips in the same amount of space. For example: A Celeron 300 made in 1995 using a 250nm process measured 131 square millimeters, yet contained a mere 7.5 million transistors; a current 65nm Core 2 Duo is a scant 11 square millimeters larger but contains 291 million transistors; and the new 45nm, quad-core Core 2 Extreme QX9650 that we tested for this article measures 214 square millimeters but contains a whopping 820 million transistors.

Hands-On

The QX9650, the first desktop Penryn chip, is a quad-core CPU that is aimed squarely at enthusiasts and other early adopters. (Among other things, it has no locks to prevent users from overclocking it.) For the most part, only select games and high-end audio or video applications can take advantage of more than two cores,

so the strategy makes sense on several levels. Mainstream users will have to wait until next year for more-affordable 45nm dual-core offerings. At press time, Intel remained tight-lipped about the exact pricing for the chip, but if the \$1000-plus prices (as of October 5) of the current top-of-the-line Core 2 Extreme QX6850 and QX6800 are any indication, the new CPU will not be cheap.

Like the existing quad-core crop of Core 2 Extremes, the new product is actually two dual-core CPUs paired on a single silicon package with a shared bus interface, running at 1333 MHz in this case. Each of the two dual-core CPUs carries a shared 6MB of secondary (L2) cache, up from the 4MB of each core of the previous QX6850 chip, for a total of 12MB. This larger secondary cache is partly responsible for the new chip's high transistor count.

Performance

Thanks to some optimizations and enhancements, such as faster divide operations and the larger L2 cache, Intel's own benchmark results from this spring's Developer Forum showed modest performance gains for Penryn over the last 65nm generation of chips running at the same clock speed, as well as moderate power savings.

To see just how much you stand to gain with a Penryn CPU running current hardware and software, we put together a test system built with Asus's Maximus For-



THE FIRST DESKTOP Penryn chip, Intel's QX9650 Core 2 Extreme, runs at 3 GHz.

mula X38-based motherboard, 2GB of DDR2-800 memory, a pair of Seagate ST3320620AS 320GB hard drives in a striped array, and an EVGA GeForce 8800GTS graphics card. We tested both the QX9650 and the older QX6850, using *PC World's* application-based WorldBench 6 Beta 2.

The QX9650 bested its older sibling by a mere point, 127 to 126. In the majority of our test apps, the new chip was 2 to 5 percent faster, but slower times in Nero and especially WinZip dropped the overall number. Neither WorldBench score would crack the top five in our power charts, though the GPU and hard-drive setup we used weren't cutting-edge, just close to it. As mentioned earlier, none of the applications in the WorldBench 6 Beta 2 suite are optimized to take advantage of the new SSE4 (Streaming SIMD [Single Instruction, Multiple Data] Extensions 4) instruction set, and only a few WorldBench apps can take advantage of more than two cores.

Intel's own benchmark results released on October 28, as well as the demos we witnessed at the fall Devel-

oper Forum, showed much larger performance gains with SSE4-optimized applications, such as an HD-optimized DivX encoder.

Infrastructure

Though they use the same LGA 775 socket as all recent Intel desktop processors do, Penryn chips aren't necessarily a drop-in replacement. Intel's Daniel S. Snyder says that the company will guarantee reliable operation only with its P35 and X38 chip sets, not with those of the older 975X and 965 families. Motherboard vendors such as Gigabyte,

however, are working to expand that support.

For example, Gigabyte's Tomas Lee confirms that the company's P35, G33, and P31 motherboards will run the new CPUs after a simple BIOS update. And nVidia tells us that its nForce 600i series of motherboards, as well as the recently launched GeForce 7150 and 7100 Series chip sets, will also work with Penryn CPUs.

Intel is pushing DDR3 as a preferred memory companion for its 45nm CPUs, and has incorporated support for it (as well as DDR2) into its more recent chip sets. >>

PLUGGED IN ERIC DAHL



NEW ZUNES: They ain't never catching Apple, but kudos to Microsoft for building in wireless syncing (and adding it to old Zunes) before other major vendors.



ADS ON YOUTUBE: Wait, you mean ads other than the ones that appear when somebody puts a TV show up without editing? I'm confused here.



FIVE MORE MONTHS OF XP: Sign #2643 that the Vista launch is not going well—vendors will continue to sell new XP machines through June 30, 2008.



RIAA'S \$220,000 VERDICT: Surely that gigantic decision against a Minnesotan single mother will make up for the vast sums of money your industry is losing. Right?



MORE EXPLODING TECHNOLOGY: This time, it was an iPod that caught a man's pants on fire. Kinda makes you worry about head-mounted displays, doesn't it?



RADIOHEAD SELLS MP3s: I love the DRM-free, iTunes-free approach, especially if I get to name my own price. But 160-kbps files? There's always a catch.

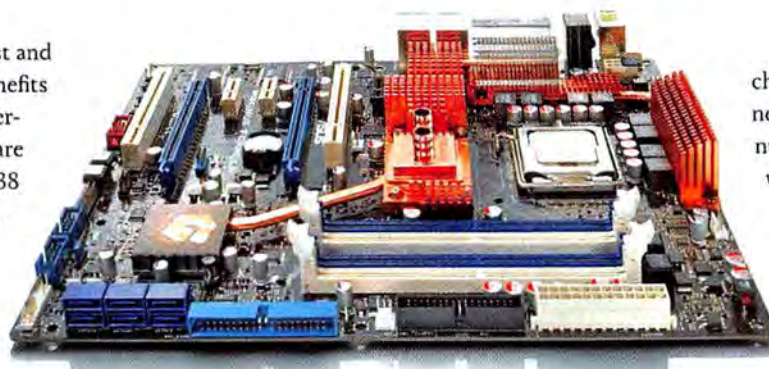


But given the high cost and small performance benefits of DDR3, many motherboard manufacturers are still designing their X38 motherboards around DDR2. Even the high-end Asus Maximus board we used for testing—equipped with a built-in water-block assembly so you can water-cool its chip set—uses DDR2. Some motherboards, such as the Asus P5KC, support both kinds of memory.

And some early Penryn PCs, such as the Power Infinity Pro from CyberPower that we tested for this story, will stick with motherboards using Intel's P35 chip set.

The Competition

AMD has lagged behind Intel in shrinking die sizes, putting itself at a distinct disadvantage in the economics of producing CPUs. Despite its tardiness, the company's Athlon CPUs have sold well because they



THE ASUS MAXIMUS Formula is one of several Penryn-ready X38-based boards that use DDR2 RAM despite chip-set support for DDR3.

outperformed Intel's products for a good three years starting in 2003. Athlon's dominance in speed tests ended abruptly in the summer of 2006 when Intel introduced its Core 2 line, though AMD's CPUs still compete nicely in terms of power consumption.

The financial advantages of shrinking die sizes are huge. Says IDC's Shane Rau: "It's classic Intel. Shrinking the die gives them more leverage over pricing, allowing them to outmaneuver the competition in the marketplace anytime they choose. In a

price war it's a huge advantage." In other words, AMD has its hands full.

AMD isn't just sitting around idly while Intel kicks its, err...circuits. According to AMD's Simon Solotko, December should see shipments of the company's quad-core Phenom desktop processors based on its new Stars core, which includes the Hyper Transport 3 bus and support for DDR2-800 memory, plus Opteron-like features such as a shared L3 cache. The latest announcement from the company is a 65nm triple-core Phenom

chip that should ship early next year. Generally the number three doesn't sit well in an industry based on powers of two, but with application support for more than two cores still a rarity, AMD believes that its triple-core chips can perform as well as quad-core processors do in many cases. And a triple-core option gives AMD a way to use quad-core chips with one defective or deactivated core to hit lower price points.

Unfortunately, since AMD hasn't yet shipped out any Phenoms—quad-core, triple-core, or otherwise—for testing, we can't say how they will match up with Intel's latest. Though they lack SSE4, their design and projected specs indicate that they should perform well. AMD has also started exploring methods of linking the GPU and CPU as an alternative way to improve multimedia performance.

Penryn Speed: Minor Gains in Mainstream Apps

PCW Test Center

INTEL'S NEW HIGH-END CPU, the 3-GHz Core 2 Extreme QX9650, showed only modest gains over its predecessor in our tests with mainstream applications.

TESTED SYSTEM	CPU	World-Bench 6 Beta 2	Time in seconds			
			Adobe Photoshop CS2 test	Autodesk 3DS Max 8 SP3	Multitasking test	Ahead Nero 7 Ultra
Core 2 Extreme "Penryn" reference system ¹	3-GHz Core 2 Extreme QX9650	127	307	318	213	336
Core 2 Extreme 65nm reference system ¹	3-GHz Core 2 Extreme QX6850	126	315	327	221	328
COMPARABLE DESKTOP PC						
CyberPower Power Infinity Pro ²	3-GHz Core 2 Extreme QX9650	120	303	320	214	592

CHART NOTES: ¹ All tested reference systems had 2GB of DDR2-800 memory, an Asus Maximus Formula motherboard using Intel's X38 chip set, a pair of Seagate ST3320620AS 320GB hard drives in a striped array, and an EVGA GeForce 8800GTS graphics card. ² The tested CyberPower Power Infinity Pro system had 2GB of DDR2-1333 memory, an Asus P5K3 Deluxe motherboard using Intel's P35 chip set, a pair of Western Digital WD1500AADF Raptor 150GB hard drives in a striped array, and a GeForce 8800GTX graphics card. Tests conducted by the PC World Test Center. For details on how we test, go to find.pcworld.com/52482. All rights reserved.

What It Means

For the moment, most users would gain little advantage in upgrading to a Penryn CPU—the chip may not be compatible with your motherboard, the market has few SSE4-optimized applications that would allow it to shine performance-wise, and it will certainly be extremely expensive. And rumors have hinted at new chip sets just down the pike that may offer superior support for the new processor line. So unless you simply must live on the bleeding edge, wait a few months to see how the market shapes up.



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Online Television Turning Into a Scavenger Hunt

WHEN NBC SEVERED its ties with Apple's iTunes Store in September, everyone knew that downloadable TV was headed for a shake-up. As networks rebel against Apple's one-price model in iTunes, they're turning to new partnerships and fresh approaches for offering downloads via the Web—and legally downloading TV shows to your PC is now easier than ever. But while this TV-download turmoil gives you more options for catching up with the episode of *Heroes* you missed this week, it can make for some confusing choices.

NBC Chooses Unbox

Shortly after NBC Universal dissolved its arrangement with the iTunes Store, the company began offering shows from its networks (which include NBC, USA Network, Sci-Fi Channel, and Bravo) for download at Amazon's Unbox Video Downloads service. Unbox now boasts a catalog of 2600 current and past shows.

NBC didn't stop with the Unbox deal. The network, which has had a division dedicated to producing digital content for two years, then announced its plans to strike out on its own and offer content for download directly to viewers.

After completion of beta testing in October, the NBC Direct service should launch on NBC.com in November. The service will provide access to current-season shows as well as to previous-season and library content.

With networks launching new sites and trying new approaches to downloading TV programs, finding your favorite shows has become harder.

At launch, NBC's videos will be limited to downloads for PC viewing; the free, ad-supported files will be tied to your hard drive and will expire seven days after the TV broadcast. For the most part, the content will be the same as what NBC offers as a streaming experience, albeit at a higher resolution and bit rate. NBC has been mum

Future plans for the NBC service could bring high-definition downloads. "Free, on-demand, ad-supported streaming; free, on-demand, ad-supported downloads; subscriptions; pay-per-view; and download-to-own—it's our intention to make all of those available," as long as the company can find a way to make money with them,

analyst Greg Ireland. NBC, ABC, CBS, Fox, and The CW all provide streaming of select television shows, including hit series, directly from their own Web sites. ABC, for example, features programs in both full-screen and small-screen modes, and in high-definition (though ABC's streaming works only in Internet Explorer).

Streaming Options

CBS says that its main focus is ad-supported, free streaming online, via its various site partnerships—including Joost.com (which has just entered public beta) and AOL.com. And Fox and NBC have partnered to form Hulu.com for streaming video from their networks as well as from others. Hulu in turn will distribute its video via AOL, Comcast, MSN, MySpace, and Yahoo.

All of this choice is bound to cause some consumer frustration, as finding your favorite TV show for download or streaming turns into a scavenger hunt that spans network sites, Web storefronts, and third-party Web sites, all stocked with programs from different subsets of networks and studios. And tangled distribution rights—for example, CBS, not Paramount, now owns the *Star Trek* franchise—can further muddy the waters.

These new online TV offerings may prove to be difficult to manage, but they're becoming a decent way to augment, though not replace, normal TV viewing.

—Melissa J. Perenson



JOOST.COM, WHICH IS now in public beta testing, offers more than 250 channels of video, many of which are devoted to network TV.

on the exact specifications, such as resolution and encoding, beyond acknowledging that the shows will be WMV files with digital rights management protection. The company has revealed that the offerings will be similar to the files that are provided through Amazon Unbox in DVD-like resolutions at 2.5 megabits per second and portable files encoded at 700 kilobits per second—though the portable downloads may not arrive right away.

according to George Kliavkoff, chief digital officer at NBC Universal.

Most of the other major networks will continue to offer a limited selection of programs from their back catalog of TV episodes, while rolling out more and more current episodes for download via storefronts, such as Apple's iTunes and Amazon's Unbox.

In fact, streaming will continue to enjoy the lion's share of usage, predicts IDC

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Microsoft



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There's so much more
you can do when your
phone runs Windows.
startdoingmore.com

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SONY'S FIRST COMMERCIALY available OLED TV, the XEL-1.

Incredibly Thin OLED TVs Nearing Release

OFFERING FAST response times, superwide viewing angles, and exceptionally thin packaging, OLED is one of the most promising display technologies around. Thanks to Sony and Toshiba, some of that promise is finally becoming reality.

Sony's first OLED television set, the \$1740 XEL-1, will go on sale in December. The product's 11-inch OLED screen is just 3mm thick—much thinner than the screens on LCD and plasma TV models. That's because no backlight is required: OLED materials, which are carbon-based, emit light on their own when an electric current is applied.

The XEL-1 will accept video signals of up to 1080p, even though the set's screen has a resolution of just 960 pixels by 540 pixels.

Toshiba also plans to begin selling OLED TVs as soon as it can produce panels in volume, likely in 2009.

—Sumner Lemon

GEEKTECH TOM MAINELLI



Technology, the Cruel Temptress

Some days I love my toys; other days I hate them. And at times—like when my Xbox 360 first met my home network—I do both.

I EMBRACE TECHNOLOGY, but sometimes I can't help feeling that technology neither loves nor respects me. My most recent example: a string of mishaps surrounding my purchase and setup of a brand-new Microsoft Xbox 360.

I put off buying a 360 for a long time, largely due to the console's well-documented—but supposedly addressed—reliability issues (for the grim details, see "Chronicles of an Xbox 360 Support Odyssey," find.pcworld.com/58937).

Halo 3, however, is a must-play for me—so much so that I made plans with friends to go a few rounds with the highly anticipated title online the Friday evening of launch week, even though I didn't yet own an Xbox 360.

I shopped around and decided to buy my Premium 360 from Amazon.com, which was my first mistake. Though I requested overnight shipping, the company erroneously sent my package by UPS Ground (a service that seems designed for maximum crawl). As a result, my 360 wasn't scheduled to arrive until the following Tuesday, roughly five days too late.

Well, that just wouldn't work, so on Thursday I drove to four different stores before I found a GameStop with the Premium console in stock. At home, setup went quickly, and soon I had the 360 communicating with a new Linksys WRT54G Wireless G router (an upgrade from an old but dependable 802.11b router) that I'd installed just for the occasion.

I went to bed happy, confident that I was all set to play on Friday.

Friday evening, 30 minutes before game time, I gently put the Halo 3 disc in the tray. Midway through the opening screens, the console crashed. I restarted the console and reinserted the disc; again and again it crashed. I tried another game: same results.

I was furious, mostly at myself for buying a product with such well-known problems. My blood pressure rising, I repackaged the 360 and headed for

GameStop, expecting that I might have to do some vehement arguing to get a new unit.

Instead, the nice fellow at the store quickly exchanged my defective box for a new one, few questions asked. Bravo, GameStop.

The Show Must Go On

I returned home, quickly set up the console, and inserted Halo 3. It started successfully. Minutes later I eagerly clicked on the accept button to join my friends in an invitation-only Halo 3 campaign—only to receive a network error message citing something about a problem with NAT (Network Address Translation).

I bowed out of the game, promising my buddies that I would return shortly.

Searching online, I found a tip suggesting that opening certain ports on my router would resolve the issue, but the Linksys EasyLink Advisor software didn't make that so easy. So I pulled up the router's browser-based interface, only to find all the settings in Spanish!

Angry, frustrated, and tired, I made a classic geek error. Instead of stopping, I pushed forward, and decided to reinstall the router. Within 30 minutes the PC could no longer even see the router, and I was thoroughly defeated.

Oh, technology, why must you be so cruel?

I got ready to go to bed, and then realized that the 360 was still running. As I went to shut it off, I glanced at the Halo 3 start menu. I decided to launch a solo game—you know, just to watch the opening scenes.

I didn't turn off the console until after 3 in the morning, exhausted but giddy.

Technology may not respect me, but I'll be damned if I'm not smitten anyway.





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New Ways to Solve Your Cell Phone Dead Spots

READY TO ABANDON your landline, but stymied by poor indoor cell reception? Two new technologies—one that lets you make calls over your home Wi-Fi network through your cell phone and another that uses tiny, in-home cell towers called “femtocells”—are emerging to fill gaps in cell coverage.

Both services make use of your broadband connection to route in-home cell phone calls over the Internet using VoIP, but they let you make and receive calls directly from your mobile handset, with your regular cell number. You can start a call indoors over broadband and continue it outside over cellular, and vice versa. According to early adopters, both systems are transparent to use and both function well.

Your Own Cell Tower

Sprint's Airave system places a miniature cell tower, called a femtocell, in your house. The service is being tested in Denver, Indianapolis, and Nashville, and is set to roll out to the rest of the country in 2008. The Airave hooks up directly to your broadband router. When in range of the Airave, any Sprint handset will connect automatically to the device, which will then transmit calls over the Internet. As many as three handsets, from a pool of up to 50 “registered” phones, can make or receive calls simultaneously on a single femtocell. Additional callers are routed to the nearest cell tower.

We couldn't test the Airave, but early users report that handoffs between tower and femtocell work well and that call quality is excellent. Sprint charges \$15 per month per line for unlimited calling (\$30 for a family plan), in addition to \$50 for the Airave hardware.

The Home Hotspot

T-Mobile's HotSpot@Home (reviewed alongside the new BlackBerry Curve 8320 on page 84) went nationwide this summer. It uses hybrid

If using your cell phone in your house is an exercise in frustration, one of these three growing technologies could fix the problem.

handsets that switch from a cellular network to Wi-Fi when you move into range of a hotspot. But built-in Wi-Fi isn't enough, as special circuitry must perform the handoffs between the Wi-Fi and cellular networks. Only a few handsets work with the service: Nokia's 6086, Samsung's t409, and RIM's newest BlackBerry Curve. And though any Wi-Fi router will work with the service, T-Mobile sells optimized models from D-Link and Linksys that promise to provide better voice quality and to extend your handset's battery life. (Wi-Fi is a big power eater.)

We tried the service with the Linksys router and the Nokia handset, and it worked right off the bat, with no set-up beyond creating a Wi-Fi encryption password. The



THE NOKIA 6086 Wi-Fi-enabled handset and a Linksys router for HotSpot@Home.

phone automatically connects when you move within range of the router, and you simply make and receive calls as you normally would. It also works at any hotspot that

doesn't require a browser log-in screen, and the service kicks in free of charge at any T-Mobile hotspot. In our tests, voice quality was similar to that of calls made using VoIP service Vonage.

T-Mobile's fees are in the same ballpark as Sprint's: An optional special router costs \$50, and unlimited Wi-Fi calling is \$20 per month per line or \$30 for a family plan. You can also let Wi-Fi calls use your cell minutes and pay no extra monthly charge.

Signal Boosters

If you'd rather not pay a monthly fee for expanded cell coverage, a cellular signal booster such as those from Wi-Ex and Wilson Electronics might be a better alternative. For \$400 you can buy a dual-band amplifier and antenna system that

works with both CDMA providers (such as Sprint and Verizon) and GSM carriers (AT&T and T-Mobile). Cell boosters require an antenna in a spot (often outdoors) that has good reception—the amplifier can boost indoor signal strength only to the level the outdoor antenna receives. But they work with any normal handset, and can even boost 3G data access.

All three technologies can liberate you from your landline and save money. The best fit for you will depend on your carrier, coverage, and calling patterns. Expect to see more offerings in 2008, with new equipment—such as integrated femtocell/Wi-Fi routers—coming from Netgear and other networking vendors. Also expect a variety of pricing strategies, such as a monthly fee for unlimited calls within a “home zone” around your home or office, or equipment leases. While the options may be more complex, the end result should simplify your life.

—Becky Waring

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Hands-On With Windows Vista Service Pack 1

THE FIRST SERVICE pack for Microsoft's Windows Vista operating system won't arrive until early next year, but judging from our experience with a beta of SP1, the update will be more about stability and security fixes than noticeable performance gains.

What's Improved

Many alterations in this service pack—we tested version 0.275—won't be obvious to a casual user. You probably won't notice any interface changes, for example.

Instead, Microsoft says, the service pack beta improves stability, performance, and



reliability when reactivating a machine from Hibernation or Suspend mode; enhances device-driver support; increases security; and adds support for new standards such as Extended File Allocation Table (intended to

enhance flash storage on notebooks, not desktops).

According to Microsoft, typical load times for the final version should range from 30 to 60 minutes. The installation requires 7GB of free hard-drive space (some of which will be reclaimed after the installation is complete), though the finalized install file itself is expected to be a 50MB download via Windows Update.

In our early tests with the beta, we saw some small improvements in boot time on an HP Compaq 8710p Core 2 Duo notebook. Before SP1, the laptop took 1 minute, 51 seconds to boot. After the

update, that figure dropped by almost 20 seconds.

Microsoft is also touting improvements in "the speed of copying and extracting files," so we tested a few of those scenarios. We noted a slight increase in the time required to copy 562 JPEG images totalling 1.9GB from an SD Card to the hard drive of the aforementioned HP Compaq notebook.

In another test, we used Nero 7 Ultra on an Acer Aspire 5630 Core 2 Duo laptop to add files to a disk image. After we installed SP1, the notebook built the disk image about 7 percent faster.

—Melissa J. Perenson

BETA WATCH

EDWARD N. ALBRO



Zoho DB & Reports: Online Data Analysis

ZOHO ALREADY HAS one database app: Creator, which provides lots of options for making a database. Its new app, called DB & Reports, has fewer creation options but gives you lots of ways to graph and analyze the data you have (you can build a database from scratch or import data from a spreadsheet). Creating pivot tables, pie charts, and custom queries is relatively simple, though this free beta still has some annoying bugs. db.zoho.com

Stixy: The Fridge Door of the Net

IN LOTS OF homes, the refrigerator door is where photos, to-do lists, notes, and interesting stories from the paper end up being displayed. The free Stixy is a Web version of that kind of free-form repository. You drag a widget for notes, photos, documents, and to-do lists anywhere onto your Stixy board, and then add content. Upload files (including music files), paste something from another Web site, or just start typing. You can share your board with friends and easily rearrange the widgets, too. stixy.com

Mint: Put Your Finances on Autopilot

YOU KNOW YOU should keep track of your finances, but who has the patience for all that data-entry work? Mint.com can help. Give it the log-in info for your bank and credit card accounts, and it'll download your transactions daily and do its best to categorize your



USING THE WIDGETS at the bottom of the screen, you can place notes, photos, to-do lists, and documents on Stixy's online notebook.

purchases automatically. The free service even sends you e-mail or SMS alerts if your balance drops dangerously low or if it notices lots of unusual spending. Mint works best with fairly large financial institutions; it may not be able to connect with your local credit union. It doesn't monitor investment or loan accounts. mint.com



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Dell recommends Windows Vista® Home Premium.



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USB 3.0 Will Offer a 10X Speed Boost Over USB 2.0

INTEL AND A group of companies including HP, Microsoft, NEC, and Texas Instruments have begun



developing the successor to USB 2.0. The third generation of USB will transfer data at speeds of up to 4.8 gigabits per second, ten times faster than USB 2.0's 480-megabits-per-second transfer rate. The new standard will be backward-compatible with existing USB 2.0 and USB 1.1 devices.

According to Intel, the USB 3.0 specification will be designed for low power consumption and improved efficiency. USB 3.0 ports and cabling will be designed with both copper and optical cable capabilities, so even higher speeds will be possible in the future.

Updates are also planned for the Wireless USB (WUSB) transfer format, which currently operates at the same 480-mbps speed as USB 2.0. A new WUSB 1.1 interconnect format will operate at speeds of up to 1 gbps.

Jeff Ravencraft, Intel's technology strategist, cites increasing interest in digital music and high-definition video as the main reason for updating the USB standard. The group hopes to have a final specification ready by the middle of next year.

—Chris Mellor

GADGET FREAK DAN TYNAN



Pushing the One-Button Household

IT WASN'T THE first time my wife had threatened divorce, but this time it sounded serious.

"If you *had* spent \$5000 on this thing, you'd be shopping for a lawyer," she warned, with a look that said Don't Even Try to Sweet-Talk Your Way Out of This.

"This thing" was a Control4 home automation system that was

supposed to simplify our lives. After we connected the HC-300 Home Controller to our A/V gear and a wireless access point, we could dim the lights, turn on the projector, and load a DVD by pressing a single button on a handheld remote. Other buttons let us watch TV, play digital music throughout the house, control the thermostat, view a security cam, and cut the power to my son's computer whenever he refused to stop playing RuneScape.

Automation systems like this were once a luxury item, but lately they've become much more affordable. Walk into a big-box electronics store, and you'll find them sold alongside flat-panel TVs and surround-sound stereos.

"We call it the 'No TV Left Behind' plan," says Control4 CEO Will West. "Anyone who buys a digital TV is a customer for these systems."

Obviously, he has never met my wife.

Control and Chaos

Though our Control4 system did what it was supposed to do, simple things—like turning on the lights by hand instead of using the remote—could throw it out of whack. We noticed a lag between pushing a button and getting a response via Control4's Wi-Fi network, and some tasks required six or seven steps, not just one. "How do I get this @#@\$#! thing to work?" became a familiar refrain.

To be fair, our home theater was designed by Dr. Frankenstein—the projector, receiver, and

media players all purchased at different times and strung together with A/V cables. Our Control4 installer replaced the receiver and DVD player with more recent models, and then began connecting devices

and writing scripts. A mere 8 hours later, he was done. An hour after that, the cursing started.

A Control4 setup like

ours—the home controller, an access point, two touch panels, two zones of audio, lighting controls, an iPod dock, a programmable thermostat, and a security cam—would cost roughly \$5000 at retail, plus another \$1000 or so for the installation and programming, says Control4 CTO Eric Smith,

who personally installed my loaner system free of charge.

The biggest problem: Unless you're an A/V geek, you'll have to call in a programmer every time you need to troubleshoot or add gear.

Sticker Shock

Nevertheless, home automation is almost

ready for prime time, according to Patrick Hurley, research director at telecom analyst firm TeleChoice and coauthor of *Smart Homes for Dummies*. Before mainstream buyers jump in, however, prices need to drop farther, the software must become easier to program, and the free-for-all of competing communications protocols such as Insteon, Zwave, and Zigbee has to shake out in the marketplace.

Even then, most consumers will adopt home automation for energy efficiency—the ability to turn off lights and crank down the heat automatically when they're not needed, Hurley says.

Personally, I loved how the Control4 allowed me to turn off every blinking device in my living room with the press of one button. But I also pined for the grace and simplicity of my TiVo remote. Maybe someday I'll be able to have both—without putting my marriage at risk.





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Attack of the \$200 Laptops!

THE \$100 LAPTOP may still be a myth, but the projects it inspired—rugged, networked, ultracheap, and low-power portables created to aid educational programs in developing countries—are very real. And after months in development, they're finally about to ship. Here's a run-down of the designs and their key specs. —Eric Dahl and Tom Spring ●

OLPC XO

Price: \$200

CPU: AMD Geode LX-700 with integrated graphics

Display: 7.5 inches, 1200 by 900

Storage: 1GB flash

RAM: 256MB

Networking: 802.11b/g Wi-Fi, plus mesh networking

Features: Built-in camera, speakers, game-pad controls, and mic

Number of green, antenna-looking things: Two

Availability: For a limited time, xogiving.org will sell you one for a child in a developing country and one to keep for \$400



Designed for schoolchildren in developing countries, these inexpensive, stripped-down portables are drawing lots of interest from the gadget set.



Intel Classmate PC

Price: Expected to cost \$200 to manufacture

CPU: Intel Celeron M CPU and 915GMS chip set with integrated graphics

Display: 7 inches, 800 by 480

Storage: 2GB flash

RAM: 256MB

Networking: Ethernet and 802.11b/g Wi-Fi

Features: Built-in microphone and stereo speakers, optional wireless pen for note taking

Approximate width of screen bezel: Rather a lot

Availability: Sent to pilot programs in Brazil, Nigeria, and some Asian nations; won't be sold to individuals

Asus Eee PC

Price: \$260 to \$400

CPU: Intel mobile CPU and graphics

Display: 7 inches, 800 by 480

Storage: 2GB to 4GB flash

RAM: 256MB to 512MB

Networking: Ethernet and 802.11b/g Wi-Fi

Features: Built-in Webcam, MMC/SD card reader, three USB ports

Percentage of name that is "e": 60 percent

Availability: At press time, available for preorder through sites such as allasus.com



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Acer recommends Windows Vista® Ultimate.



November/December 2007

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- Optical mouse
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- Internal power adapter
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- Internal power adapter
- Silver color

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(ET.F16WP.B02)



Acer AL2216WBd

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- 1680 x 1050 native resolution
- 700:1 contrast ratio
- 170° horizontal viewing angle
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- VGA, DVI (HDCP) signal connectors
- 300 cd/m² brightness
- 5ms response time
- Internal power adapter
- Black color

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(ET.2216B.0D0)



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- 5ms response time
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(ET.1917B.0DC)



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- VGA, DVI signal connectors
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- 5ms response time
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(ET.C17WPA.04)



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(ET.1916B.W08)

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(ET.B17RPF.04)



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- 16ms response time
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(ET.B16WPA.01)





Acer® Aspire® 3100



Acer SignalUp

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



Acer GridVista

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



Acer DASP

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Display sold separately.



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- VGA, DVI signal connectors
- 300 cd/m² brightness
- 5ms response time
- Internal power adapter
- Black color

\$219

(ET.D16WP.B04)



Acer AL1916 Cb

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

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(ET.1916B.00C)





Acer® AcerPower™ 1000



Display sold separately.

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AMD Athlon™ 64 X2 Dual-Core Processor 4000+
Genuine Windows® XP Professional

Acer Empowering Technology



Acer eLock Management

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



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- 5ms response time
- Internal power adapter
- Black color

\$185

(ET.B16RP.F02)



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Acer recommends Windows Vista® Business.



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² For a free copy of the standard limited warranty end-users should see a reseller where Acer products are sold or write to Acer America Corporation, Warranty Department, P.O. Box 6137, Temple, TX 76703.

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

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

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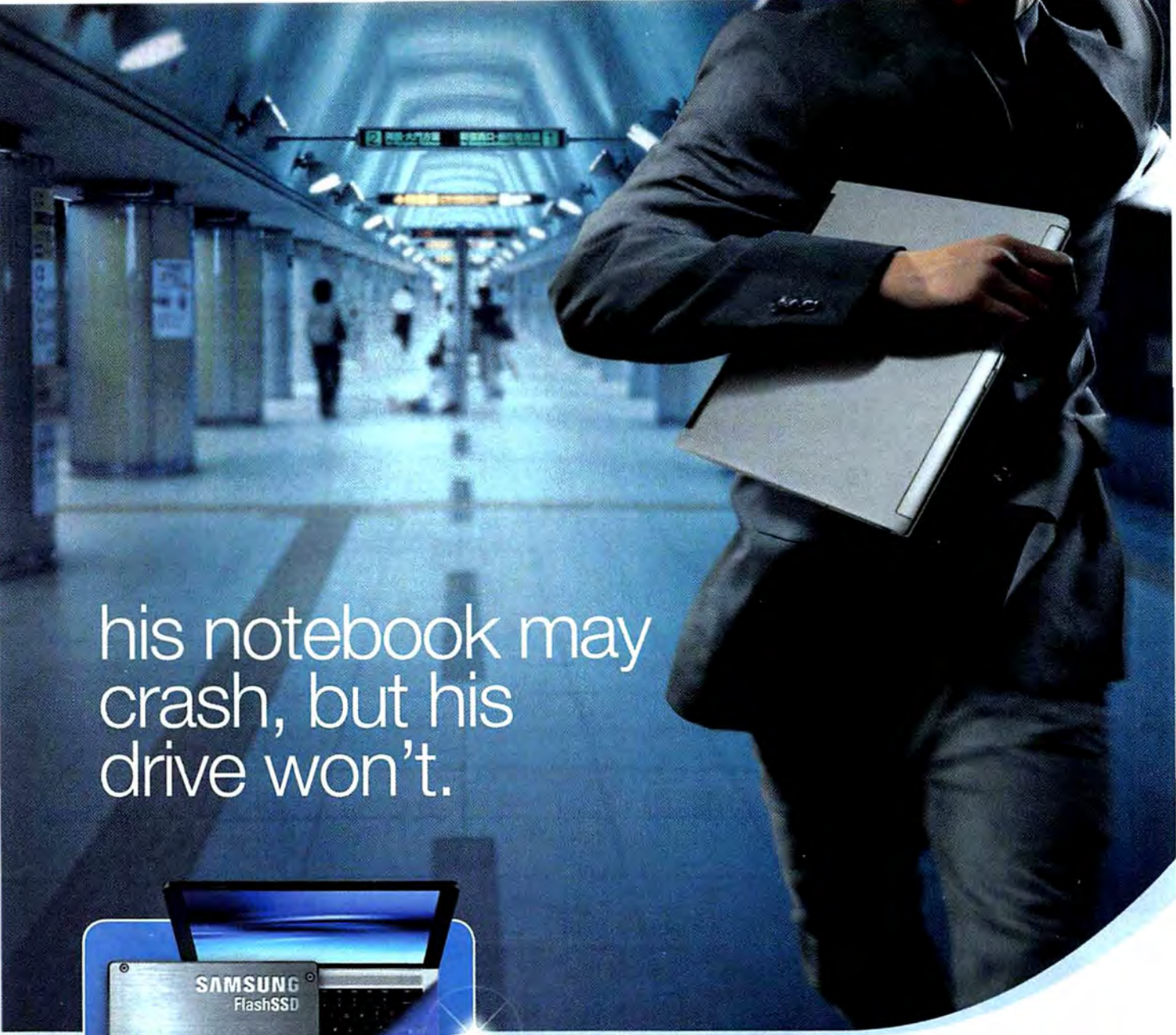
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Consumer Watch

The Painful Cost of First-on-the-Block Bragging Rights

In the wake of Apple's swift—and steep—iPhone price cuts, early adopters may have to live with shorter windows of joy.

BY JOSH KRIST

WHEN APPLE ANNOUNCED a massive price cut on the iPhone only two months after its introduction, the company didn't merely upset its loyal fan base: It very well may have signaled a sea change in the economics of early adoption. Being the first with the latest tech toy is becoming a fleeting experience—and one that may or may not remain just as sweet.

Ask Eunice Woo, who waited 3 hours in line at an AT&T store in Daly City, California, to become the first iPhone owner in her group of friends. Woo is still fuming at the memory of Steve Jobs announcing that the 4GB model she bought for \$499 was roadkill on the road to progress. Apple now offers only the 8GB phone for \$399—a full \$200 drop from its launch price.

"I felt really angry at Apple, and I still do—I could have had an 8GB phone for only \$400," Woo says. "When someone tells you that what you just bought from them isn't really worth the price you paid and they don't even offer it anymore, you feel cheated."

Unusually Early Price Cut

Most early adopters understand that they are paying a premium, but they expect their bragging rights to last for more than two months. While Woo welcomes Apple's offer of \$100 credit toward purchases at any Apple retail or online store, she would have preferred a trade-in offer that would let her get the 8GB model without taking a big loss on her 4GB unit.

Roger Kay, president of market research firm Endpoint Technologies, agrees that the iPhone price drop was unusually early and large. "Normally, early adopters ought to get about six months to run with a device before the vendor drops the price," he notes.

Kay believes that Apple needed to goose iPhone sales to recoup more of its investment in the touch-screen technology that is now also available on the iPod Touch.

"The strategy was right; the tactics were lame," Kay says of the price cuts. "It's all a matter of timing. [Apple] could have waited a bit to bring on the next round of products."

Chris Crotty, a consumer electronics market analyst at iSuppli, says savvy consumers should expect what Apple did with the iPhone—albeit with less severe price cuts—to become the norm.

"The time it's taking to develop products is coming down, and that's going to put a lot of pressure on companies to think about their pricing differently," he explains. But this trend can be good news for consumers.

"For example, during the last few years the price [and] product competition was so intense in the digital camera market that some of the companies...took losses for the first time. Consumers

benefited from the [rising] quality of digital cameras and the whole emergence of digital SLR," Crotty says.

Phones seem particularly prone to big price cuts. The Razr V3 cell phone from Motorola debuted in late 2004 with a \$500 price tag, but within months Motorola started dropping the price due to competitive pressures. A new version of the Razr launched in August—and AT&T sells the old one for \$50 after rebates and with a two-year contract.

"This trend is going to continue—most consumers don't realize that most of this [price-cutting] is driven by the >>



EUNICE WOO WAITED 3 hours to buy a 4GB iPhone, only to see Apple discontinue the model two months later.

High prices aren't the only drawback of early adoption. Go to find.pcworld.com/58901 to read one editor's rant about how being an early adopter sometimes feels like paying to be a beta tester.

rapid advances in semiconductors," Crotty says. As semiconductors become more powerful and standardized—more than 20 MP3 players on the market today use the same basic chip, for example—it's easier for electronics manufacturers to add desirable features.

How to Win Without Being First

As product cycles shrink, however, so do the windows for being first with cool new technology.

Ivan Tam of Milpitas, California, an account manager at a computer reseller, is a veteran early adopter who now closely studies his potential purchases—he has been burned too many times.

Case in point: Tam has purchased three DVRs. He bought a ReplayTV device early on; when ReplayTV stopped making hardware, he bought a TiVo. Now he's using a DVR from his satellite-TV provider. The lesson here is that buying early often means repurchasing.

Tam still buys new gadgets—he got a Nintendo Wii within days of its initial release—but says he's an "early adopter as far as research, but not in terms of buying. I usually wait for the technology to work itself out a little."

Tam is holding off on buying an iPhone until a model that supports 3G cellular networks appears (the current AT&T units support only EDGE, which transfers data at roughly dial-up speeds compared with AT&T's DSL-like HSDPA/UMTS service).

Analysts say another iPhone model may be announced either in time for holiday shopping or at next January's Macworld. But those observers we spoke to believe Apple will try to avoid riling up its loyal user base this time around. Just giving early adopters more time to enjoy their purchase, as End-point's Kay notes, could go a long way toward keeping them happy.

But no matter how short product cycles become, some people will always pay more to be early adopters.

"Everyone wants to use the newest, coolest stuff. It's just human nature," iSuppli's Crotty concludes.

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Outsourcing Customer Satisfaction

"SATISFACTION Guaranteed." That's the traditional merchant's pledge to customers, a promise that if

you aren't happy, they'll make things right. Such promises used to be an integral part of the shopping experience.

Now, however, some e-tailers are offering that kind of guarantee as a checkout extra—a service that you pay for, like extended warranties. And like so many other services these days, it's outsourced.

Assurz, a relative newcomer in online commerce, is the purveyor of the "100% Satisfaction Guarantee" you can now obtain for most products at TheNerds.net (and, by the time you read this, at TigerDirect). Offered during checkout, the service will tack about 3 percent onto the cost of your purchase.

Here's what Assurz's service promises: 90 days to decide whether to send the purchase back; full reimbursement for all charges, including shipping, should you decide to return it; and prepaid return shipping by Assurz.

That's much better than TheNerds.net's standard return policies: 30 days for returns, you pay for return shipping, and the company deducts shipping charges plus a 3 percent "credit card convenience fee" from the refund for returned items.

The charges are only part of the hassle. Like most retailers, TheNerds.net requires that you call for an RMA (Return Merchandise Authorization) number before sending anything back; if you don't get that number, the company charges a 15 percent restocking fee.

When I tried buying a TomTom One GPS unit from TheNerds.net and opted for Assurz, I encountered an initial glitch: The total bill reflected the \$7.87 cost for Assurz, but the service wasn't itemized in

Worried about buyers' remorse? Some merchants will make it easy to return your purchase—if you pay extra.

the printout or the Web version of the bill. This matters because you need an Assurz number as well as your order number if you want to use the service.

I quickly called customer service and was told it would be fixed immediately. But the itemized charge was still missing a week later, when TheNerds.net e-mailed me to say that the item was out of stock and that they would refund the amount billed to my card.



Returns Only

Assurz CEO Steve Hoffman says that Assurz offers what he calls "regret-free shopping." For retailers, it promises to lower the abandoned-shopping-cart rate among nervous customers.

Of course, some shoppers might be annoyed that they have to pay for the service; but Assurz says some of its merchant customers absorb the cost of the service themselves.

Assurz doesn't solve all post-purchase issues. Hoffman emphasizes that it does not, for example, accept returns of defective products; these must be handled through the manufacturer's or retailer's warranty process. Rather, it is meant to be the perfect antidote for buyer's remorse.

While I love the concept, I'm less thrilled about having to pay up front for it. After all, I don't buy tech products intending to return them, so to my mind Assurz's service is like insurance: a bet that things won't go as planned, and that the retailer won't be there to help you. It's a shame that customers now have to pay to guarantee their own satisfaction because merchants can't afford—or don't feel the need—to do it anymore.

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ON YOUR SIDE

AMBER BOUMAN



WHEN I RECENTLY ordered a Sony VAIO PC online, I also purchased the \$150 two-year Extended Service Plan. The fee was promptly charged to my credit card, and I received documentation confirming the plan—but the effective date was the date I placed my order, not (as the sales representative told me) the day that the computer shipped. I immediately called and was told to call back for a correction when the laptop was delivered. But when it arrived (nearly a month after I'd placed the order), customer service representatives said they could not change the coverage date. I believe that Sony has charged me for nearly one month of warranty coverage on a computer I had not yet received.

Alex Demel, Plano, Texas

OYS Responds: Sony officials acknowledge that Demel's warranty coverage should not have started the day he ordered the PC; normally coverage begins when a product actually ships, in order to protect it while it's in transit.

Demel's VAIO shipped three weeks after he placed his order, so his complaint that he was being shorted on warranty coverage was valid. After we contacted Sony, the company changed the warranty start date to the day that Demel's system was delivered.

Sony is not alone in starting warranty coverage when a PC ordered by phone or online ships: Dell says its policy is essentially the same. Hewlett-Packard, however, says its warranty coverage begins when the customer receives the PC. In any event, if you notice a discrepancy in coverage dates, be sure to insist on speaking with a supervisor.

Finding a Company's Number

San Francisco reader Adam Lazar wrote to seek help contacting eMusic about changed account settings. He was unable to locate a customer service phone number on the music download service's Web site, and had received no response to four messages he had sent over ten days using a customer service Web form.

eMusic told us Lazar could have found a corporate phone number by clicking Contact Us on its site (Lazar looked only under Customer Service), and said it generally responds to user messages within 24 hours. The company attributed the delays in Lazar's case to problems relat-



ing to a rollout of new software, and has since resolved his issue.

OYS tip: Try the Better Business Bureau Web site for phone numbers if you can't find any on a company's Web site.

Hard-Drive Heat Problem

I-O Data Device USA has recalled about 740 AC adapters sold with network hard drives after learning that some of the adapters can overheat and deform or melt, posing a burn hazard. The company says no injuries have been reported, but is urging customers to stop using the products immediately.

The affected AC model number is IO-ACADP1510UL; the adapters were sold with I-O Data network hard-drive models UHDL-160U and UHDL-300U (check the base of the console for the model number) between December 2004 and February 2007.

Owners of these adapters can receive a free replacement by contacting I-O Data at 877/878-2926 or by filling out a form at find.pcworld.com/58708.



Xbox Racing Wheel: Too Hot!

XBOX 360 USERS can't catch a break. First, Microsoft had to extend the game console's warranty because of "flashing lights of death" failures, apparently attributable to overheating problems (see find.pcworld.com/58919 for more).

More recently, Microsoft began offering a free retrofit to owners of the Xbox 360 Wireless Racing Wheel game controller. It turns out that this controller can also overheat.

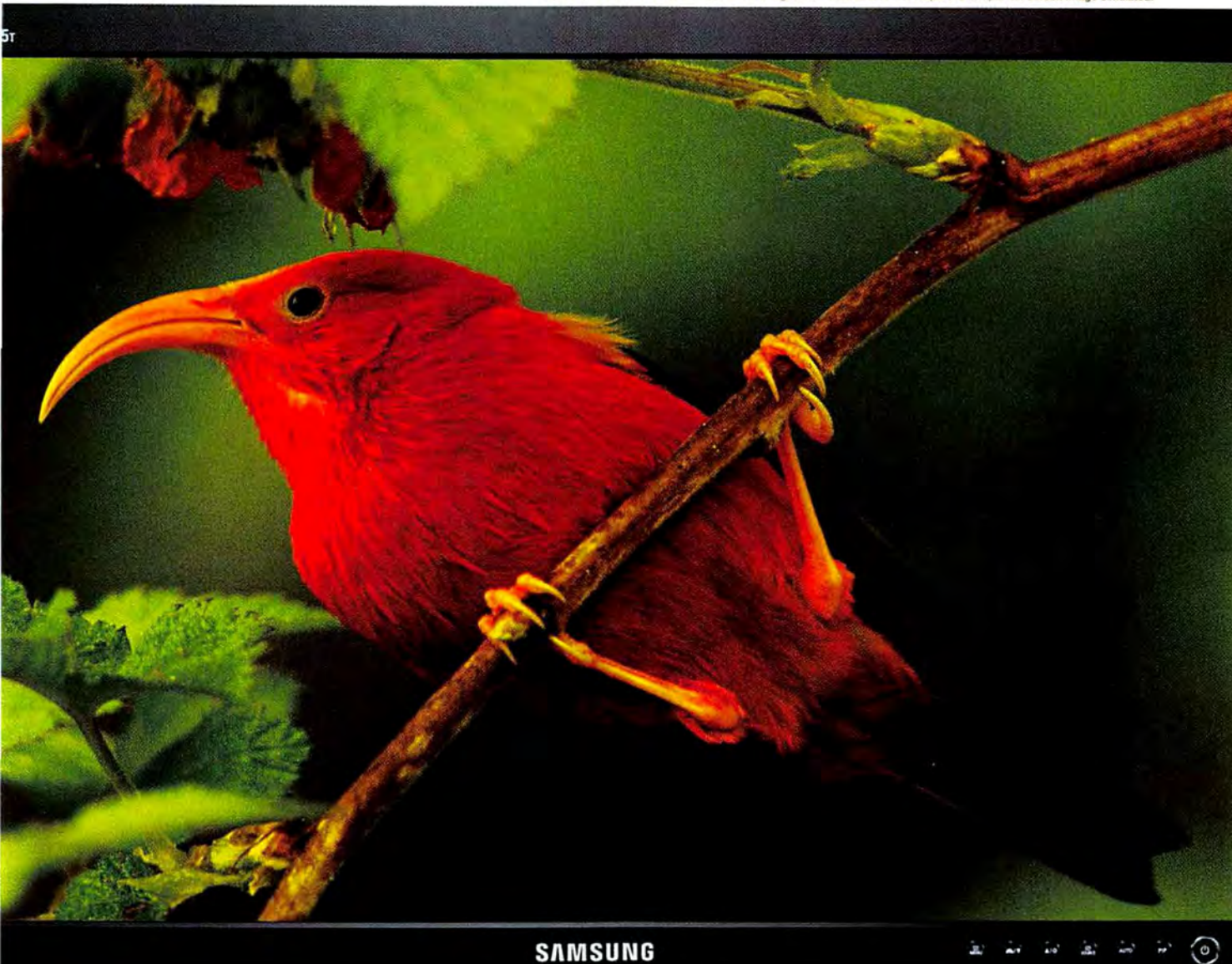
When the controller is used with the AC/DC power supply, a component in the wheel chassis can smoke. The company says the flaw hadn't caused any fires, property damage, or injuries as of early October, but just to be on the safe side, we'd recommend getting the retrofit. And in the meantime, Microsoft advises that you use the controller wheel in battery mode only.

Smoke is never a good thing with consumer electronics, and you don't want to risk burning yourself or even your home—no matter how remote the possibility seems to be.

The affected wheels were made in 2006 and 2007. You can read further information on the problem at the Xbox 360 site (find.pcworld.com/58920), where you'll see a link to a form for receiving the retrofit; you'll need to print, fill out, and fax the form. Alternatively, you can call 800/469-9269.

One hitch: While you're using the product's battery mode and waiting for the retrofit, the wheel's force-feedback feature will be unavailable.

—Stuart Johnston ●



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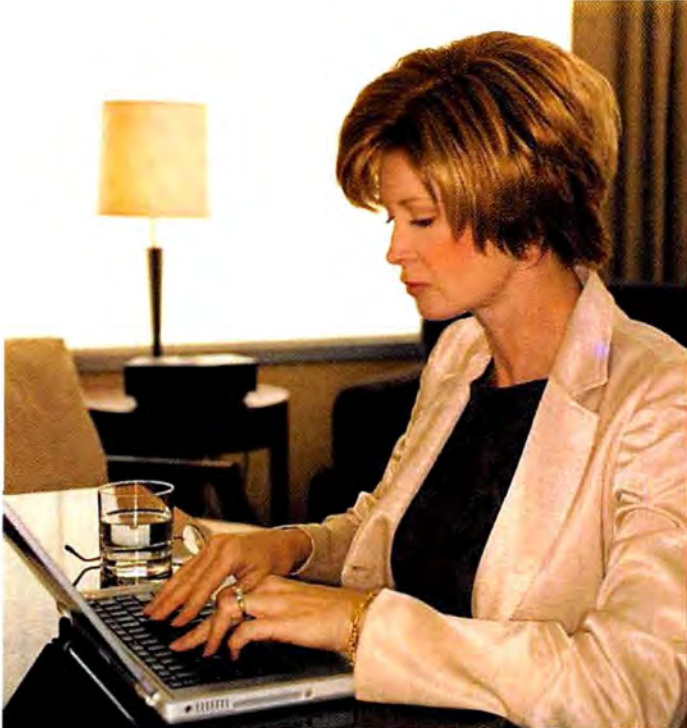
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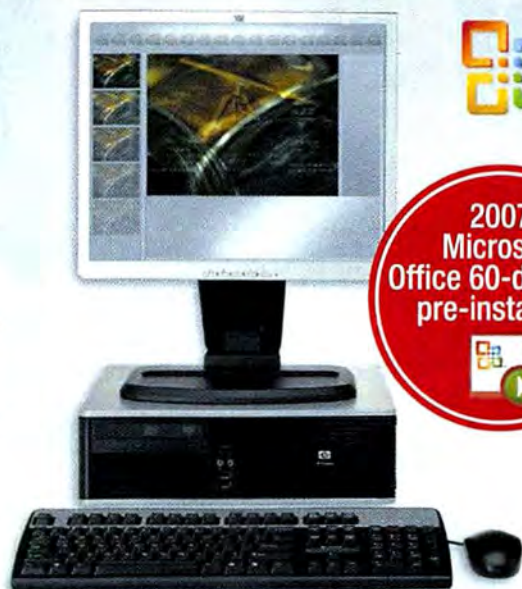
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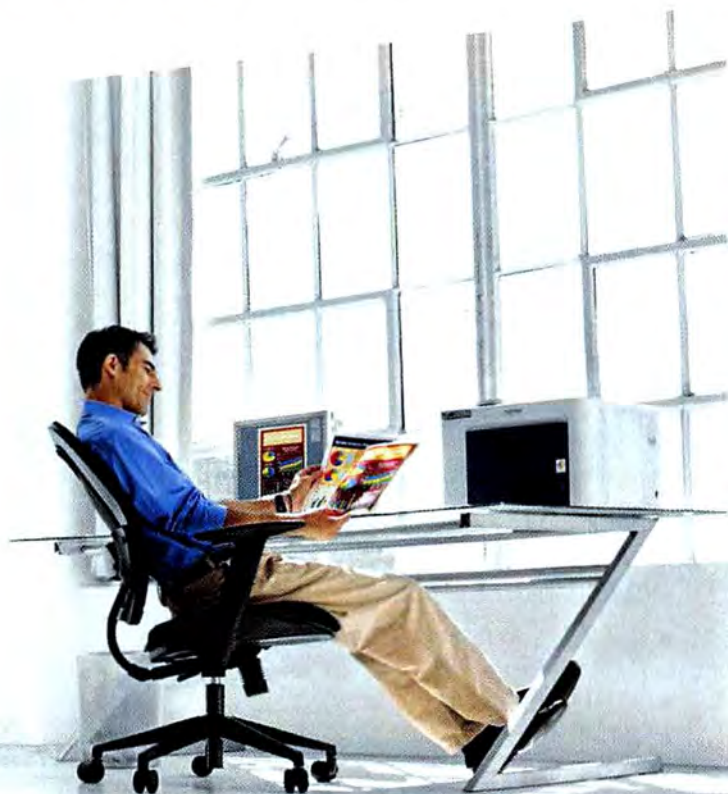
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Business Center

Comparing Collaborative Web Services

BY SCOTT SPANBAUER

SECRETS OF THE New Web

BUYING THE VAST feature set of a collaboration server like Microsoft Office Sharepoint would be overkill for many businesses. That's why Sharepoint has lots of competition from Web-based services that offer more-focused subsets of collaboration tools for fewer dollars, and in some cases for free. We looked at four alternatives to Microsoft's monolithic server: Central Desktop (www.centraldesktop.com), Ninian Solutions' Huddle (www.huddle.net), 37Signals' Basecamp (www.basecamp.com), and WebEx's WebOffice (www.weboffice.com). All four provide basic document management or sharing capabilities, user management and communications, and project management tools. A couple even offer features—such as app sharing and chat—that are well suited to geographically dispersed work groups.

What's Up, Docs?

You don't need a specialized service if you just want to share files with others on the Web; various services, including Google Docs, give lots of upload space and the ability to share uploaded files with fellow users of your choice. But Google et al. don't offer document management, in which the service tracks versions of documents and uses a check-in/check-out system to protect master documents.

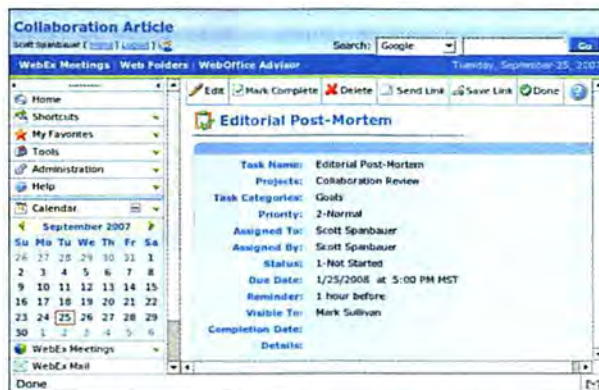
Huddle (even the free version) has the most thorough controls for document management. Huddle users can

Use the latest low-cost collaboration tools to manage your group's projects online.

check out and download documents for editing or proofreading, upload and check them back in when finished, and then assign document review and approval duties to other team members. In contrast, the free, limited version of Basecamp won't permit file uploads; paid versions offer file storage with basic version tracking but no check-in/check-out capability. Central Desktop falls in the middle, allowing you to set a document's status manually as Draft, Pending Approval, Approved, Final, or Cancelled. WebOffice, which starts at \$60 a month

for five users, doesn't track changes in uploaded documents at all. But it does let you configure Windows Explorer to upload and download files to and from the WebOffice documents folder.

In all but WebOffice, users can create and collaborate on simple text documents directly in the service's interface—a nice way for users to author drafts of text collectively for later publication. Unfortunately, though all three text-edit utilities worked fine, each suffered from a common collaboration flaw: Attempts to edit a document that another user was editing simultaneously generally resulted in the loss of the edits of one or both users, with little warning in advance from the Web site. We don't understand why the three services don't simply prevent users from editing already-open documents. >>



WEBOFFICE SUPPLIES the highest level of detail in task assignment.



HUDDLE PROVIDES the most thorough document management.

With the advent of Web 2.0, Web-based collaboration services have sprung up in all shapes and sizes. For more information on selecting the right service for your business, go to find.pcworld.com/58960.

Task Masters

Businesses do not live by documents alone. Shepherding colleagues through a project may involve coordinating and completing numerous subsidiary tasks. All four of the services we tested have tools for creating tasks and assigning them to group members, and all but Huddle let you tie tasks to a larger goal or milestone. WebOffice provides the most fine-grained task control data, including due date, time of day due, task category, priority level, person assigned the task, and notification reminder.

Basecamp has fewer task options, but it does let you assign tasks remotely via e-mail, even from your BlackBerry.

Staying in Touch

Communication is the key to collaboration. Both Basecamp and Central Desktop support basic threaded-discussion forums for project-related bantering. You can even link Basecamp to 37Signals' Campfire group chat service; WebOffice similarly dovetails with WebEx's separate WebEx Mail service. But none of the four systems incorporates a basic instant messaging application to streamline real-time collaboration.

Web-hosted collaboration removes a slew of document attachments from your e-mail. To keep you abreast of the goings-on in your virtual office, however, each service defaults to notifying you via e-mail about significant activity, such as new task assignments, due dates, and uploaded documents. Basecamp, Central Desktop, and Huddle blessedly give you the option of receiving those notifications via an RSS feed, lightening the load on your inbox.

Virtual-office denizens looking for the ultimate collaboration experience may want to opt for one more premium add-on service. Both Central Desktop and WebOffice let you (at extra cost) create online meetings in which each participant can view others' applications and multiple people can browse the Web together. Central Desktop's add-on starts at \$35 per month, while WebOffice's starts at \$50 per seat per month.

NET WORK

RICHARD MOROCHOVE



Phone Service Without Big-Ticket Hardware

IF YOUR BUSINESS has more than one phone line but you want callers to be able to reach all of

them by using a single number, your local phone company will be happy to sell or lease you pricey PBX (Private Branch Exchange) equipment. But you can get many of the same telephone call-handling capabilities at a fraction of the cost by using a Web-based, virtual PBX service.

It's easy to enhance or cancel a monthly PBX service any time. There's no capital investment or long-term leasing contract.

I looked at TelCan, which distributes calls from a toll-free line to standard landline and mobile phones. You can manage the service with only a dial-up

Internet connection and a Web browser.

TelCan's standard service costs \$10 per month, plus usage fees, for up to five extensions; add \$5 for another five extensions. Usage fees run 4.5 cents per minute (in 6-second billing increments) for calls originating in the United States and 6.5 cents per minute for calls from Canada.

Each TelCan extension has its own greeting and voice-mail service. The standard package supports 10 messages per extension at any moment; for an additional \$5 per month, you can bump the maximum queue per line to 20 messages.

No More Busy Signals

One benefit of a virtual PBX is that callers are unlikely to encounter a busy signal. That's not always true of hardware-based PBX systems, which field only as many simultaneous calls as the equipment supports—a number that may be inadequate during peak periods. For example, if your ten incoming lines are in use, the eleventh caller will receive a busy signal and not get through to voice mail. TelCan

Telcan and other Web-based PBX services offer advanced telephone options while sparing you the costs of new equipment.

says that its virtual PBX can accommodate more than 100 simultaneous calls.

You can transfer an existing toll-free number to the service, or you can choose a new number—perhaps a vanity number spelling the name of your business.

You log on to TelCan's Web site to specify where to route each extension, and

when (or if) to transfer unanswered calls to voice mail. But I find TelCan's 60-second limit on voice mail a bit short to handle long-winded callers.

Call Hunt

For people who are on the move, TelCan's optional

Call Hunt feature (\$8 per month per extension) will ring through to up to five different phone numbers in the order the users establish, and will allow them to set the number of rings for each. For example, you might route calls to your office line for two rings, then to your cell phone for three rings, then to your assistant's line for four rings, and finally to voice mail.

Other features let you block incoming calls from specific numbers or from entire area codes. Call reports show incoming calls by number, length, time of day, and cost over a date range you specify. I liked TelCan's visual voice mail, which e-mails you the caller ID number, date, and time of a call along with a link to an audio file of the message for playback.

TelCan's biggest drawback: Because the service requires a toll-free number, you can't avoid the per-minute charges. If you use more than 5000 or 10,000 minutes per month, a PBX service that uses standard phone numbers (so callers have to pay any toll charges) may be more cost-effective for your business.





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QuickBooks '08: Pricy, Good

THE LATEST INCARNATION of Intuit's market-leading small-business accounting package, QuickBooks Premier Edition 2008, simplifies program setup, provides useful training help, improves integration with online services, and adds other interesting features. These help justify its \$450 price tag—which is \$50 more than its predecessor cost.

Getting Started

A smarter setup process reduces the number of screens required from more than 100 in previous versions to about 30, reducing new users' startup time.

The new QuickBooks Coach and Tips give novice users two ways to learn: tutorials and guidance. You can use interactive tutorials to learn more about key features, and rely on guidance mode as you work with the program. If you get stuck, clicking on a guidance icon leads to an explanation of how a process fits into your accounting workflow.

QuickBooks' online help now displays context-sensitive topics. A link goes to the QuickBooks Community

Forums, a bulletin-board system where users can view or post messages on tips, best practices, and questions.

Quicken and Peachtree users have long been able to convert and import financial data into QuickBooks; now Microsoft Office Accounting users have that option, too.

A new "Time and Expense" invoice form puts your unbilled time and expenses on a single screen, to help you decide which customers to bill. The QuickBooks Time Tracker (an extra-cost subscription service) enables you to use Microsoft Outlook to account for your time.

Many QuickBooks users hire a public accountant to look at and adjust their books before preparing year-end financial statements. QuickBooks 2008 makes sharing data with your accountant easier with a new wizard that guides you through the steps of creating an accountant's copy of your books. The software encrypts the copy and sends it to your



CLICK ON QUICKBOOKS' Directions link to see a Google map of the route from your office to the customer's.

accountant via a secure Intuit server.

QuickBooks 2008 has improved its integration with various online services. An expanded listing service adds your business to several directory sites, including Google Maps, SuperPages.com, Yahoo Local, and YellowPages.com.

Easy Access to Google Maps

QuickBooks now integrates directly with Google Maps and Directions, which can help sales staffers plan customer calls. For example, prior to visiting a customer, you can click the Directions link in QuickBooks and create a Google map of the route from your office to the customer, with directions.

The Intuit program comes with a version of Google Desktop that lets you search for customer or vendor data in QuickBooks or elsewhere on your PC.

Microsoft Office Accounting still integrates better with Office applications, but QuickBooks retains its lead in accounting capabilities. Overall, the upgraded integration with online services and the friendlier startup routine make QuickBooks Premier Edition 2008 a good choice for newcomers and a solid upgrade for existing customers.

—Richard Morochove ●

In-Flight Net Making a Comeback

ALASKA AIRLINES PLANS to test a high-speed satellite wireless Internet service on some of its aircraft next year, making it the first U.S. carrier to offer such broadband service.

The broadband service provider (Row 44, a California company) relies on geosynchronous satellites to provide broadband to planes anywhere in the world. Customers will use Wi-Fi hotspots located in the aircraft cabin to access the service.

In the past, aircraft broadband services have struggled. Boeing pulled its Connexion option last year after failing to sign enough airlines onto the service. Though support from international airlines was strong, U.S. carriers hesitated

to adopt the service following the terrorist attacks of 2001 and the subsequent industry downturn.

Meanwhile, American Airlines has announced plans to test a broadband service in 2008 that will rely on air-to-ground technology, rather than satellites. The test will focus on American's Boeing 767 planes, primarily on transcontinental routes. Provider Air-Cell says that it will construct

cellular towers throughout the United States to beam the signals to aircraft. American will offer its broadband service as an extra-cost option, but the airline won't announce the exact fee until the service rolls out.

—Matthew Sainsbury



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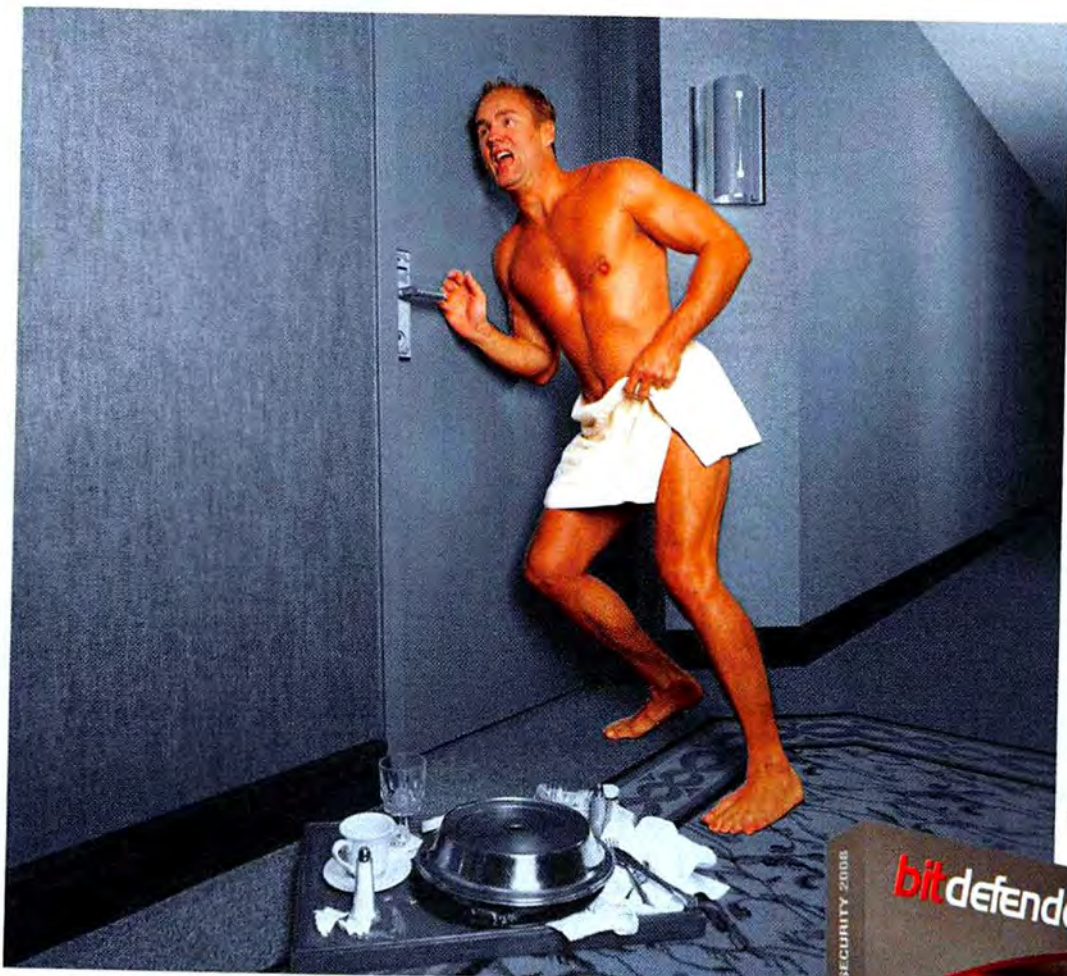
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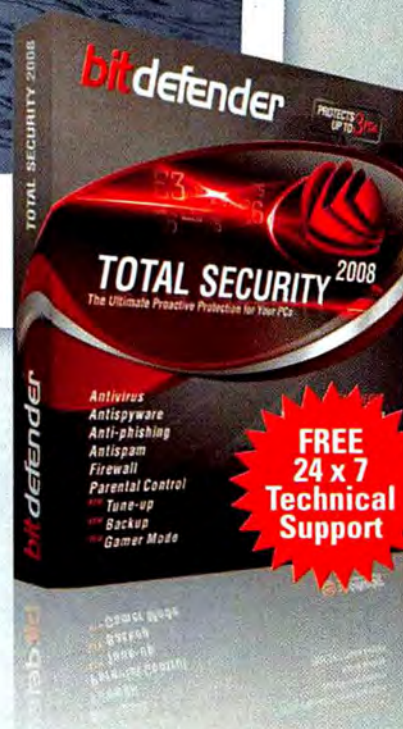
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The Internet's Public Enemy Number One

BY ERIK LARKIN

SECRETS OF THE New Web

A VASTLY POWERFUL new supercomputer is on the loose. With more than a million CPUs and a petabyte of RAM, it completely dwarfs its next-largest competitor, IBM's BlueGene/L, which contains a paltry 128,000 processing cores and 32 terabytes of memory. And the new supercomputer is growing larger every day.

There's just one problem. This powerhouse isn't run by a university, or IBM, or a government agency. It's the Storm Worm botnet, capable of sending staggering amounts of spam and viruses around the globe, and launching devastating attacks against security researchers or anyone else who might oppose it.

A botnet (short for "robot network") is a corralled network of computers that are infected by bot malware and can be remotely controlled by a single individual. Estimates vary, but security researchers believe that the Storm Worm has anywhere between 1 and 10 million PCs unwillingly dancing to its tune.

Tops in Hardware

Peter Gutmann, a computer scientist with the University of Auckland in New Zealand, notes that real supercomputers would likely outperform Storm's distributed network in traditional supercomputer benchmarking. But "where Storm leaves every conventional supercomputer in the dust is in terms of the sheer hardware resources (number of CPUs, amount of memory, and network bandwidth) at its disposal," he wrote in an e-mail.

Those network connections, likely numbering in the millions, are the most valuable resources for the crooks behind Storm. Botnet controllers, or "bot herders," sell their bot-

nets' spam-sending or Internet attack services for a fee on the Internet underground. (To learn more about the Web's black-market economy, see "How the Web Works: The Malware Marketplace" on page 139.) The more PCs and network connections a botnet has, the more spam or denial-of-service attack traffic it can send, and the more money it can make.

Who's behind the Storm Worm? No one knows for sure.

Researchers at Finnish security firm F-Secure believe, for a few reasons, that the masterminds are Russian. They use a domain and host out of the notorious Russian Business Network. Inside their code, they refer to their hatred of Moscow-based security firm Kaspersky Lab. And some of their software uses the word *byd-loshka*, which F-Secure researchers believe is a derivative of *buldozhka*, a Russian term of affection that translates roughly to "bulldog."

Cunning Defense

Whoever is controlling the massive botnet is managing its spread and defense with great sophistication. They frequently change the well-crafted e-mail messages that trick users into installing the virulent bot. When the alert went out about a late-summer wave of fake e-card

notes (find.pcworld.com/58673), Storm e-mail in September shifted to messages that pretended to promote Tor, a legit anonymous-surfing application. The fake Tor e-mail (find.pcworld.com/58674) used text and images from the actual Tor Web site, but any recipient who followed the download link and double-clicked the resulting *tor.exe* file installed Storm.

And once it has control of a PC, Storm will fight to maintain it. According to Paul Sop, CTO of Prolexic, which defends business clients against the type of Internet attacks that botnets launch, security researchers who investigate Storm-infected >>

The Storm Worm has infected so many machines that it's now one of the most powerful supercomputers.



The best defense against the Storm Worm and other malware is cautious clicking—and a good antivirus program. Go to find.pcworld.com/58675 to see PC World's Best Buy in antivirus software.



BUGS & FIXES

STUART J. JOHNSTON

machines can expect swift retaliation.

"The Storm Worm [botnet] has the ability to defend itself," Sop explains. "When you scan it, it will tell another portion of the botnet to DDoS you." In a DDoS, or distributed-denial-of-service attack, a bot herder instructs some or all of the botnet to send a flood of garbage data to a particular victim. And often that flood is enough to knock a Web site offline, or to take down a researcher's Internet connection.

Unique Defense

Storm is the only botnet Sop knows of with this kind of automated self-defense. What's more, it's sneaky about how it executes that defense. It won't launch the attack from the same machines that are scanned, or even ones with similar IP addresses, since that would make the attack's cause immediately apparent. Instead, it passes along the researcher's location to other parts of the Storm botnet, so the DDoS attack appears to come from somewhere else.

The Storm Worm has become so ubiquitous, it's even a star on YouTube, where an F-Secure video that shows the worm's spread around the globe has been viewed more than 850,000 times. (You can see the video at find.pcworld.com/58935. Check out the comments, where you'll find some viewers who are convinced that the worm was created by extraterrestrial forces.)

To help ensure that you don't become the next cog of the vast Storm Worm wheel, use a good antivirus program, and keep your applications up-to-date. The Storm Worm and other such malware frequently exploit known holes in old versions of software such as Internet Explorer, Firefox, QuickTime, and even WinZip to infect PCs.

Also, exercise extreme caution with any unsolicited e-mail, even if it appears to come from someone you know. And finally, to help determine whether your computer might have already joined the ranks of the living dead, see "Proper ID for a Zombie PC" at find.pcworld.com/58676.

Bumper Crop of Instant Messaging Bugs

CHATTERS, BEWARE: A rash of new bugs have hit the popular IM clients

Yahoo Messenger and MSN Messenger.

The latest vulnerability could allow bad guys to feed any file to users of Yahoo Messenger, according to an e-mail alert from nCircle Network Security. This is the ninth zero-day exploit to target Yahoo's chat client this year, according to nCircle, and it leaves users vulnerable to Trojan horses and other malware. Yahoo hadn't released word of a patch at press time, but researchers believe that running Internet Explorer 7 with default security settings will likely protect you from this bug.

Yahoo did correct an earlier problem that would have allowed a complicated, two-stage attack through an ActiveX control that's part of Messenger. The exploit is difficult for hackers to pull off—meaning that it's less of a danger for you—but if you have a version of Messenger from before August 29, you should still update by going to find.pcworld.com/58913.

Microsoft patched MSN Messenger and Windows Live Messenger in response to an attack that enters through a fake invitation to view someone else's Webcam. If your curiosity gets the better of you and you accept the invitation, the attacker could then do anything that you can on your machine. You are safe if you run MSN Messenger 7.0.0820 or Windows Live Messenger 8.1; otherwise, download the patch through Automatic Updates or at find.pcworld.com/58911.

Zero-Day in Windows XP

Jonathan Sarba of GoodFellas Security Research Team revealed a flaw in a pair of files in Windows XP's system code that could allow a hacker to take total control of your computer. PCs running HP All-in-

Plus: A new vulnerability in Windows XP, and Excel has trouble with math.

One Series Web Release software/driver installer version 2.1.0 and HP Photo & Imaging Gallery version 1.1 are particularly vulnerable to the attack because they use the portions of Windows that the attack exploits. Microsoft says that it's investigating the warning, but the software giant has yet to release a patch. Until one exists, be careful, especially if you run either piece of HP software.

iTunes Cover Flaw

A bug in the way iTunes processes album cover art could leave you exposed to a criminal who could completely hijack your PC. You'd first have to click on a tainted music file, and no attack code for this hole has surfaced

yet, but fixing iTunes is still a good idea. Downloading version 7.4 or higher will protect you.


Excel's 65535 Problem

Good news: If your salary is exactly \$65,535 and your company handles its payroll in Excel 2007, you may be in for a big raise! Microsoft acknowledged that in certain specific circumstances, if a calculation yields the answer 65,535, the number displayed will be 100,000. The key word in that description is "displayed"—Microsoft says that behind the scenes Excel knows the real answer, but the program shows the wrong figure. You can find more information and the patch at find.pcworld.com/58909.



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Google Adds Spam, Virus Filtering to Paid Gmail

CUSTOMERS WHO PAY for Google Apps Premier, a combination of Web-browser-based e-mail, calendar, and office-productivity programs, can now get new e-mail security and recovery services at no extra charge.

Providing the service is Postini, a top-tier e-mail security company that Google acquired in September. Google Apps administrators can configure spam and virus filters, set up e-mail usage and management policies, and recover deleted messages. The service is avail-

able now for customers using the English-language version of Apps Premier, and it will be available in November for users of the international edition.

Gmail has had spam and antivirus filtering features previously, but the Postini technology is sharper and more sophisticated, and it should offer a marked improvement for current users, says Matt Cain, a Gartner analyst.

The ability to set and manage usage



policies centrally allows administrators to add footers to every message sent,

and to block messages with specific keywords or attachments.

They can also create policies for user groups or individuals, as well as monitor all e-mail communications for compliance auditing purposes. In addition, administrators can recover messages deleted within the previous 90 days.

—Juan Carlos Perez



PRIVACY WATCH ERIK LARKIN

How to Protect E-Mail From Prying Eyes



E-MAIL IS AN incredible communications tool, but it isn't very private. As it travels between sender and recipient across the Internet, snoopers can intercept and scan it at many points along the way. That anyone would bother to do so for everyday e-mail is highly unlikely, but if you want genuinely private

communication, you need to encrypt your messages.

The problem is, e-mail encryption can be a real pain. First you have to create a digital ID, in the form of a certificate from a third party. Then you must exchange IDs with every person to whom you might want to send a protected message.

And you'll need to back up your certificate religiously. Lose it (after a hard-drive crash, for instance), and you'll lose not only the ability to send or receive new encrypted e-mail, but also any chance of reading previously sent protected e-mail.

But with a little guidance and care, you can send business secrets (or sweet nothings) that only the intended recipient can read. Here's how to manage the process using Outlook and Internet Explorer. (You can read instructions for Firefox and Thunderbird at find.pcworld.com/58941.)

First, head to Comodo (find.pcworld.com/58677) or Thawte (find.pcworld.com/58678), which both provide free certificates for secure e-mail. I found Thawte's process smoother and more thorough, but neither site had especially simple instructions, particularly for finding your certificate after going through the online application. And in my testing, there were times when the process seemed to go fine, but the certificate never showed up.

Encrypting your messages isn't the easiest thing to do, but it will ensure your privacy.

That elusive new ID hides in IE's tucked-away "certificate store." Check the store for your ID, and export it for a backup right away.

To make such a backup with IE, head to *Tools • Internet Options*, and click the *Content* tab. Once there, click the *Certificates* button. You should see your new certificate under the *Personal* tab; select it and click *Export*. In the resulting *Export Wizard*, choose to export the private key, keep the defaults for *Export File Format*, and come up with a password and file name.

Save the exported certificate to a USB drive, a trusted online storage service, or some other safe place. You'll need to reimport it for use with any new mail application. Fortunately, IE and Outlook share the certificate store, so you don't need to import it to that program.

Now you're ready to swap certificates with other people so you can send them encrypted e-mail. In Outlook, bring up a new window for composing e-mail, fill in the address of the recipient, and then click the button in the toolbar showing a yellow envelope with a red spot; doing so digitally signs the message and sends your certificate to the addressee. For someone to add your new ID certificate to their version of Outlook, they must open your digitally signed message and then add you as one of their contacts.

Now, at long last, you're ready to send encrypted e-mail. While composing a message in Outlook, click the *Encrypt* button, a yellow envelope with a blue lock, on the second toolbar. Your e-mail will be safe from snoopers.

Marc Philips, a network administrator based in St. Louis, contributed to this article.

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Reviews & Rankings

22-Inch LCDs: More Screen for Less Green

Basic 22-inch wide-screen LCDs are a steal for under \$300, and decked-out ones are tempting, too, at less than \$400.

PCW Test Center HAVE YOU BEEN holding out for the right wide-screen monitor? The big manufacturers are releasing a torrent of new 22-inch wide-screen models, starting at around \$270, that may just persuade you to open your wallet. And though any of these models will expand your desktop view, they're far less likely than a 24-inch-plus display to empty your pockets.

The PC World Test Center subjected seven new 22-inch wide-screen monitors to a plethora of viewing tests. Our hawk-eyed jurors scrutinized various text documents and graphics to see which monitors were pleasing and which merely middling. Our Best Buy award went to the good-looking HP w2207

monitor. Priced at \$360 (as of October 9), this display combines beauty and substance. Though it trailed others in graphics and text quality, it still performed well enough to earn scores of Very Good and Good, respectively, on those two measures. And its many features, such as a pivoting panel and USB ports, helped it overcome its minor shortcomings in performance. ViewSonic's VG2230wm finished close behind, thanks to good performance and an even better price (\$319).

Nipping at the heels of the top two was the Samsung SyncMaster 2232GW. The best graphics and text per-

former, this monitor will satisfy both casual users and graphics pros. AG Neovo's H-W22, which ranks a respectable fourth, carries a budget price (\$269) that belies its impressive showing in our tests. It trumped many of the more expensive displays with accurate and

attractive renderings of graphics and text. To boot, its minimalist design will suit users who want to simplify the appearance of their desks. Dell's staid-looking E228WFP rounded out our Top 5 with test scores confirming it as a serious workhorse for users who don't



HP SELLS OPTIONAL Easy Clip accessories that attach to the sides of its w2207 display.

INSIDE



86 NAVIGON 7100



88 APPLE IPOD TOUCH



90 HTC ADVANTAGE X7501



96 MICROSOFT MOBILE MEMORY MOUSE

consider design a priority.

We also tested the Envision G218a1 and the Acer P221W, but neither of them captured spots our chart. Though inexpensive (\$280) and fairly well designed, the Envision display suffered from so-so graphics performance and a paucity of extra features. Meanwhile, the Acer's performance was okay, but not nearly enough to compensate for its \$500 price.

The Office Workers' New Desk Friend

For a time, many manufacturers were pushing 19-inch wide screens, already a consumer hit because of their low price and broad spread, to businesses. But that market hasn't taken off as expected. Tom Mainelli, senior research analyst for monitors at IDC (and a *PC World* contributor), sees monitor manufacturers responding

PC WORLD TOP 5 22-INCH WIDE-SCREEN LCD MONITORS

MODEL	PCW Rating	Performance	Features and specifications
1 BEST BUY HP w2207 \$360 NEW find.pcworld.com/58687	79 GOOD	<ul style="list-style-type: none"> Graphics quality: Very Good Text quality: Good DVD motion quality: Very Good 	<ul style="list-style-type: none"> Analog and digital inputs Multiple adjustments 5ms response time 1000:1 contrast ratio
BOTTOM LINE: Though pricier than some rivals, this LCD is well designed and has extras like a pivoting panel and USB ports.			
2 ViewSonic VG2230wm \$319 NEW find.pcworld.com/58688	78 GOOD	<ul style="list-style-type: none"> Graphics quality: Very Good Text quality: Very Good DVD motion quality: Very Good 	<ul style="list-style-type: none"> Analog and digital inputs Multiple adjustments 5ms response time 700:1 contrast ratio
BOTTOM LINE: This wide screen's graphics and text documents are easy on the eyes, and its price is easy on the wallet.			
3 Samsung SyncMaster 2232GW \$380 NEW find.pcworld.com/58689	77 GOOD	<ul style="list-style-type: none"> Graphics quality: Very Good Text quality: Very Good DVD motion quality: Very Good 	<ul style="list-style-type: none"> Analog and digital inputs Tilt adjustment only 2ms response time 3000:1 contrast ratio
BOTTOM LINE: A superb monitor, the SyncMaster is excellent for many graphics tasks, justifying its slightly higher price.			
4 AG Neovo H-W22 \$269 NEW find.pcworld.com/58690	75 GOOD	<ul style="list-style-type: none"> Graphics quality: Very Good Text quality: Very Good DVD motion quality: Very Good 	<ul style="list-style-type: none"> Analog and digital inputs Tilt adjustment only 3ms response time 1000:1 contrast ratio
BOTTOM LINE: This extremely thin-looking monitor is a no-frills performer good for minimalists and budget-conscious offices.			
5 Dell E228WFP \$300 NEW find.pcworld.com/58691	74 GOOD	<ul style="list-style-type: none"> Graphics quality: Very Good Text quality: Good DVD motion quality: Very Good 	<ul style="list-style-type: none"> Analog and digital inputs Tilt adjustment only 5ms response time 800:1 contrast ratio
BOTTOM LINE: A competitive price and strong graphics quality raise this otherwise pedestrian-looking monitor's score.			

CHART NOTES: Prices and ratings are as of 10/9/07. Response times and response types are as reported by the vendor (ms = milliseconds).

by producing a raft of 22-inch wide-screen models that may soon emerge as "blockbuster" performers for office use. "Twenty-two-inch wide monitors have been [in the market] for a while," he observes, but demand for them only recently "started gaining some traction primarily because of the dramatic

price difference between 20- and 24-inch wide screens."

Currently you can buy a no-frills 22-incher for as little as \$250, while few 24-inch monitors cost less than \$500. Mainelli says the price difference reflects the fact that "monitor vendors have kept 24- to 30-inch [displays] as premium monitors, [so] customers are more

likely to expect extras" such as high-definition video connectors, pivoting panels, TV tuners, and multiple physical adjustments. If you don't need these frills, however, you can parlay a budget for one 24-inch monitor into an enviable double-22-inch-monitor configuration. Moreover, even though 22-inch models have the >>

MORE ONLINE

Visit find.pcworld.com/58685 for a full review of each 22-inch wide-screen model in our Top 5 chart. You'll also find Best Buy charts for flat-panel displays with screen sizes ranging from 17 to 24 inches.

same resolution as 20-inch wide screens (1680 by 1050), Mainelli thinks that most users feel more comfortable viewing that resolution on a larger panel. By contrast, 23- and 24-inch models sport a 1920-by-1200 resolution.

Our test batch of 22-inch units did indeed tend to be bare-bones displays, with just a smattering of extras such as speakers. Only the HP w2207 offered features on a par with those of larger and more-expensive monitors. But in general, the displays in our tests will provide easily readable text and high-quality graphics.

For general-purpose uses, such as word processing and Web surfing, all seven monitors we tested are good, and some are excellent. A very small room could benefit from a 22-inch wide-screen monitor's space-saving design, particularly one like AG Neovo's thin H-W22, which could double as a display for DVD movies. In our test assessing each monitor's movie-playing talents, the Samsung SyncMaster 2232GW stood out, thanks to the unit's wonderful balance of colors and its ability to handle fast action.

Value-Monitor Extras

The speakers built in to several of the models we looked at—the AG Neovo, Envision, HP, and ViewSonic—tended to fall short of producing satisfactory sound for applications that require robust audio, such as music or movie playback. Only the Envision G218a1's integrated speakers managed to produce above-average sound



EYE-PLEASING: VIEWSONIC'S VG2230wm (left) and Samsung's SyncMaster 2232GW.



for movie dialogue or audio. Unless you're willing to tolerate tinny-sounding speakers or you desperately need to conserve space, you should plan on supplementing these generally weak built-ins with a pair of free-standing speakers.

Few of the models we evaluated permitted full, multiple physical adjustments. All of them include a tilt mechanism, but most stop there. The ViewSonic VG2230wm and HP w2207 come with height-adjustable stands, and the former swivels 360 degrees, too. Only the HP w2207 had a pivot mechanism, but it lacked a true swivel stand.

If you've already moved to Microsoft Windows Vista or bought a PC that runs on it, you may already know that sidebar widget applications (such as those from Google) work best with a wide screen. Sidebars sit on the left or right side of the monitor; and depending on the

application, they offer a constant stream of information such as RSS feeds, weather updates, and images. Several monitors in our cohort sported a "Vista Certified" logo—a confusing selling point signifying, among other things, that the screen supports Microsoft-specified technical display standards, such as monitor sleep states and rendering of standard Red Green Blue (sRGB) color spaces. For consumers, the most important Vista-compatible feature is that a monitor have HDCP compatibility, which will enable you to view copy-protected high-definition content, something movie studios are pushing to become standard. This feature may not be paramount for everyone—especially not people who aren't planning to watch movies on their monitors, but it's a feature to think about if you want to future-proof this component of your computer setup.

HP Wins; Neovo's Thin

You can't go wrong with any of these monitors if you simply need a wider screen for word processing and spreadsheets. The HP can even swivel to portrait (vertical) mode, which can be ideal for Web browsing. Each monitor in this segment is generally very good for viewing text and graphics. If you want the thinnest, go with AG Neovo's H-W22, which also happens to be the least expensive of this bunch. If you want one that offers maximum physical adjustability, consider the HP w2207 or the ViewSonic VG2230wm. And if an eye-catching design tops your list, check out the HP w2207 and the Samsung SyncMaster 2232GW, whose unique cabinets are sure to set adjacent offices and cubicles abuzz. Samsung's model also had the best performance numbers, a boon for graphics pros and gamers.

—Roy Santos



DESK MOUNTS



MODEL MD103 FEATURED



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Size Isn't All That Matters With Huge Gateway LCD

PCW Test Center

MOST 30-INCH wide-screen monitors are inflexible beasts with few benefits beyond their high resolution and billboard-like size. Gateway's XHD3000 30-Inch Extreme HD LCD bucks the trend, however, by delivering excellent image quality along with the screen adjustability and device compatibility that other 30-inches lack. But at \$1700, it

costs a few hundred dollars more than the competition.

In our lab tests, our unit held its own against other recently tested 30-inch wide screens, and our jury lauded the XHD3000's rendering of real-life office and photo screens at default settings. This monitor isn't limited to defaults, though. Whereas other 30-inch models let you change only brightness, the Gateway offers a full complement of controls—among them gamma, black level, and saturation.

The XHD3000 serves up a native resolution of 2560 by 1600 pixels if you attach it to a computer with a dual-link DVI connection. Unlike other models, however, it also supports single-link DVI



THE XHD3000'S
uncluttered design hides
a bevy of handy adjustments.

and even VGA connections (albeit at a lower resolution of 1920 by 1280). This permits you to connect it to a less-capable computer.

The XHD3000's friendliness doesn't stop at PCs: Providing component, composite, HDMI, and S-Video ports, the monitor welcomes input from many different

types of external devices as well. We connected a high-end HD DVD player to the XHD3000 and found movie scenes crisp and detailed, with realistic color.

The Gateway XHD3000 is sure to make anybody—especially the competition—sit up and take notice.

—Laura Blackwell

81

VERY GOOD

**XHD3000 30-Inch
Extreme HD LCD | Gateway**

Has more inputs, more controls, and more extras than rivals do.

Street: \$1700

find.pcworld.com/58923

Backup App Protects You During Risky Surfing

NOW IN VERSION 11, Acronis True Image Home is the most powerful consumer disk imaging program on the market. It runs from within Windows or from a Linux-

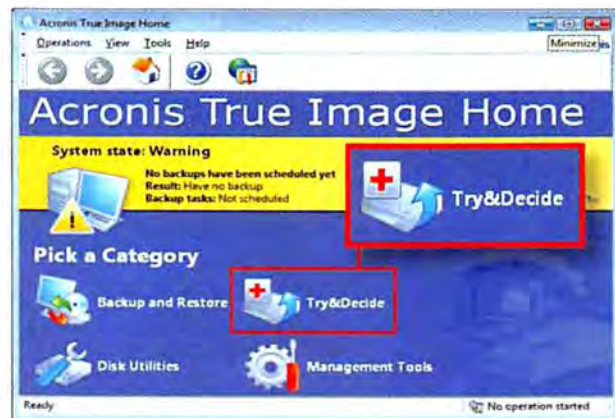
based boot disc, creates full and incremental images (backing up the entire drive and subsequently adding new and changed files), and offers the usual compression

and encryption options. If you buy the more expensive Workstation version and a Universal Restore module, you can restore images to a PC whose hardware profile differs from the one that the image was created on.

The new Try & Decide mode works like a virtual machine, writing disk changes to a hidden recovery partition, and committing them later at your discretion. Turn it on before you install unfamiliar software or browse to dubious Web sites. In my informal testing, the feature exacted a noticeable performance hit, but it's still a nice safeguard to have.

You can also now restore individual files and folders from a full image within the main program, perform a quick system-state backup, and take advantage of improved filtering for file and folder backups. The interface is befuddling in spots, but True Image is an excellent all-around backup utility.

—Jon L. Jacobi



THE NEW TRY & Decide mode provides an added layer of security.

83

VERY GOOD

True Image Home 11 | Acronis

Great at backups, but interface can be confusing. List: \$50

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Blu-ray and HD DVD Spice Up 17-Inch Laptops

THREE LAPTOPS with choice gaming and entertainment features debut on our desktop replacement chart. The sixth-place HP Compaq 8710p is sold as a business laptop, but has excellent graphics performance and a Blu-ray Disc drive. Toshiba's eighth-place Satellite X205-S9359 comes with an external USB HDTV tuner and an HD DVD player, and its subwoofer-enhanced sound is rich. The ninth-ranked Eurocom D900C Phantom-X, the first quad-



EUROCOM'S D900C PHANTOM-X is big, fast, and expensive.

core notebook we've tested, posted the fastest WorldBench 6 Beta 2 score we've seen from a laptop, but it suffers from pitiful battery life and a crushing price of \$5158. In other news, a price fluctuation for HP's Pavilion HDX caused that machine to switch spots with Apple's MacBook Pro, which moves into first place.

—Carla Thornton

MORE ONLINE

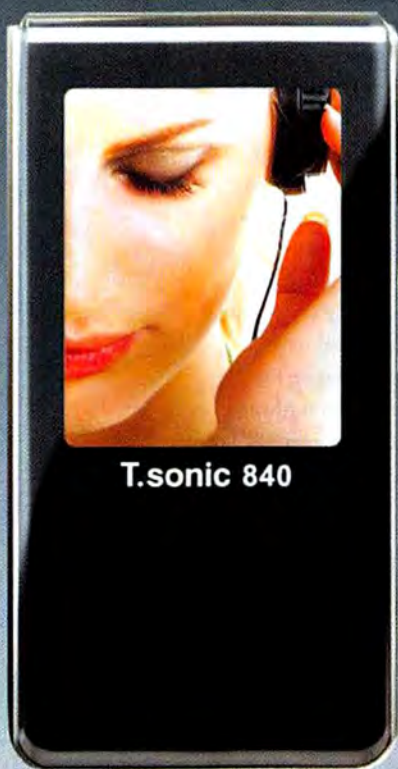
For more information about these laptops, including details on how we test, go to find.pcworld.com/55176.

PC WORLD TOP 10 LAPTOPS

DESKTOP REPLACEMENT	PCW Rating	Performance	Features and specifications
1 BEST BUY Apple MacBook Pro \$2949' find.pcworld.com/57902	81 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 88 Superior Overall design: Very Good Tested battery life: 2:44 	<ul style="list-style-type: none"> 2.4-GHz Core 2 Duo T7700 17.0-inch wide screen 6.6 pounds DVD±R DL/DVD±RW/-RAM
BOTTOM LINE: Lightweight 17-inch has a beautiful screen and comes loaded with useful software. It's fast, too.			
2 HP Pavilion HDX \$3575 find.pcworld.com/57901	80 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 86 Very Good Overall design: Superior Tested battery life: 2:22 	<ul style="list-style-type: none"> 2.4-GHz Core 2 Duo T7700 20.1-inch wide screen 15.5 pounds HD DVD-ROM/DVD±R DL/DVD±RW/-RAM
BOTTOM LINE: Stylish, high-end model is huge and heavy, but its fast performance makes it a great gaming machine.			
3 Acer Aspire 5920G \$1999 find.pcworld.com/58189	80 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 77 Good Overall design: Very Good Tested battery life: 3:15 	<ul style="list-style-type: none"> 2-GHz Core 2 Duo T7300 15.4-inch wide screen 7.0 pounds HD DVD-ROM/DVD±R DL/DVD±RW/-RAM
BOTTOM LINE: Sophisticated-looking multimedia unit has oodles of custom keyboard buttons and one-touch sound settings.			
4 HP Pavilion dv9500t \$2314 find.pcworld.com/58295	80 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 73 Good Overall design: Very Good Tested battery life: 3:21 	<ul style="list-style-type: none"> 2.2-GHz Core 2 Duo T7500 17.0-inch wide screen 8.5 pounds HD DVD-ROM/DVD±R DL/DVD±RW/-RAM
BOTTOM LINE: Equipped with a stylish 17-inch screen and an HD DVD drive, this is a terrific multimedia notebook.			
5 Dell Inspiron 1720 \$2534 find.pcworld.com/57903	80 VERY GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 75 Good Overall design: Very Good Tested battery life: 3:33 	<ul style="list-style-type: none"> 2-GHz Core 2 Duo T7300 17.0-inch wide screen 8.7 pounds DVD±R DL/DVD±RW
BOTTOM LINE: Splashy laptop offers excellent entertainment options and great sound, as well as strong performance.			
6 HP Compaq 8710p \$2549 NEW find.pcworld.com/58720	79 GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 77 Good Overall design: Very Good Tested battery life: 3:38 	<ul style="list-style-type: none"> 2.2-GHz Core 2 Duo T7500 17.0-inch wide screen 7.5 pounds BD-R/RE/DVD±R DL/DVD±RW
BOTTOM LINE: Handsome business laptop has a cutting-edge Blu-ray Disc drive and can moonlight as a hot 3D gaming station.			
7 Lenovo ThinkPad T61p \$2995 find.pcworld.com/58351	79 GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 81 Very Good Overall design: Very Good Tested battery life: 4:03 	<ul style="list-style-type: none"> 2.4-GHz Core 2 Duo T7700 15.4-inch wide screen 6.5 pounds DVD±R DL/DVD±RW/-RAM
BOTTOM LINE: This early Energy Star 4.0 desktop replacement combines top performance with energy efficiency.			
8 Toshiba Satellite X205-S9359 \$2400 NEW find.pcworld.com/58729	79 GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 76 Good Overall design: Good Tested battery life: 2:34 	<ul style="list-style-type: none"> 2-GHz Core 2 Duo T7300 17.0-inch wide screen 8.7 pounds HD DVD-ROM/DVD±R DL/DVD±RW/-RAM
BOTTOM LINE: Robust home portable offers great gaming with beautiful-sounding audio and a stylish striped lid.			
9 Eurocom D900C Phantom-X \$5158 NEW find.pcworld.com/58730	79 GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 97 Superior Overall design: Very Good Tested battery life: 1:17 	<ul style="list-style-type: none"> 2.66-GHz Quad Core Q6700 17.0-inch wide screen 11.3 pounds DVD±R DL/DVD±RW/-RAM
BOTTOM LINE: Behemoth with a quad-core processor runs scorchingly fast, remarkably quiet, and cool—but can you afford it?			
10 Gateway NX860XL \$1580 find.pcworld.com/56862	79 GOOD	<ul style="list-style-type: none"> WorldBench 6 Beta 2 score: 80 Very Good Overall design: Good Tested battery life: 1:56 	<ul style="list-style-type: none"> 2.16-GHz Core 2 Duo T7400 17.0-inch wide screen 8.0 pounds DVD±R DL/DVD±RW
BOTTOM LINE: Looks can deceive: The Gateway NX860XL lacks flair, but it's fast and powerful.			

CHART NOTES: Prices and ratings are as of 10/9/07. Weight does not include AC adapter, power cord, docking station, or extra batteries. FOOTNOTE: *Price includes the \$150 cost of Windows Vista Home Premium.

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Wireless USB: IOGear Tops Gefen

PCW Test Center

MICE, KEYBOARDS, printers, thumb drives—the list of devices demanding a free USB port never ends. But the cable spaghetti surrounding my wired USB hubs (which add the ports I need) looks ugly, so I was happy to test two wireless alternatives: IOGear's Wireless USB Hub & Adapter and Gefen's four-port Wireless USB 2.0 Extender.

Both let you attach USB devices to a hub that communicates wirelessly with a receiver plugged into a USB port connected to your PC, but there the similarities end. IOGear's kit uses the freshly minted Certified Wireless USB standard, based on ultra-wideband wireless technology that offers excellent throughput (up to 250 megabits per second) but limited range

(IOGear says up to 30 feet, but based on my experience, I'd recommend no more than 10 or 15 feet).

Installing the IOGear product was tricky. I couldn't use my Vista PC at all (IOGear says that it will make Vista drivers available by the time you read this), and after installing the software on a Windows XP system, I had to wait through driver setup for the receiver and two rounds of driver setup for the hub. Even then nothing worked until I completely disconnected and then reattached both receiver and hub. Once the connection came alive, however, the PC instantly recognized a Sony Reader and a thumb drive I had plugged into the hub.



ASK OUR EXPERTS

Best Video Editor for VHS?

I HAVE OLD VHS tapes that I want to copy to DVD. Because of the age of the tapes, a lot of the video is dark. What software would you suggest to edit it?

G. June Register, via e-mail

Executive Editor Alan Stafford responds: If your PC's graphics board has an S-Video-in or composite-in port, connect a VCR to it and then use Adobe Premiere Elements 4 (see page 94) or another video editor to capture and edit the footage. If the board lacks these inputs, consider upgrading to one of the models on our graphics board chart (find.pcworld.com/58723)—the test reports indicate which boards have such ports—or buy a USB-based conversion box. Use Elements' scene-detection feature to create separate clips from the footage; adjust the levels on each clip individually so that you don't end up with uneven results. Visit find.pcworld.com/58724 for a thorough how-to.

—Alan Stafford

E-mail your question to askourexperts@pcworld.com or post it online at forums.pcworld.com.



BOTH THE GEFEN (above) and IOGear products include a hub that communicates wirelessly with a transceiver plugged into the PC.

Wi-Fi Plus USB

Gefen's adapter and hub, in contrast, communicate by using standard, 54-mbps 802.11g Wi-Fi, so you can place them farther apart—perhaps 50 to 75 feet—but data transfers at much slower speeds. In my test, 59MB of files from a thumb drive took more than half an hour to get to my PC from the Gefen hub, versus only a minute or two over the IOGear setup (even though I placed both hubs only a few feet from the receiving PC).

The Gefen package was easier to set up: The receiver and hub form an ad hoc connection and don't need any existing Wi-Fi network support. However, the Gefen

hub never recognized my Sony Reader. Also, because the kit uses Wi-Fi, it is subject to interference from other Wi-Fi networks and nearby devices that use the same 2.4-GHz band.

I would consider the \$399 Gefen only if I had a pressing need to install low-bandwidth USB devices at some distance from a host PC. The IOGear's \$160 price is a lot more palatable, and its technology should prove particularly useful once Certified Wireless USB chips are built into PCs (probably within a year), eliminating the need for the dongle and a lot of extra cabling to connect devices.

—Yardena Arar

75

GOOD

Wireless USB 2.0 Extender (Four-Port) | Gefen

A high price and slow transfers overshadow the ease of use.

List: \$399

find.pcworld.com/58907

88

VERY GOOD

Wireless USB Hub and Adapter IOGear

Offers excellent throughput, albeit over a limited range.

List: \$160

find.pcworld.com/58908

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Go to find.pcworld.com/58062

Glide Outshines Google With Web Presentation App

GOOGLE'S NEW presentation software, touted as a Web-based alternative to Microsoft's PowerPoint, is an easy-to-use product with a nifty interface and impressive collaboration features, but its omission of several important functions makes it a runner-up to Transmedia's Web-based application, Glide Presenter 2.0.

Residing under the Google Docs umbrella of online office applications, Google's presentation program works on Internet Explorer and Firefox. It lacks support for

options for tinkering with text and images within slides. It is nicely laid out, with the individual slides down the left pane and a central window showing the contents of the slide you're working on. Along the top are clearly marked icons for adding/removing slides and inserting images and text.

Once you have created a presentation, the software's real-time collaboration—its killer feature—kicks in. The app is connected to Google Calendar, to Gmail, and to Google Talk; clicking the 'Share' button brings up a screen that allows you to invite viewers or collaborators. Clicking the 'Start presentation' button opens your slide show along with a chat window that integrates with Google Talk.

Power users will be disappointed in several respects, however. Though Google's app will import a PowerPoint file from your desktop, it won't export it in PowerPoint's .ppt or OpenOffice's

.odp (open document) format. It offers no transitions, sounds, or effects such as bouncing text and fading animations. You can't draw shapes, make arrows, or design your own templates. Although you can upload images from your PC, even that is a chore because you must do so one at a time.

Glide Presenter 2.0 from Transmedia outclasses Google's offering in more



GLIDE'S PROGRAM LETS you export presentations to PowerPoint format or PDF, so the results can be viewed on a variety of devices.

ways than one. Though the interface is a tad cluttered and page loads can sometimes be slow, the program lives in a collaborative ecosystem (called Glide OS 2.0) that matches Google's. You can invite others to view and collaborate on your presentations via e-mail, over instant messaging, and from your contact list. Unlike Google, which lets you share your work only with other Google users, Glide has no such limitations on participation.

The Glide Presenter application opens in a full-screen browser window (Adobe's Flash Player is required) and features clearly marked menu items across the top. From the main screen, you can add slides with a click and import videos from the management system, which Glide hosts. Unlike Google's presentation app, Glide lets you upload multiple images or audio/video files at once, and large media files can stream within presentations, even on low-bandwidth mobile devices.

Whereas Google enables only text and images in presentations and provides no support for exporting presentations to other formats, Glide lets you save and serve

presentations on a variety of platforms (Windows, Mac, and Linux machines are supported), as well as save and convert presentations to PowerPoint format or PDF. In my tests, a Glide-created presentation converted to PDF without a glitch.

The simplicity, interactivity, and unlimited free storage of Google Docs' presentation component will appeal to many people, but for power users it falls short. By comparison, Glide has covered all the bases with a compelling software offering that could emerge as a true Web-based replacement for Microsoft PowerPoint.

—Ryan Naraine



GOOGLE ALLOWS YOU to invite others to view or collaborate on your work.

Safari and Opera, however, and it includes only the most basic tools for creating and sharing slide shows.

Google's presentation app comes with six templates and one-click formatting

MORE ONLINE

Interested in another set of office apps? Go to find.pcworld.com/58965 for a review of IBM's Lotus Symphony Suite.

85
VERY GOOD

Google Docs (Presentations) Google

Easy-to-use software is likely to disappoint power users. Free find.pcworld.com/58925

88
VERY GOOD

Glide Presenter 2.0 : Transmedia

Impressive program could be a true PowerPoint replacement. Free find.pcworld.com/58926

WARNING: TAPE BACKUP AND RECOVERY MAY BE HAZARDOUS TO YOUR DATA.



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Sleek New BlackBerry Calls on Wi-Fi

PCW Test Center

FIRST CAME THE trim, consumer-friendly BlackBerry Curve 8800. Then came the Wi-Fi-enabled BlackBerry 8820. Now there's the BlackBerry Curve 8320, an impressive PDA phone that combines the best of the previous two models with an impressive bonus: While the 8820 supports Wi-Fi for data only, the 8320 permits you to make voice calls over Wi-Fi too.

The 8320 is smaller, lighter, and—as its name suggests—curvier than the boxy 8820. Physically, the 8320 is the same as the original Curve. Unlike that device and the 8820, which AT&T offers,

the 8320 is available from T-Mobile; it costs \$300 with a two-year contract.

The big news, however, is under the hood: In addition to support for GSM and EDGE networks, the 8320 has Wi-Fi with Unlicensed Mobile Access (UMA)—a technology that lets you make voice calls over Wi-Fi. It works with T-Mobile's \$20-per-month (on top of your voice and data plan) HotSpot@Home service, which allows unlimited calls over Wi-Fi. Though the service is pricey, it could lower your costs by reducing your used cellular voice minutes.

I tested both the phone

and the service by using one of T-Mobile's HotSpot@Home wireless routers, manufactured by Linksys. But the 8320 will connect to any 802.11b/g wireless network, so you can use your existing router—or even a public hotspot—to make calls and surf the Web. T-Mobile says that its router (\$50, but free after a rebate) is designed to prioritize voice traffic in order to improve call quality. However, I noticed no significant improvement when using the T-Mobile router instead of my own Linksys wireless router. Call quality over both wireless networks was the same: decent, just as it was when I used the phone over a regular cellular connection. Being able to make calls over Wi-Fi is a great option in areas where cellular service is spotty, though. (We couldn't lab-test the phone's talk-time battery life in time for this issue, but you can see the results—and the device's PCW Rating—online at find.pcworld.com/58955.)

For both voice calls and data usage, the 8320 will default to Wi-Fi. Should you leave the network's range, the phone will switch your call to the cellular network (and vice versa)—but in my tests, the experience wasn't smooth. When I went out of range of my Wi-Fi network, calls dropped, even though cellular service was available.

Like all BlackBerry units, the 8320 is a stellar e-mail device. The 2-megapixel camera (which sports a flash and a 3X digital zoom) took good snapshots. It also has an



THE BLACKBERRY CURVE 8320 features a slim design and an impressive display.

audio and video player that supports most formats (including MP3, AAC, WMA, WMV, and MP4).

The ability to make voice calls over Wi-Fi is very useful. And combined with the 8320's sleek design and awesome e-mail handling, it makes a winning package.

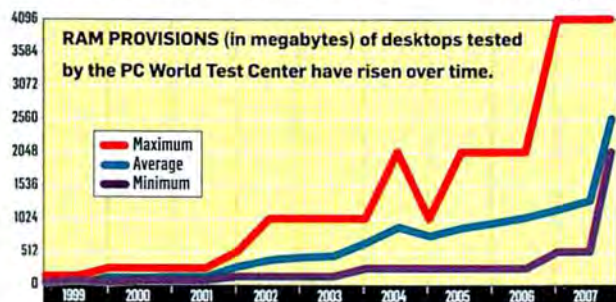
—Liane Cassavoy

TECH TREND

Windows: It Hungers for RAM

EVERYONE KNOWS THAT PCs sold today have more RAM than they did in the olden days. The question is, why? Applications grow hungrier and RAM prices keep falling, of course, but operating system bloat is the biggest reason. A review of systems that the PC World Test Center has evaluated since 1999 reveals that the average RAM provision has grown from a little over 90MB to about 2GB, spiking whenever Microsoft releases a new version of Windows. For example, when Windows XP machines started appearing, system RAM increased, on average, from about 126MB to more than 286MB. When Windows Vista started shipping, our test PCs' RAM jumped from slightly more than 1GB to about 2GB. Windows' minimum system requirements ballooned from 16MB to 1GB over the same period. So when you are ready to upgrade your PC and your OS, you can assume that you'll need substantially more RAM.

—Alan Stafford



BlackBerry Curve 8320 | RIM

Voice-over-Wi-Fi feature makes an excellent phone even better.

List: \$300 (with two-year contract from T-Mobile)

find.pcworld.com/58957



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List: \$20 per month

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Mapping Software Can't Keep Pace With GPS

IF YOU'RE LOOKING for a navigation tool, you have several choices: one of the GPS units on the market, a cell phone with GPS capability, or software on a laptop (or even, for old-schoolers, a paper map). I tested three options—Navigon's 7100 in-car GPS hardware; Ask Mobile, a service delivered to your cell phone; and Microsoft's Streets & Trips 2008 With Connected Services software. Result? The hardware and the cell-phone service left the software package eating their dust.

Like most high-end GPS devices, Navigon's 7100 provides text-to-speech conversion of street names. It also has a 4.3-inch display, 2D and 3D maps for all of North America, support for Bluetooth phone connections, and millions of points of interest. The device was simple to use, and the maps and directions it provided were easy to follow, as well.

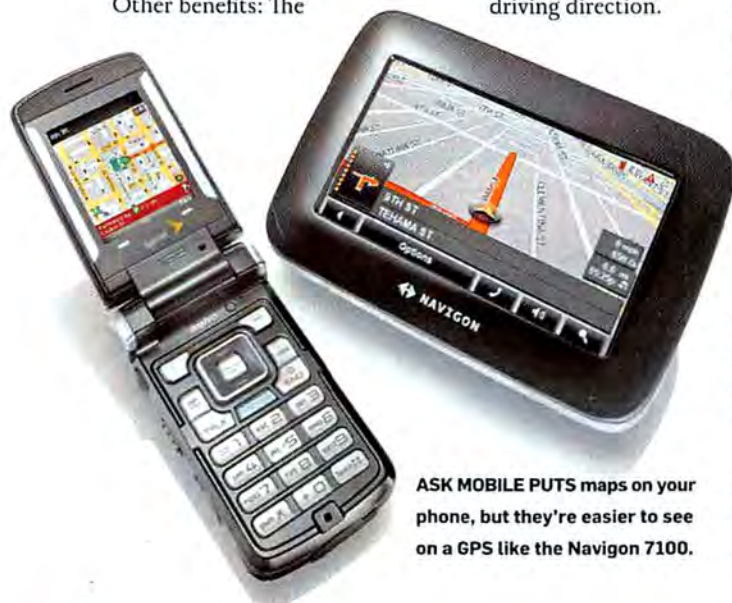
Other benefits: The

Navigon 7100 offers real-time traffic updates for free (they usually cost about \$10 a month), plus Zagat listings for hotels, restaurants, and other travel spots. It also has a unique feature that tells you which lane to use for the next change of heading.

Alternative Directions

Getting your driving instructions on your cell phone through a service such as Ask.com's Ask Mobile makes great sense: You don't have to carry another device, and the \$10 monthly fee is less expensive than a dedicated GPS—at least initially.

Ask Mobile is currently available only with Sprint handsets, though most cell phone carriers have similar services. Unfortunately, the small display couldn't match the Navigon 7100's detailed map views (as was to be expected), and the service was usually a second or two slower in giving me the next driving direction.



ASK MOBILE PUTS maps on your phone, but they're easier to see on a GPS like the Navigon 7100.



STREETS & TRIPS requires that you tote your laptop and the included GPS transceiver.

Still, Ask Mobile got me where I needed to go, despite a few missteps (it lost its way occasionally).

It didn't take me long to realize that Streets & Trips is an application whose time has come and gone. One problem is keeping the included hockey puck-size GPS transceiver on the dash using only its 1-inch plastic suction cup; mine continually fell on the floor.

A bigger problem with the program is how difficult it is to work with on the road, as you must tote your laptop with you. It's relatively easy to find the option you're looking for among the dozens (or hundreds) visible at one time when your vehicle remains stationary, but once you're moving, it's nearly impossible.

But the real knock on Streets is its high price: At \$180, it costs about as much as a low-end in-car GPS that would be far easier to use.

The Navigon 7100 is a great travel companion. Still, many people will find all the assistance they need

with a cell-based service such as Ask Mobile—as well as prefer its lower cost and greater convenience. I can't think of one good reason to choose Streets & Trips 2008 as a navigation assistant.

—Dennis O'Reilly

81

VERY GOOD

Ask Mobile | Ask.com

Convenient way to get driving (and walking) directions.

List: \$10 a month

find.pcworld.com/58725

82

VERY GOOD

7100 | Navigon

High-end GPS unit adds nice extras. Street: \$550

find.pcworld.com/58727

58

POOR

Streets & Trips 2008 With Connected Services | Microsoft

For navigation, shrink-wrapped software is not the way to go.

List: \$180

find.pcworld.com/58726

THE MOTHER OF ALL HOOKUPS.

As acronyms go, USB means more than most. Because this wildly popular technology is how the world holds hands. Or rather, how computers and their supporting peripherals carry on meaningful relationships.

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and-go simplicity. And the sort of reliability that sometimes gets taken for granted. Think about it: Has there ever been a more user-friendly technology?

Now think about how the USB suite of technologies—Certified Hi-Speed USB, Hi-Speed USB On-The-Go or Wireless USB—makes it possible for various technologies to get along. In the world of computers and peripherals and mobile devices, it's love at first sight.



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iPod Touch's Design Shines

PCW Test Center AS AN IPHONE fan who can't get an AT&T signal at home, I hoped the iPod Touch would give me most of the iPhone's benefits, albeit minus the phone. Its specs (Wi-Fi, mobile Safari, multitouch interface, and 16GB of storage), are impressive, but the \$399 iPod Touch I tested had several glitches—though some

were subsequently resolved.

The iPod Touch's beautiful interface and large screen help make it easily the most fun media player I've ever tested. The Touch works exactly like the iPhone: The tap, scroll, and pinch gestures work just as well here.

Unfortunately, the Touch exhibited a pronounced hiss when playing through in-ear headphones. This problem was confirmed in our lab, where the Touch showed poor results on our signal-to-noise-ratio test. The hiss goes away if you plug in an attenuator (an adapter that shipped with my third-party earbuds), but I would prefer

not to have to use one.

With the iPod Touch supporting up to 640-by-480-resolution videos in both H.264 and MPEG-4 formats, I was all set to load some movies. My first unit had a display problem that made many dark scenes almost unwatchable, but Apple addressed this issue later with a firmware update. Screen quality still lags behind the iPhone's, but video looks quite nice.

Viewing Web pages is terrific in Safari, which remains the best mobile Web browser I've seen. It works great on the iPod Touch.

Though it's expensive, the



THE IPOD TOUCH features a gorgeous 3.5-inch display.

Touch is an amazing piece of technology. I'd gladly recommend it to anyone looking for a mobile video player, a portable Web browser, or a high-class way to cart around your music library.

—Eric Dahl

PHOTOGRAPH: MARC SIMON

78
GOOD

iPod Touch | Apple

Beautiful design outweighs minor audio-quality issues. List: \$399
find.pcworld.com/58915

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HTC's Advantage: PDA, Phone, or Laptop?

HTC'S ADVANTAGE X7501 offers the inner workings of a PDA phone—with features such as 3G cellular, Wi-Fi, and Windows Mobile 6—and the shell of an Ultra-Mobile PC. It sounds like a good formula. In practice, it falls short. The Advantage has an im-

pressive list of specs: an 8GB hard drive, a miniSD card slot, a 3-megapixel camera, a TV-out connector, and built-in GPS. Using the included Microsoft Office Mobile suite, I easily opened PowerPoint slides and created Word documents and Excel spreadsheets.

Reading e-mail and browsing the Web was simple, too. Web pages loaded quickly, thanks in part to fast data connections via Wi-Fi or 3G HSDPA or UMTS networks.

The major drawback is the thin, detachable QWERTY keyboard. It looks impres-

sive at first, but the keys are too flat, and its small size makes nudging the wrong key easy.

The phone part of this device seems like an afterthought. To carry on a conversation, you have to use the speakerphone, earbuds, or an optional Bluetooth headset. Talk-time battery

THE 5-INCH screen makes watching videos and viewing documents a pleasure.

life was very good, though: The Advantage lasted more than 7 hours in our lab tests.

All things considered, the HTC X7501 is a full-featured PDA with an awkward phone and a poor keyboard. What a disadvantage.

—Grace Aquino

PHOTOGRAPH: MARC SIMON

73
GOOD

Advantage X7501 | HTC

Great display, but awkward phone with a poor keyboard. List: \$900
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\$100 Snapshot Printers: Ink vs. Dye-Sub Models

PCW Test Center

FOR SNAP-HAPPY families, a snapshot printer can save time and is just plain fun. Of the four new models we reviewed this month, three came in at a tempting price of \$100.

But are they good deals or just gadgets? In the case of our Best Buy, the Epson PictureMate Dash, you may be surprised at how much it has to offer: a 3.6-inch LCD, buttons for printing without a PC, and several fun editing features. The Dash may look like a glorified lunch box, complete with handle, but it delivers where it counts. It is faster than the other models we tested, and it prints good-

looking photos. Best of all, its consumable costs are moderate, at 26 cents per print (based on the \$40 PictureMate Print Pack, which supplies enough paper and ink to produce 150 4-by-6-inch prints).

HP's Photosmart A526 takes the opposite tack, minimizing features but maximizing print quality, making up somewhat for its slowness. This inkjet-based model is fairly compact and, like the Photosmart, sports a handle for toting. If you buy HP's \$35 supply pack,



which contains sufficient ink and paper for 120 4-by-6-inch prints, the cost per page is a tolerable 29 cents. The A526's 2.4-inch LCD is quite

EPSON'S PICTUREMATE Dash prints quickly and inexpensively.

a bit smaller than the Dash's, however.

Two dye-sublimation printers rub shoulders with the inkjets in our rankings. Canon's Selphy CP740 and Sony's DPP-FP70 pair compact base units with somewhat awkward external paper cassettes. They use special paper and film-based ink that are matched precisely to one another, so you can't use third-party supplies; and if you want to change paper size, you have to change the cassette and cartridge, too. Canon sells a kit containing 108 sheets of 4-by-6-inch paper plus a 108-print cassette for \$30—a reasonable 27 cents per print. The postcard-paper cassette that comes with the printer is external; inserting it into the printer's front nearly doubles the machine's footprint. The CP740's LCD is even smaller than the HP A526's, at only 2 inches.

The Sony model offers better speed and print quality than the Selphy does, but it costs more. Like the Canon, the DPP-FP70 has a large paper cassette. The cost per print for both dye-sub is predictable because you use each section of ribbon only once. The Sony's print cost isn't out of line at 29 cents a page (if you buy the \$35 pack of 120 sheets plus ink).

—Melissa Riofrio

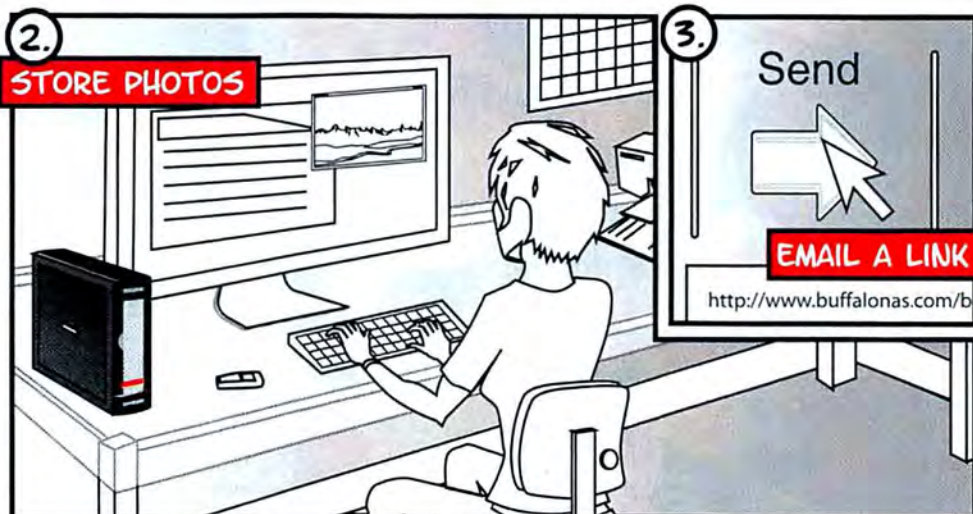
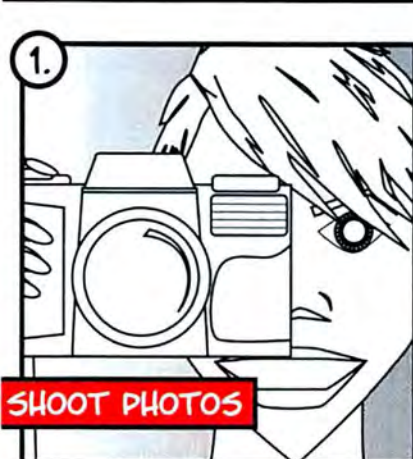
PC WORLD TOP 5 SNAPSHOT PRINTERS

MODEL	PCW Rating	Performance	Features and specifications
1 BEST BUY Epson PictureMate Dash \$100 NEW find.pcworld.com/58735	89 VERY GOOD	<ul style="list-style-type: none"> Color photo quality: Good Grayscale photo quality: Very Good Tested speed (ppm): 1.5 	<ul style="list-style-type: none"> Media types: CompactFlash, Memory Stick, SD Card, xD-Picture Card Cost per print: \$0.26
BOTTOM LINE: This bulky printer produces nice-looking photos quickly, easily, and at a good price.			
2 HP Photosmart A526 \$100 NEW find.pcworld.com/58736	84 VERY GOOD	<ul style="list-style-type: none"> Color photo quality: Very Good Grayscale photo quality: Very Good Tested speed (ppm): 0.7 	<ul style="list-style-type: none"> Media types: CompactFlash, Memory Stick, SD Card, xD-Picture Card Cost per print: \$0.29
BOTTOM LINE: The Photosmart A526 is simple to use but very slow. The prints are worth the wait, though.			
3 Canon Selphy CP740 \$100 NEW find.pcworld.com/58737	80 VERY GOOD	<ul style="list-style-type: none"> Color photo quality: Very Good Grayscale photo quality: Fair Tested speed (ppm): 0.7 	<ul style="list-style-type: none"> Media types: CompactFlash, Memory Stick, SD Card Cost per print: \$0.27
BOTTOM LINE: It's slow and a bit clunky, but prints look smooth (albeit dark). Cost per print is reasonable.			
4 Sony DPP-FP70 \$150 NEW find.pcworld.com/58739	74 GOOD	<ul style="list-style-type: none"> Color photo quality: Very Good Grayscale photo quality: Very Good Tested speed (ppm): 1.4 	<ul style="list-style-type: none"> Media types: CompactFlash, Memory Stick, SD Card, xD-Picture Card Cost per print: \$0.29
BOTTOM LINE: The main drag on this fast and feature-rich printer is its comparatively high price.			
5 HP Photosmart A616 \$130 find.pcworld.com/55342	73 GOOD	<ul style="list-style-type: none"> Color photo quality: Fair Grayscale photo quality: Good Tested speed (ppm): 0.5 	<ul style="list-style-type: none"> Media types: CompactFlash, Memory Stick, SD Card, SmartMedia, xD-Picture Card Cost per print: \$0.36
BOTTOM LINE: This Photosmart is easy to use, but it prints quite slowly and delivers so-so quality in skin tones.			

CHART NOTES: Prices and ratings are as of 10/9/07; ppm = pages per minute. Cost per print takes supply pack price, if applicable, into account.

MORE ONLINE For more information on snapshot printers and for details on how we test them, go to find.pcworld.com/58943.

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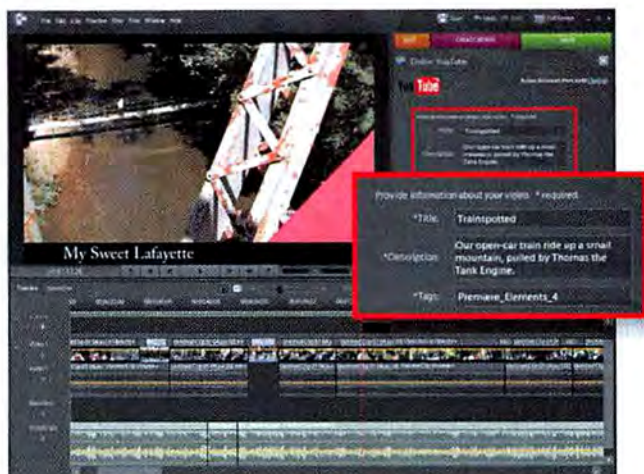
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Reviews & Rankings



THE TITLE AND description of your video will be sent to YouTube.

Premiere Elements Finds YouTube—Finally

"THIS YOUTUBE THING might be catching on." Two years or so after that dawned on most people, Adobe has recognized the trend, adding an upload-to-YouTube feature to its consumer video editor, Premiere Elements 4. But despite that and an overhauled interface, I wasn't as thrilled with this update as I have been with past versions.

Elements outputs your movie directly to YouTube in its preferred Flash format, so you save time by skipping the step of outputting to some other format first. However, you can't change any settings, and the quality isn't so hot. For now, the feature supports only YouTube, but Adobe says other sites could be added in the future.

Adobe calls Elements' updated interface "decluttered," but it felt dumbed down to me: Some useful features are gone. For example, Elements 3's interface let you put panes wherever you wanted, even on a second monitor. Elements 4 allows you to resize panes, but you can't move them.

The Media bin now has a Project sub-bin and an Organizer sub-bin; if you preview a clip in the Project window, you'll see rudimentary playback controls such as fast-forward and fast-reverse. But if you preview clips in the Organizer window, you can't tell how long a clip is, and you can't fast-forward to see whether material at the end is useful.

In the past, a common criticism of Premiere Elements has been that it's too complicated. That may have been true, but some compromises the new version makes to appeal to newbies will frustrate existing users.

—Alan Stafford

82

VERY GOOD

Premiere Elements 4 | Adobe

Prettier, and finally YouTube-friendly, but dumber. Street: \$99
find.pcworld.com/58929

Utility Eases Migration to Windows Vista

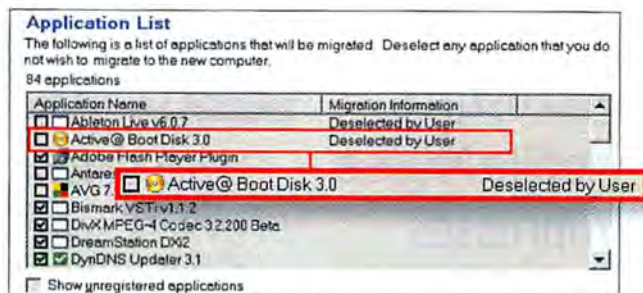
LOOKING TO BUY a new Vista PC but don't want to leave your carefully honed Windows XP software image behind? A PC migration application such as Laplink's PCmover 3.0 can—usually—help ease your transition.

PCmover copies program

settings, common data files, and other files and Registry information that contribute to the look and feel of your PC. Version 3.0 takes the process a step further and copies your apps, too.

You can perform transfers via USB, LAN, or CD/DVD. After installing the software on your old PC and your new machine, you simply attach the cable, and you're all set to move data.

Four of my five test migrations worked fine. I had trouble, however, trying to migrate applications from a 750GB system to one with



YOU CAN SET the applications that you'd like PCmover to transfer.

only 250GB of drive space. I instructed the utility to copy all of my applications, but because I had to deselect several drive partitions from the copy list to save space, PCmover didn't copy the applications on the deselected partitions. This was an unusual scenario, but a more intelligent program would have checked where the apps were located.

Other glitches: It didn't

copy my Firefox settings; transfers using the cable halted when I merely ejected a CD on the destination PC; and the program refused to resume the halted transfer—I had to start all over.

PCmover will migrate your settings and programs nicely in most circumstances, but if your image strays from the norm, you might need to reinstall some apps yourself.

—Jon L. Jacobi

73
GOOD

PCmover 3.0 | Laplink Software
Migration software works well—within limits. List: \$60 (includes USB transfer cable)
find.pcworld.com/58712

Special Advertising Supplement

When Losing Files Is Not An Option

R-Studio from R-Tools gives major boost to data recovery and business continuity

The R-Studio Vista-ready business continuity solution continues to improve. Now **R-Studio** from R-Tools, the industry leader in high-performance data recovery solutions, includes HFS and HFS+ file systems support, UFS/BigEndian support, GPT partition layout schema support and Apple partition map support.

Another recent enhancement is a universal hexadecimal editor to inspect and edit file system structures. These can include NTFS and FAT boot sectors, MFT file record, MBR, LDM structures and others. This advanced tool is particularly helpful for specialists working in lower-level data processing, IT security, data recovery and computer forensics. R-Studio is an ideal file recovery solution for IT

a local computer or server only.

R-Tools also recently launched an enhanced version of **R-Wipe & Clean**, which automatically keeps applications free and clear of harmful clutter. R-Wipe & Clean now supports Windows Vista and removes useless or unwanted data from more than 200 third-party applications, including Microsoft Office 2007.

Other business continuity solutions in the R-Tools lineup include **R-Drive Image 4.0**, which enables users to totally, quickly and confidently restore their systems after a major crash, attack or hardware failure. R-Drive Image 4.0 is flexible in that imaged files can be stored in a variety of places and on various removable media such as CD-R(W)/



DVD, Zip disks, Jazz disks and so on. The utility is accurate in that image files contain exact byte-by-byte copies of a hard drive, partition or logical disk.

Other superb utilities and solutions from R-Tools include:

- **R-Mail for Outlook** and **R-Mail for Outlook Express**, which reconstruct inadvertently deleted email messages or damaged .pst and .dbx files
- **R-Word** and **R-Excel**, which recover damaged Word or Excel files that have been corrupted or attacked

To learn more about the latest release of R-Studio and the rest of the exceptional solutions from R-Tools designed to keep your business up and running efficiently, visit www.r-tt.com.

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Microsoft's Mobile Mouse Impresses

MICROSOFT'S NEW Mobile Memory Mouse 8000 is a well-designed, full-featured, and—at \$100—expensive input device. This wireless mouse worked great on all desktop surfaces; it even worked on rough or unusual surfaces such as glass and the keys of a keyboard.

Powered by a rechargeable nickel-metal hydride battery, it can charge through a small cable that latches magneti-



THE MEMORY MOUSE 8000 fits comfortably in your hand.

cally from the mouse to a 2.4-GHz USB receiver that also doubles as a 1GB flash drive. (You can connect the mouse via Bluetooth, too.)

Business travelers will appreciate the flexibility this mouse offers; other people will find its price too high.

—Greg Adler

81
VERY GOOD

Mobile Memory Mouse 8000
Microsoft

Pricy, full-featured wireless mouse is impressive. List: \$100
find.pcworld.com/58921

Scrub Software, Snap Links Open, Kill Germs

LIKE PEOPLE, PCs can get the winter blahs, working hard on those long, dark evenings. Their drives fatten with unnecessary data, while we users get tired of repetitive clicking. Give everybody a minivacation with these three freebies: a utility to jettison unnecessary files, a Firefox add-on that should cut back on clicks, and, just for kicks, a colorful game demo.

Tone Up Software

Over time, programs balloon with unnecessary junk. CCleaner gives apps the once-over and tells you what excess material it can shed.

Unlike many cleaning programs, Piriform's CCleaner doesn't stop at the obvious (browser caches, temporary files, the Recycle Bin); it also scrubs out temporary files from a long list of programs by Adobe, Microsoft, Mozilla, Nero, Norton, and other companies. You can exclude folders from the cleaning, and you can tag others outside the default profile for emptying. The sheer volume of expendable files might surprise you.

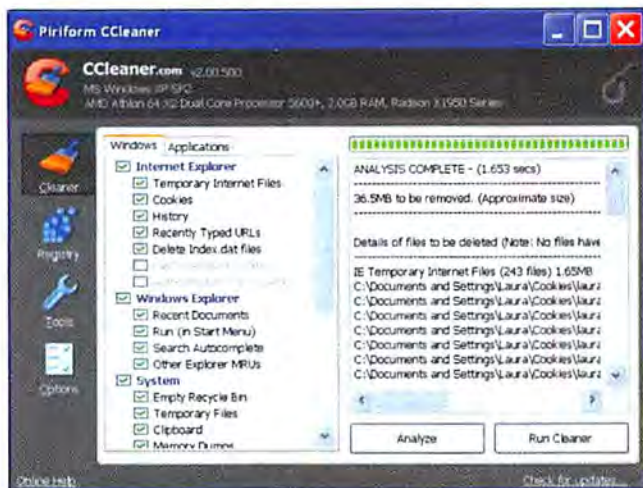
This freebie has a few useful extras, too, such as an uninstaller and a Registry scanner. It's like spring cleaning—regardless of the actual season. Free, find.pcworld.com/58679.

Search Results: Snap to It!

Everybody wants lots of search results, but clicking each one gets dull fast. If you're using Firefox, you can deal with those results all at once with the free Snap Links extension, which lets you draw a box around a group of links and either open or save them. It's as simple as a right-click-and-drag: In my tests with various search engines and PCWorld.com search results, it worked swimmingly.

By default, Snap Links opens all your chosen links in new tabs in the original window. But author Pedro Fonseca makes sure to give you choices. Holding down <Ctrl> when you start drawing your magic box produces a menu of

options. You can open the links in a new window (or several), bookmark them, or save the results to the Clipboard. Fight click tedium by making any of these the default for handling selected links. Free, find.pcworld.com/58680.



CCLEANER WEEDS OUT unneeded temporary files from many apps.

Fight Disease the Fun Way

Flu shots. Hand sanitizer. Nasty zinc tablets. Health precautions are a drag. But with the game Nanotron, you can line up ranks of goofy-looking germs and shoot them down, arcade-style, to stop their merciless advance through Patient B-145A's liver.

In the free demo you can enjoy ten levels of play. Armed with a bat, you bounce a red ball off the invading germs, destroying some and mutating others into more useful forms. (The makers at Orbital Cows Entertainment describe the game play as a cross between arcade classics Breakout and Space Invaders.) In addition, different types of germs drop various power-ups and 'power-downs—an extra ball, a germ-damaging nano-pill, a bat-shortening pill, and so forth—to keep things lively.

When you win the demo, your name goes on the scoreboard, just as it does in the arcade. To continue the fight for Patient B-145A, pay \$20 for the full version to unlock the challenges of the next 50 levels. Dare your friends to top your high score—just make sure they use hand sanitizer before touching your keyboard. Free demo, find.pcworld.com/58681.

30 million computer users don't trust the power grid.



APC Smart-UPS® 1000 provides power protection and battery backup during power outages. Also available in rack-mount models.

They do trust APC. Shouldn't you?

"Overall the reliability of electrical systems in the US almost certainly will decline over the next 10 years."

— Venture Development

Think of all that you rely on your computer for: personal and business files, financial information, broadband access, videos, photos, music, and more. Increasingly, computers are the hub for managing our lives. And more people rely on APC to protect their hardware and data than any other uninterruptible power supply (UPS) brand.

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40% over the next 10 years. Yet today, investment in utilities is at an all-time low. It's a "perfect storm" for computer users, one that makes APC protection even more essential.

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Dangerous Times, **Intelligent Protection**

ESET Smart Security offers a proactive, integrated approach for protecting small and medium-sized businesses

There may be a Grinch lurking under those trees this holiday season.

New PCs and laptops bursting with performance and snazzy features are prime targets for malicious software (malware) ranging from viruses, spyware and adware, to rootkits and trojans.

It used to be that an email-transported virus was the primary threat to computer users. Times have changed. Malware can now be downloaded simply by visiting a website, and many users can be drawn to malicious sites through enticing web links.

"Unfortunately, even a single visit to an infected website enables the attacker to detect vulnerabilities in the user's applications and force the download of a multitude of malware binaries," according to *The Ghost In The Browser: Analysis of Web-based Malware*¹, a report by a group of Google researchers who found that 1-in-10 surveyed web pages were launching drive-by downloads.

True, many new systems come loaded with a bewildering array of trialware, including security software. But the likelihood that users will employ such software in a correct manner beyond the trial period is questionable at best.

A SPECTRUM OF THREATS

Security experts advise that all computers, whether they are for home or business use, should be protected from the many types of malicious attacks that prey on innocent victims. This requires having strong antivirus, antispyware, antispyware and firewall features.

Unfortunately, most security suites don't serve these computer users very effectively. They are likely to be cobbled-together applications requiring complex configuration for each module, or even separate installations. Even worse, they are likely to be performance hogs—causing many users to disable key components.

"Most traditional products have a need to be updated to detect new viruses," says Andrew Lee, chief research officer of ESET, a global provider of

security software for enterprises and consumers. ESET's highly praised NOD32 antivirus software was developed utilizing a system of heuristics which, according to Lee, provides proactive protection by detecting new, unknown threats in real time and preventing the malware from acting, even though no specific definition has been implemented for that threat.

ESET just released ESET Smart Security—a fully integrated security solution for consumers and small to medium-sized businesses. It includes antivirus, antispyware, antispyware and personal firewall features, built on ESET's award-winning advanced heuristics ThreatSense® detection system and the ESET NOD32 scanning engine.

INTELLIGENT SECURITY

"ESET Smart Security is built on an integration framework that allows each threat protection component to share information with the other components," says Lee. "We are really using the full capabilities of each feature because we can, for instance, feed the firewall with updates and information that relates to the antivirus component, to provide faster and more accurate detection."

ESET Smart Security combines the industry's highest level of accuracy and fewest false-positives with lower CPU overhead and lightning-fast scanning speed.

"The speed and performance of the computer when security solutions are installed is directly related to the effectiveness of that antithreat solution," says Lee. "If the computer user disables any part of the protection array because it interferes with their effective use of the system, then you've lost the security battle."





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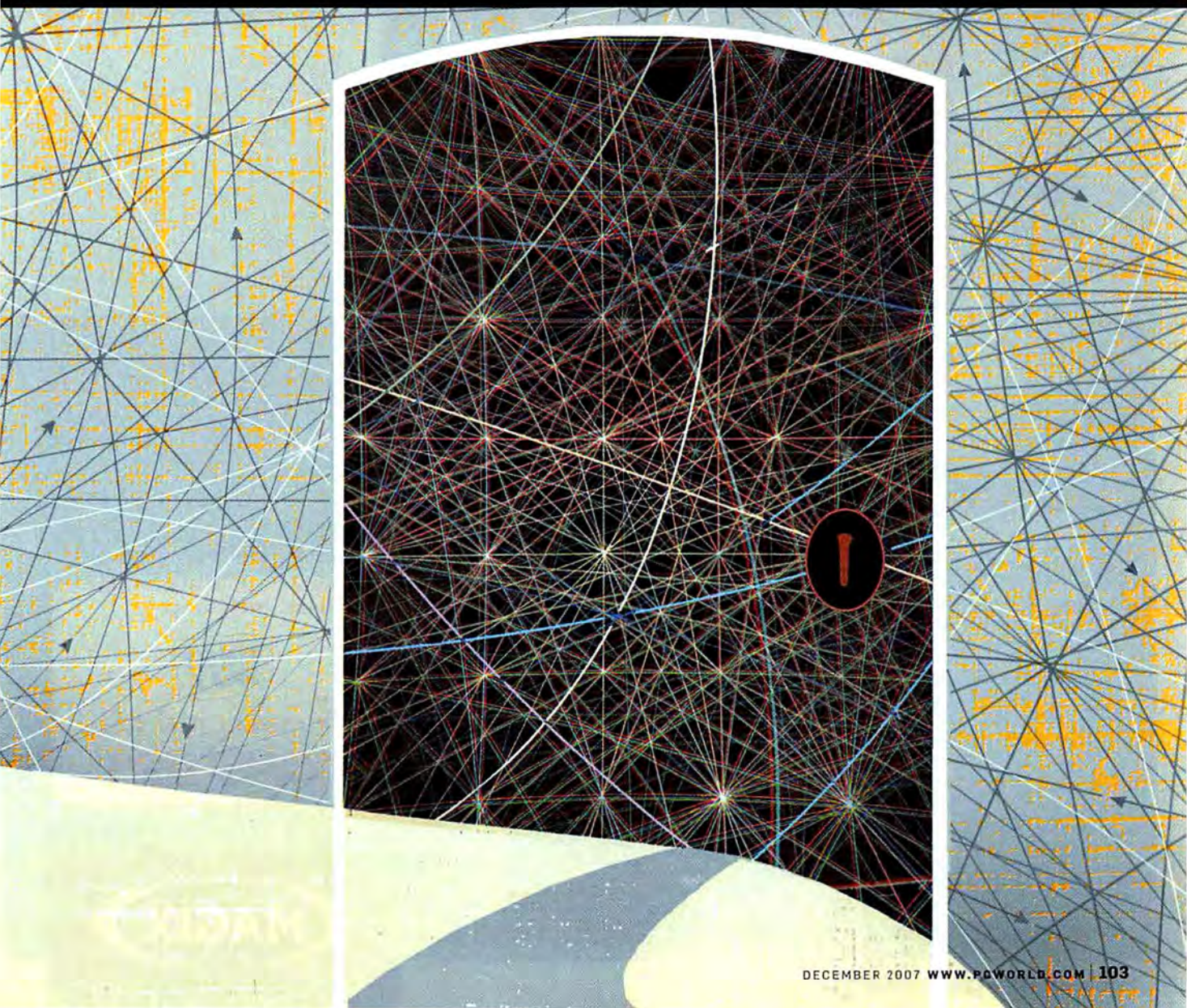
Secrets of the New Web

ILLUSTRATIONS BY MICK WIGGINS

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We're enjoying the Web's second great creative bloom. Speedy connections, sophisticated browser-based applications, and portable devices that can bring the Net wherever you roam make collaborating, creating, and socializing online more addictively useful than ever. But how does it all work—and more important, how can you make it all work for you? This special issue is devoted to tools and tricks that will help you unlock the power of the new-and-improved Web. And since nothing's perfect, we've also spotlighted ten things about the Web that still drive us bonkers—along with a few ideas on how to fix them once and for all. »



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Seize the Web

Go beyond browsing: With these 39 exceptionally interactive Web sites and services, you can do anything from launching a private social network to publishing your own book. »

BY JEFF BERTOLUCCI



The Web is not a spectator sport. Sure, you can watch videos and do countless other low-brainwave activities online, but the Web's outlets for self-expression and creativity are boundless. In fact, the medium doesn't come alive until you take advantage of the participatory Web—the sites and services that can present you and your talents to the world.

Whatever your passion—creating video, networking with friends or colleagues, blogging, running a business, making music, or publishing a novel—you're bound to find a site or service that can help you pursue your goals. While many of these services are free, others may charge from a few bucks to thousands of dollars. We'll give you our favorites in each category, and we'll introduce you to two people who are making a living by distributing their creative efforts on the Web.

Star in Your Own Videos

The best thing about a lot of video-posting sites is that they let you earn cash based on the number of views your videos generate. And if you're a fledgling auteur, some can help you get discovered by the entertainment industry.

Metacafe claims over 1 million users a day. Equally important to video creators, though, is the site's revenue-sharing program, which pays \$5 for every 1000 views, although payments don't arrive until your clip receives 20,000 views and an average viewer rating of 3 stars (out of 5) or higher. Another income-sharing site is **Revver**,

which offers a 50-50 revenue split based on views and ad clicks. You can disable the ads that run before your video starts. Some Revver clips play on Verizon Wireless VCast phones, which extends your opportunity for cash and exposure.

If you're waiting for Hollywood to discover you, **Crackle** can be your online casting agent. This Sony-owned site limits file uploads to 100MB, so don't post your feature film here. Crackle's contests offer prizes such as pitch meetings with studio execs.

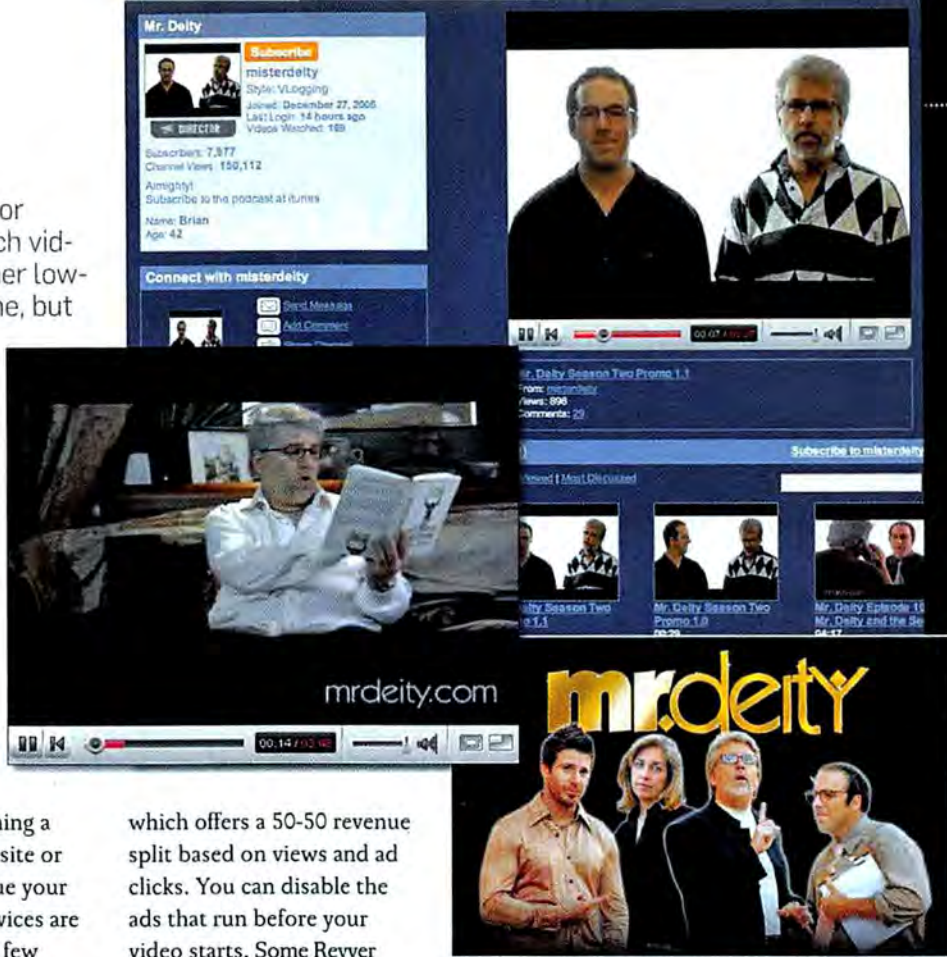
Several innovative features distinguish **Veoh**, a hidden gem whose video-playback quality is a notch above that of most sites. If you have an account on Google Video, MySpace, or YouTube, Veoh automatically posts your clip to those sites too (you must activate this feature first). And it imposes no size limit on video uploads—a rarity.

It's no secret that **YouTube** has the biggest audience of video viewers, so naturally you'll want to post there. The site's playback quality isn't great, particularly when compared with that of Crackle and other newer sites. You

won't find a video site that's easier to use, however, and its Video Toolbox section provides helpful shooting and editing tips from the pros.

Formerly known as iFilm, **Spike** provides a platform for fledgling filmmakers. You can embed your Spike-hosted clips on personal sites, including blogs and MySpace pages. The service offers no revenue sharing, though. Your file uploads can be as large as 500MB—many sites limit you to 100MB. **JibJab** is the place to submit video jokes: You'll find everything from stand-up routines to the ever-hilarious guy getting kicked in the groin. JibJab accepts photo, audio, and text jokes too. The site's editors decide if your bits are funny enough to post; if they're not, well, there's always YouTube.

Yahoo Video (video.yahoo.com) lets you link clips to your blog and drive traffic to your site. Videos are a breeze to upload at **Google Video** (video.google.com),



Web Moguls:

Mr. Deity Hits the Big Time in a Browser

SOON AFTER THE devastating Indian Ocean earthquake and tsunami of December 2004, Brian Dalton, a writer/director in Temecula, California, began pondering why such tragedies occur. Why would an all-loving, all-powerful God allow such misery? His musings led him to write a short comedy script, "Mr. Deity and the Evil," in which an anxious, distracted, yet essentially benign creator decides what types of suffering should afflict the human race. "Holocausts?" asks his clipboard-carrying assistant, Larry. "Yeah, I'm gonna allow it," answers Mr. Deity matter-of-factly. Torture, natural disasters, and Down syndrome make the cut too. Taking those things out "will make it way too easy for people to believe in me," Mr. Deity decides.

"I had friends who read it and liked it, and thought we should do something with it," he says. Eventually they posted two episodes on YouTube. A favorable mention on Digg brought a lot of viewers, which in turn spurred YouTube to place "Mr. Deity" on its home page. "It took off from there and never really stopped," says Dalton.

Dalton is now developing a TV pilot, and he has been approached by an agent for a book deal. He calls the "Mr. Deity" franchise "profitable," but can't discuss specifics.

thanks to the service's intuitive (and bare-bones) interface. The site provides an optional desktop uploader for files larger than 100MB. It doesn't offer revenue sharing, and we'd like to see more (or at least some) integration with YouTube, but Google Video's big-name pedigree and utter simplicity make it a good place to post your videos.

Be the Center of Your Social Network

If you've moved beyond Facebook, LinkedIn, or Orkut and are ready to build your own online community, either for personal or professional use, these sites will let you create a social network, complete with discussion forums, RSS feeds, member profiles, and other essentials. Constructing a simple social network costs nothing, but you'll likely want to upgrade to the sites' paid services as your network gains members, or to remove the ads that display on networks you build for free.

The best design tools we've seen for building a social network are at Ning. Organize your network's main page by

dragging a text box, forum widget, or other component into the layout window. Then select fonts, colors, background images, and other page elements. Invite friends and associates by importing addresses from AOL Mail, Gmail, MSN Hotmail, Yahoo Mail, and other Web mail services—but not from Outlook or any other desktop mail clients, unfortunately. Your finished product has a polished and professional appearance.

A close second is Nexu, which provides a great site builder that is simple enough for anyone to use. Just choose a design template, or start out with a blank page and insert your choice of more

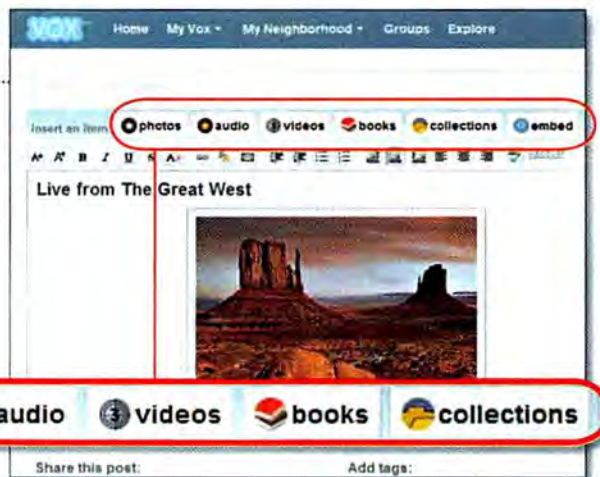
THE VOX BLOG editor makes adding photos, audio files, videos, and other nontext elements to your blog as easy as clicking a big, clearly labeled button at the top of the screen.

than two dozen modules, including forums, feeds, images, and polls.

The page-design tools at KickApps are targeted more at Web-savvy developers who have built sites before. Getting your KickApps network to look the way you want may take time, but experienced designers will appreciate the site's advanced tool kit.

For people whose Web-design experience ends with their MySpace profile, there's Me.com, where setting up a network is a snap. You won't find the type of top-notch customization tools that Ning offers, or KickApps' developer-friendly features. And Me.com has a few weird quirks: For instance, you can't upload a video into the viewer, but must instead import a feed directly from a Webcam. The service is for personal, not professional, networks.

CollectiveX offers many business-friendly features, but it lacks the customization and hand-holding options that you can find on other social-network sites. You can import contacts directly from Outlook and Outlook Express, as well as from the major Web mail clients. Setup is a bit confusing; the service could use more Ning-style help guides. However, your finished CollectiveX page will be nicely organized and visually appealing.



December 25, 1990: The World Wide Web is born in Geneva.

Blog for Show, Blog for Dough

Getting your blog read takes more than compelling prose. These sites will help you attract and hold an audience.

Vox has the best blog editor we've tested. To add an image, song, or video to an entry, just click the appropriate button above the text window. You can embed a reader poll or other widget on your page, too. Vox's bigger sibling is **TypePad**—both are owned by blogging-services provider Six Apart. TypePad has the powerful design tools that professional bloggers crave, offering easy drag-and-drop design and more customization tools than other blog sites provide. Six Apart won't place ads on your blog, but you can supply your own via a third-party ad network, if you wish. TypePad's fees range from \$5 to \$30 a month (more for custom plans).

Yet another Six Apart site, **LiveJournal** is designed as a community tool rather than a standard blogging service. For instance, you can join user-created groups and text-message other LiveJournal members. The free Plus service provides 1GB of photo storage.

A good choice for first-time bloggers is Google's **Blogger**. Setup couldn't be simpler: Choose one of a dozen design

templates, enter your blog title and text in the browser-based editor, and add an image, video clip, or links with just a couple of clicks. The service lacks TypePad's sophisticated features, and we'd like to see more editing tools, but what Blogger does, it does very well.

If you already have a Yahoo Mail account, **Yahoo 360** (360.yahoo.com) is the fastest way to blog—no additional setup required. The service's editor lacks the ability to post audio and video clips, among other features, but you can add reader polls. **Microsoft's Windows Live Spaces** (spaces.live.com) is fine if you don't need high-end features. Its basic editor lets you add photos and embed videos, but you can't upload videos directly from your computer.

The **WordPress** service provides handy editing tools, including a word counter, and the option to open links in a separate window. For \$15 a year, you can access the site's CSS Stylesheet Editor to modify your blog's template.

Get Help for a Business or Workgroup

You have a business to run, and you don't have the time or skills to build a Web site from scratch. Let these services do the heavy lifting for you, allowing you to focus on

Tools for Building a More Perfect Web

YOU DON'T HAVE to take the Web as it is. These two sites help you do your own in-browser customizations.

YouTube Remixer: This browser-based applet allows you to quickly add captions, graphics, borders, and transitions to clips you've already uploaded to your YouTube account. To get started, sign in to YouTube, go to find.pcworld.com/58718, and click *Try Remixer*. In the *My Videos* window to the right, you'll see thumbnails of your clips. Drag them into the editing window, and use the drag-and-drop tools to add effects. When you're finished, click *Publish*. Your original videos remain unchanged, but the edited versions appear on YouTube.

Feed Rinse: This freebie (at feedrinse.com) lets you enter your RSS subscription URLs singly, or you can import your OPML (Outline Processor Markup Language) file to add them all at once. Then you set up rules for each feed (to block posts that contain a certain objectionable topic or word, for example).

more important management matters.

The **Homestead** hosting service has a great tool kit for building a professional site, even if you can't tell "HTML" from "BYOB." The Design Gallery has more than 2000 templates, so chances are good that your site won't be a clone of your competitors'. Homestead's drag-and-drop tools let you easily add your company's logo and other brands. Homestead's least-expensive hosting service for businesses costs \$20 a month, plus a \$25 setup fee (skip the "Starter" package, which is too limited to be useful). For more-affordable hosting, try **Yahoo Small Business** (business.yahoo.com): Prices start at \$9 a month, and when we signed up the startup fee was waived. The page-design tools >>



DESIGNING A SITE couldn't be easier than using one of the 2000 templates in Homestead's Design Gallery.

March 15, 1993: The Mosaic browser is posted for download.

THE I.T. MANAGER'S I.T. MANAGER.



Whatever your everyday routine is like, IBM System x3655 Express can help manage routine tasks and save you time. How? It comes with IBM Director, which helps to deploy, monitor, troubleshoot, maintain and optimize your infrastructure from a single screen. It's simple and efficient.

From the people and Business Partners of IBM:
Innovation made easy.

ADVANCED SYSTEMS MANAGEMENT THAT HELPS SAVE YOU TIME AND MONEY.

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Featuring up to two AMD Dual-Core Opteron™ 2000 Series Processors
Increased performance-per-watt efficiency with dual-core processing

IBM Director allows you to manage anywhere from 5 to 5,000 other servers

Xcelerated Memory Technology means faster access to memory for large memory configurations

Comes with a 1-year on-site limited warranty* on parts and labor

IBM System x3655 Express

\$1,999 (Save \$655)

OR \$53/ MONTH¹

IBM BladeCenter LS21 EXPRESS

PN: 7971E1U

Featuring up to two AMD Dual-Core Opteron™ 2000 Series Processors

Up to 32GB of DDR II memory to maximize the amount of memory that can be installed in the ultra-dense blade

IBM Director allows you to manage servers remotely to help increase uptime and reduce costs

Integrated SAS controller and connectors for 2.5-inch SFF non-hot-swap SAS HDDs



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Kipkay Videos

Visit Kipkay's Channel on Metacafe!

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Google Search

Kipkay Videos



are serviceable, although they can't match Homestead's. Constructing an e-commerce site is easy, and you get plenty of tips to help your site succeed.

Google Custom Search (www.google.com/coop/cse/) is a free, Google-hosted search window that you place on your business's site. You choose the pages that are searched when your visitors enter a query. For professional sites, the fee-based Business Edition is worth the cost (rates start at \$100 a year). Business Edition removes the Google logo from the search window and Google ads from the search results, while adding more tools and support.

The **Microsoft Small Business Center** (www.microsoft.com/smallbusiness) supplies free technical support for the company's popular business-oriented apps, including Windows XP Profes-

sional, Live Meeting, and Small Business Accounting. The Startup Center provides advice for entrepreneurs as well as an eclectic mix of business essays, such as the always-popular "5 rules for on-the-job romance."

Become a Music Sensation

Maybe you don't need a major label to make it big in the music biz. These sites help you promote and sell your tunes.

The eye-bleedingly ugly page designs on **MySpace** haven't stopped the site from becoming the top promotional resource for fledgling musicians. Sign-up is free, and the site's music-related content runs deep, including dedicated classifieds and forums. One drawback: You can upload only four songs total. Competing sites let you post more.

You may know **GarageBand** as the Mac software for creating music, but a Web site by that name (garageband.com)—

unaffiliated with Apple, apparently—also exists. Musicians get a generous 200MB of free storage for their songs. To have your tunes rated by other members, you first must review 30 songs from other artists, or pay \$20. If you're not a starving artist, a Gold membership (\$100) buys ad placements on the site, a contest entry, and other perks.

Jamendo lets you post and share as much of your music as you want, but you must post at least an album's worth, not a single or selections from an album. You can distribute your tracks free of charge—allowing others to remix or alter your creations if you choose—while retaining the right to sign an exclusive deal with a label.

Magnatune splits purchases 50-50 with its artists and allows them to set a purchase price, within reason (for example, artists can't charge less than \$5 for their CDs). You're responsible for recording your own tunes and paying for any studio time, if necessary.

MusicSubmit helps you promote >>>

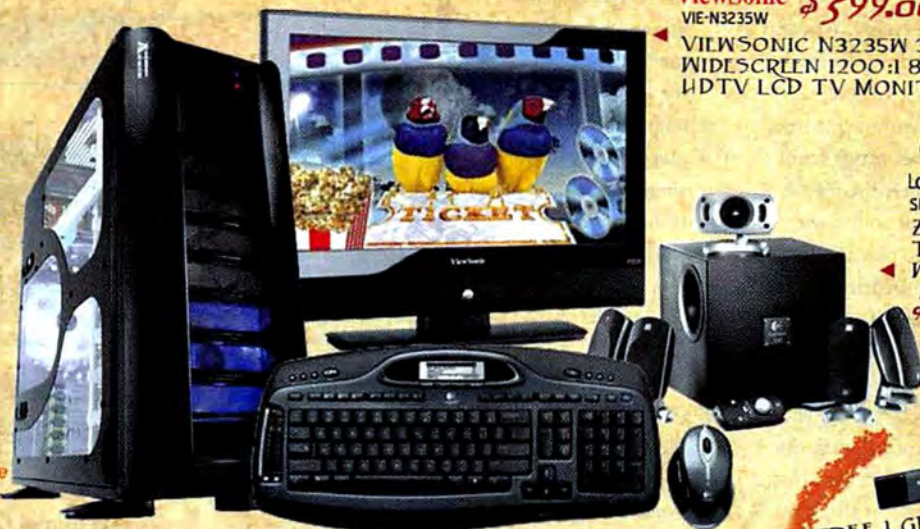
Web Moguls: Post Videos, Earn \$\$\$

A YEAR AGO, Kip Kay of St. Petersburg, Florida, began posting short clips on Metacafe, a video site that shares revenues with its content producers. Kay has made over \$57,000 from his short how-to videos for techies, making him one of the site's top earners.

Kay's topics include how to build a laser flashlight, how to make a pair of infrared goggles for under \$10, and how to chill a soda can in 2 minutes. The clips are informative, interesting, and perfect for short attention spans.

Where do his ideas come from? "There's no big magic book, and a lot of stuff I've known over the years," says Kay. "I do find some ideas on the Internet too." Since he retains the rights to his videos, Kay is free to post his clips elsewhere. He has gotten offers from competing sites, but so far nearly all of his profits have come from Metacafe. Kay plans to make videos "as long as I continue to be successful at it."

February 1994: Yahoo founders post their first Web directory.



ViewSonic \$599.00

VIE-N3235W

VILWSONIC N3235W 32 INCH
WIDESCREEN 1200:1 8MS
HDTV LCD TV MONITOR



Logitech
SP-Z5300E

Z-5300 5.1 280W
THX CERTIFIED

Wired Remote Speaker

\$133.90

Thermaltake
CA-8000BWS

\$135.96

THERMALTAKE ARMOR ATX/BTX
READY SUPER TOWER CASE



Logitech
KB-MX5000

\$103.00

LOGITECH CORDLESS DESKTOP
MX 5000 W/ BLUETOOTH
HUB LASER MOUSE AND
KEYBOARD COMBO

**FREE 1 GB READYBOOST
USB DRIVE**

WITH PURCHASE OF ANY OF THESE ITEMS
PROMO CODE: **EWIZBOOST**
VALID: 11/13/07 - 12/13/07
LIMIT ONE READYBOOST
PER PERSON PER HOUSEHOLD

live your FANTASY

WWW.EWIZ.COM

Traverse the seven seas alongside mighty pirates or deftly forge through a treacherous forest with this amazing gaming system. The nVidia GeForce video card delivers mind-blowing graphics clear enough to see every last dragon scale while 500GB of hard drive space provides plenty of room for your game collection. With all these incredible deals, eWiz will help you build the perfect system to bring all your games to life. With our low prices, easy-to-use online store and same-day shipping, we are confident that your shopping experience will be as easy as conquering your opponent!

The Real Treasures are Inside...



SUPER-TALENT
T667UX4GC5

\$168.00

SUPERTALNT DDR2-667
4GB MEMORY KIT



Thermaltake
PS-W0117RU

\$164.80

TOUGHPower 750W
POWER SUPPLY



WD
WD-W50AAS

\$109.00

WESTERN DIGITAL
500GB SATA2 7200RPM
HARD DRIVE



GIGABYTE
MB-N650SLI

\$129.78

GIGABYTE CORE 2 DUO
ATX MOTHERBOARD



EVGA
EV-8800GTX

\$540.75

NVIDIA GEFORCE 8800GTX
768MB 2DVI/HDTV
PCI-EXPRESS VIDEO CARD



intel
Q6600BOX

\$281.19

INTEL CORE 2 QUAD
PROCESSOR Q6600 CPU

your music by sending your MP3s and artist/band info to hundreds of Internet radio stations, music magazines, blogs, and other sites. Sign-up is free, but promotional services range from \$17.50 a month to a one-time fee of \$239. If you'd rather sell your own CDs, you can let people play the music on your own site by embedding the MusicSubmit player there for free.

Sony's slick **AcidPlanet** site allows artists to review other people's songs, and maybe get discovered by making the site's Top 25 list of the most-popular tunes. Among the useful freebies is the AcidExpress music-creation software. As on similar sites, the more you review other artists' songs and join in the forums, the more likely others will check out your music.

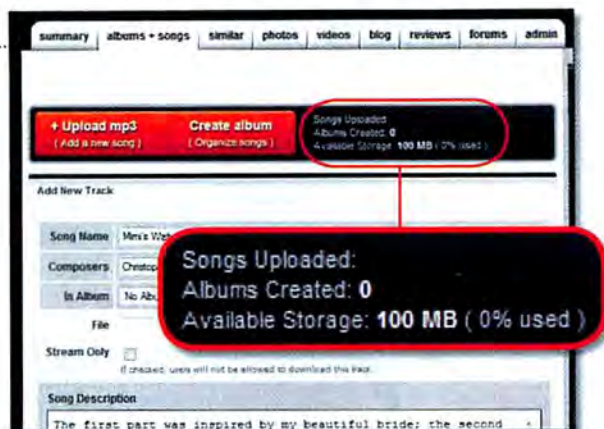
Musicians receive a lot for free at **MP3.com**, including 100MB of storage for their music, 10MB for photos, and unlimited space for video clips. The site has an egalitarian feel, with lesser-known acts enjoying equal billing alongside major-label stars.

Get Your Book Read

Some online-publishing sites don't charge up-front fees, and unlike traditional vanity publishers, print-on-demand services don't require that you buy a single copy of your book.

BookSurge, Amazon's self-publishing arm, offers various fee-based services, each tailored for a specific breed of writer. Publishing fees for fiction books, for instance, start at \$500 and range upward to \$3600. The high-end package includes the talents of a professional editor who reviews your manuscript. Royalty rates—the amount you make per book sold—range from 25 percent of the list price for trade paperbacks purchased via retail channels to a

UP TO 100MB of free storage for music (and unlimited space for videos) make MP3.com a good place to get your songs heard—and to hear other artists' work—for no charge.



CRAWL UP THE best-seller list at CafePress.com by selling copies of your self-published book in ones and twos, and profiting on each copy sold.



mere 10 percent for those sold via wholesale. Amazon and other online retailers will offer your title, and BookSurge provides tips on how to boost your Amazon sales opportunities.

If you prefer not to pay up front, **Lulu**, an on-demand publisher, will print your book, even if it sells only a single copy. If you're serious about marketing your work, however, you'll have to pay. Obtaining an ISBN (International Standard Book Number), for instance, costs \$50. Lulu lets you set the book's price; it prints and ships each item, and its author-royalty rate is a very generous 80 percent. Lulu sells its authors' books at its site, as well.

Self-publisher **iUniverse** offers a Premier Pro package (\$1300 to \$1400) that includes guidance on polishing your manuscript, plus marketing assistance and a custom hard cover. There's even the (slim) chance that your book, if it's commercial enough, will appear in Barnes & Noble bookstores for eight

weeks—or longer, if it's selling. The bargain Fast Track service (\$400) publishes your work without editorial guidance, cover graphics, or illustrations.

You might need a marketing degree to fathom the promotion and publishing choices at **Xlibris** (www2.xlibris.com), though the site's detailed FAQ section clearly explains the fine print. The service's \$300 Advantage package includes printing a paperback version of your masterwork, while the \$13,000 Platinum deal adds marketing help, including an ad in the *New York Review of Books'* Independent Press Listing.

CafePress.com makes one-offs of all kinds of stuff, including books. Simply choose the size and binding, and then upload your manuscript. You set the price, which determines your royalty payment. CafePress.com gets \$10 for each book you sell, so if you set the price at \$15, you make nearly \$5 per sale. CafePress.com's online shop will even sell your book for you. ●

July 16, 1995: Amazon's first sale—a book on computers.

ASUS recommends Windows Vista[®] Business

Future Proof Computing

Built to Win
Gaming Notebooks: G1 & G2

ASUS 360 Warranty &
Accidental Damage Warranty



U3S



Dedicated
Graphics
Engine

13.3" Revolutionary Notebook with GPS

Minimal mass, minimal design. Weighing at 3.85 lbs., the U3 is an effortlessly portable solution. Polished stainless steel edges accent the outer frame, and a leather palm rest invites intimacy.

U3S-A1W (white) U3S-A1B (black):

- Intel[®] Core[™]2 Duo T7500 2.20 GHz
- Genuine Windows Vista[®] Business
- 13.3" Color Shine widescreen display (1280 x 800 WXGA)
- NVIDIA G8400M G 128 MB
- 160 GB hard drive, 1.5 GB memory
- 1.3 megapixel webcam, Bluetooth V2.0+EDR, WLAN 802.11 A/B/G/N, fingerprint authentication with TPM, built-in GPS, piano paint finish, elegant stainless steel frame, leather palm rest, carrying bag and Bluetooth mouse, HDMI, eSATA, 3.85 lbs., 12.4" x 9.5" x 0.87~1.3"

USD \$1,599 CAD \$1,739

F8P



Dedicated
Graphics
Engine

Leather-bound Luxury with Premium Performance

The new 14.1" F8P is dressed to impress. With a case cover and palm rest bound in genuine leather, it achieves a look and feel that other notebooks just can't match.

F8P (available in white and black):

- Intel[®] Core[™]2 Duo T7250 2.00 GHz
- Genuine Windows Vista[®] Home Premium
- 14" Color Shine widescreen display (1440 x 900 WXGA)
- ATI Radeon HD2400 256 MB
- 160 GB hard drive, 1 GB memory
- WLAN 802.11 A/G/N, 1.3 megapixel webcam with 240° swivel, Bluetooth V2.0+EDR, Super Multi DVD/RW dual layer, piano paint finish and leather LCD cover, genuine leather palm rest, carrying bag and Bluetooth mouse, 5.7 lbs., 13.6" x 9.8" x 1.5"

USD \$1,299 CAD \$1,419



Core[™]2 Duo
inside[™]

Go to find.pcworld.com/58576

Luxury

Versatility

Entertainment

Gaming

ASUS recommends Windows Vista® Ultimate

ASUS-LAMBORGHINI **VX2**

Unprecedented Power and Style

Dedicated
Graphics
EngineWindows Vista®
Ultimate

Sensational Counterpart

Touch the gleaming hood and feel momentum break free from under your hands. Flick on the light and behold the world as it turns toward you. Swipe the key, get comfortable in the hand-fitted leather seats and as the engine roars to life—get ready to speed ahead. The ASUS-Lamborghini VX2 offers more performance and more possibilities with the latest Windows Vista™ operating system.

VX2S-B1Y (yellow), VX2S-B1B (black)

- Intel® Core™2 Duo T7700 2.40 GHz
- Genuine Windows Vista® Ultimate
- 15.4" Color Shine widescreen display (1680 x 1050 WSXGA+)
- NVIDIA GeForce 8600 GT 512 MB
- 200 GB hard drive 7200 RPM
- 2 GB DDR2 memory + 1 GB Turbo Memory
- 1.3 megapixel webcam with 240° swivel, WLAN 802.11 A/B/G/N, Bluetooth V2.0+EDR, fingerprint authentication and TPM, hot swappable module bay

- 8X Super Multi DVD/RW dual layer with LightScribe, spill-proof keyboard, matching bag and wireless mouse

USD \$2,999 CAD \$3,269

Upgrade to VX2S-B2Y (yellow) or VX2S-B2B (black) with HD-DVD and docking station

USD \$3,299 CAD \$3,599

High resolution webcam
with 240° swivelPrivacy protected with
fingerprint readerLeather-bound palm rest
with exquisite stitch detailing

Wheel-rimmed accent

U6



Dedicated
Graphics
Engine

12" Ultra-portable Engineered for Desire

Sparkling metallic espresso gleams under a mirror finished cover. Leather wrapped palm rests entice your fingertips, while a brush metal touchpad and stainless steel accents elevate the meaning of mobile sophistication. The ASUS U6 delivers LED backlit technology, 12" portability, and dedicated graphics in a delicious feast for the senses.

U6S (available in Espresso and Snow White)

- Intel® Core™2 Duo T7500 2.20 GHz
- Genuine Windows Vista® Business
- 12" Color Shine widescreen display (1280 x 800 WXGA)
- NVIDIA GeForce 8400M G 128 MB
- 160 GB hard drive, 2 GB memory
- WLAN 802.11 A/G/N, 1.3 megapixel webcam, Bluetooth V2.0+EDR, Super Multi DVD/RW dual layer, fingerprint authentication & TPM, carrying bag and mouse

USD \$1,799 CAD \$1,959

In-Mold Decoration (IMD)

Technology encases ASUS elegant detailed designs under the notebook for a glossy and scratch resistant protective cover.

F8S



Smart Design and Outstanding Performance for Work or Play

The F8 looks as sharp as an Armani suit, but it knows how to loosen its tie. It gives you all the power you need for the most demanding multitasking at the office, or the most thrilling DirectX 10 gaming and multimedia at home.

F8SV-A1

- Intel® Core™2 Duo T7500 2.20 GHz
- Genuine Windows Vista® Home Premium
- 14" Color Shine widescreen display (1280 x 800 WXGA)
- NVIDIA G8600M GT 256 MB
- 160 GB hard drive, 1 GB DDR2 memory + 1 GB Turbo Memory
- 5.7 lbs., 13.6" x 9.8" x 1.5"
- WLAN 802.11 A/B/G/N, 1.3 megapixel webcam with 240° swivel, Bluetooth V2.0+EDR, Super Multi DVD/RW dual layer, fingerprint authentication, scratch resistant In-Mold Decoration (IMD)

USD \$1,399 CAD \$1,739

Or upgrade to F8SV-B1

- Intel® Core™2 Duo T7700 2.40 GHz
- 14" Color Shine widescreen display (1440 x 900 WXGA+)
- 2 GB DDR2 memory + 1 GB Turbo Memory

USD \$1,599 CAD \$1,529



ASUS recommends Windows Vista® Home Premium

F3

Plow Through Multimedia and Games with a Dual Core Processor & DGE

F3SA-A1

- Intel® Core™2 Duo T7500 2.20 GHz
- Genuine Windows Vista® Home Premium
- 15.4" Color Shine widescreen display (1280 x 800 WXGA)
- ATI HD2600 512MB, up to 2 GB with HyperMemory
- 160 GB hard drive
- 1 GB memory + 1 GB Turbo Memory
- 1.3 megapixel webcam with 240° swivel, 8X Super Multi DVD/RW, WLAN 802.11 A/B/G/N, Bluetooth V2.0+EDR, fingerprint authentication & TPM, Li-ion 6 cell, 6.5 lbs.

USD \$1,299 CAD \$1,419

Or choose F3SV-C1

- Intel® Core™2 Duo Processors T7700 2.40 GHz
- 1680 x 1050 WSXGA+ display
- NVIDIA GeForce G8600M GS 256 MB
- 2 GB DDR2 memory + 1 GB Turbo Memory
- All features of F3SA-A1 plus 8X Super Multi DVD/RW with LightScribe

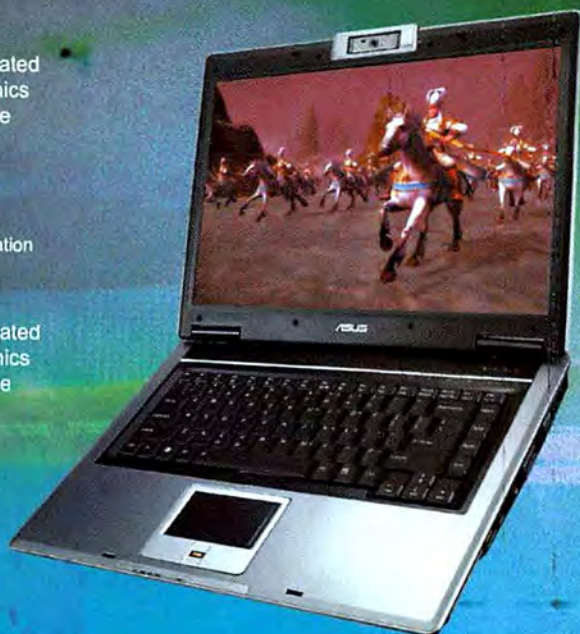
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Dedicated Graphics Engine



Dedicated Graphics Engine

**F5VL**

Great Affordable Notebook with Brilliant Screen and ASUS Quality

You'll be surprised what the versatile F5VL can deliver for under \$1,000. A beautifully enhanced, zero bright dot screen, a 1.3 megapixel webcam, and the best standard notebook warranty in the industry just begin to tell the story.

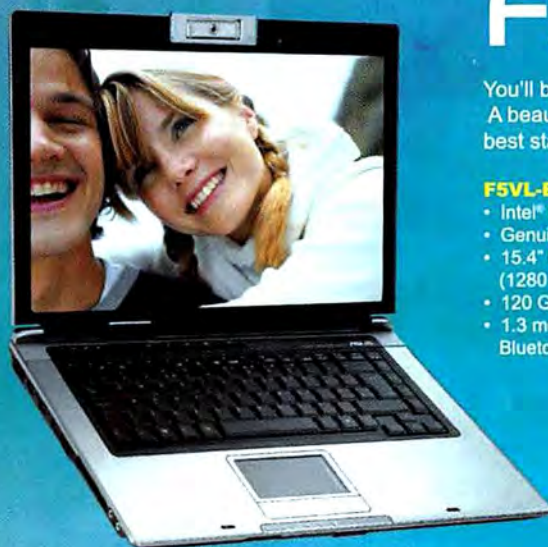
F5VL-B1

- Intel® Core™2 Duo T5250 1.50 GHz
- Genuine Windows Vista® Home Premium
- 15.4" Color Shine widescreen display (1280 x 800 WXGA)
- 120 GB hard drive, 1 GB DDR2 memory
- 1.3 megapixel webcam, WLAN 802.11 B/G, Bluetooth V2.0+EDR, Super Multi DVD/RW dual layer

USD \$999
CAD \$1,089
Or choose F5VL-C1

- Intel® Core™2 Duo Processors T2310 1.46 GHz

USD \$899 CAD \$1,199

**Future-Proof Computing**

Ever purchased something and regretted it later? One of the biggest mistakes notebook buyers make is investing in a product that quickly becomes outdated—one that is not "future proof." Avoid this frustrating mistake! Think carefully about the following specifications on your next purchase.

Dual Core Processing: CPUs provide the horsepower your software demands. If your processor isn't future-proof, it creates a significant performance bottleneck, not to mention excess heat and short battery life.

Core Duo processors are sufficient for most applications. Core2 Duo processors (like the ones in the ASUS F8Sv and ASUS F3S) offer sufficient raw power to keep you current long into the future.

**Dedicated Graphics Engines:**

Plan to use your notebook for games and multimedia? Look for an NVIDIA or ATI dedicated graphics engine (DGE, see opposite page). That way you can enjoy all the eye candy from the latest DirectX 10 games! Don't forget

that you'll need DGE to use Windows Vista™ Ultimate's flashy Aero effects. If you don't game, watch multimedia, and are perfectly happy with a more basic operating system, integrated graphics notebooks like the ASUS F5R can save you money.

Turbo Memory: Users who are frustrated with slow boot times and applications should look into Turbo Memory. Turbo Memory stores frequently used hard drive data



W2 Elegantly Thin Portable Home Theater

The W2 offers a built-in HD-DVD player, a high definition screen, and HDMI connectivity for a true HD experience. Enjoy high definition TV broadcasts in Dolby 5.1 surround sound. The W2's brushed aluminum frame and award-winning design are absolutely stunning.

W2W-A1

- Intel® Core™2 Duo Processors T7700 2.40 GHz
- Genuine Windows Vista™ Ultimate
- 17" high resolution widescreen display (1920 x 1200 WUXGA)
- ATI HD 2600 DDR3 256 MB
- 300 GB hard drive
- 2 GB memory + 1 GB Turbo Memory
- 7.95 lbs., 15.6"x11.3"x1"~1.28", award winning design
- High quality 5.1 channel audio with built-in Dolby Home Theater certified cinematic subwoofer, Hybrid TV tuner, HD-DVD player, built-in webcam, WLAN 802.11 A/B/G/N, Bluetooth V2.0+EDR, HDMI connection

USD \$2,699 CAD \$2,949



Dedicated Graphics Engine



A7 Affordable 17" Multimedia Station with Stunning Graphics

A7's powerful graphics and a high definition, Color Shine screen enable stunning video and images. A 1.3 megapixel webcam is integrated for convenient wireless video communication. At these prices, anyone can afford an ASUS media center notebook.

A7SV-A1

- Intel® Core™2 Duo Processors T7500 2.20 GHz
- Genuine Windows Vista™ Home Premium
- 17" glossy widescreen display (1440 x 900 WXGA+)
- NVIDIA GeForce 8600M GS 256MB
- 250 GB hard drive
- 2 GB memory + 1 GB Turbo Memory
- Dolby Digital Live for realistic 5.1-channel surround sound
- 1.3 megapixel webcam, WLAN 802.11 B/G, Bluetooth V2.0+EDR, Super-Multi DVD/RW dual layer with LightScribe, numeric keypad, Hybrid TV Tuner, WLAN 802.11 A/B/G/N, HDMI connection, eSATA

USD \$1,509 CAD \$1,639



Dedicated Graphics Engine

to specialized flash memory, where it can be immediately accessed. Since the frequently used data is no longer waiting for access from a physically spinning hard drive, this results in faster application boot times, and increased battery longevity.

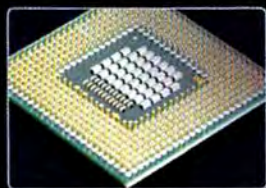
Superior Connectivity: Look for an express card slot that can take a mobile broadband card in case you want wide area network connectivity. Additionally, Bluetooth v2.0+EDR is essential for sharing data with handheld devices such as cell phones, and PDAs. Having at least 4 USB

ports is desirable for connecting external storage devices, mice, MP3 players, and cameras.

A Rock Solid Warranty: No matter what notebook you invest in, a good warranty is a must. ASUS' standard notebook warranty, ASUS 360, completely protects your notebook, for a longer time and with more convenient service than any other warranty. Other brands charge hundreds for similar protection. (see back panel for details).



ASUS recommends Windows Vista® Ultimate


Windows Vista
Ultimate
**1 Optimized for your Game**

When the fighting gets intense, ordinary notebooks crash and burn. Want extraordinary power? The G2S and G1S feature top tier processors and DGEs that support Direct X10.

**2 Sounds as Good as It Looks**

Hook up to your home system with Dolby Digital Live (G2S) and experience sharp, multi-channel theater sound via a single digital connection.

	Single layer / Dual Layer
HD content:	4.5 Hrs / 9 Hrs
Data:	25 GB / 50 GB
DVD DATA:	4.7 / 8.5 GB

3 Blu-ray

Store 6 times the data of a DVD with the latest in optical drive technology. Blu-ray drives allow up to 9 hours of high definition content, or 50 GB of data from a dual layer Blu-ray disc.

**4 Gaming Backpack**

While your buddies are breaking their backs lugging desktops, monitors, and peripherals - just bring this stylish bag with your secret weapon in stow. Our matching backpacks include protective layers for your notebook, ample padding for your shoulders, and plenty of extra pockets.

PC WORLD
Best
BUY

G2P-7R009C

August 2007



“If your dream laptop is a desktop replacement that doubles as a lights-flashing gaming machine, look no further.”

-- PC World awarded **ASUS G2P Desktop Replacement Best Buy**

G1S-B1:

- Intel® Core™2 Duo T7700 2.40 GHz
- Genuine Windows Vista® Home Premium
- 15.4" Color Shine widescreen display (1680 x 1050 WSXGA+)
- NVIDIA GeForce 8600M GT 256 MB
- 200 GB hard drive 7200 RPM, 2 GB memory + 1 GB Turbo Memory
- WLAN 802.11 A/G/N, 1.3 megapixel webcam, Bluetooth V2.0+EDR, gaming backpack and gaming mouse, 8x Super Multi DVD/RW dual layer with LightScribe, HDMI connection


**Dedicated
Graphics
Engine**
**G2S-A5:**

- Intel® Core™2 Duo Processor T7500 2.20 GHz
- Genuine Windows Vista® Home Premium
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F8P	\$1,299	14	5.7	✓ (swivel)	ATI Radeon HD2400 256 MB	✓	✓
VX2S-B1Y (yellow) VX2S_B1B (black)	\$2,999	15.4	5.6	✓ (swivel)	NVIDIA 8600 GT 512 MB	✓	✓
VX2S-B2Y (yellow) VX2S_B2B (black)	\$3,299	15.4	5.6	✓ (swivel)	NVIDIA 8600 GT 512 MB	✓	✓
U6S	\$1,799	12		✓	NVIDIA G8400M G 128 MB	✓	✓
F8SV-A1	\$1,399	14	5.7	✓ (swivel)	NVIDIA G8600M GT 256 MB	✓	✓
F8SV-B1	\$1,599	14	5.7	✓ (swivel)	NVIDIA G8600M GT 256 MB	✓	✓
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G2S-B1	\$2,199	17.1	9.5	✓	NVIDIA G8600M GT 256 MB	✓	✓
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7	Wake-up (coffee to go) Last minute packing
8	Call cab (hope it comes)
9	Check in
10	Hour in Security (remember to take out laptop)
11	Flight (middle seat)
12	Sit uncomfortably as passenger falls asleep on shoulder
1	Sit on landing strip for hours
2	Rush to Meeting
3	Present for half hour
4	Flight home (eat before flight) Lose feeling in legs
5	Taxi home (bring enough cash)
6	Call Therapist
7	Unpack
NOTES	
Cry self to sleep	

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How the Web Works: The Cost of Your Second Life

BY DAN TYNAN

ANYONE CAN LOG on to Linden Lab's Second Life (go to secondlife.com), create an avatar, and start stumbling around for free. But to get respect from your virtual peers, you'll have to part with actual dollars. And membership fees (\$10 a month or \$72 annually for a Premium account) are only the beginning. For one thing, nothing says newbie in Second Life like a head covered with the standard-issue hair. You'll eventually want to hit the virtual mall to buy clothes, land, and furnishings with your Linden dollars (at press time, 265 Linden dollars equaled \$1).

Pimp Your Crib

Your furnishing options are dictated by the size of your place; the bigger your house, the more "prims" (the primitive building blocks that make up everything in SL) you can have inside it. Complex objects, such as the plasma TV and furniture shown here, push the prim limits of this condo. But once you get the flat-screen TV in the door, it actually plays videos.



- Plasma TV: L\$249
- Black-and-gold rug: L\$100
- Leather couch: L\$325
- Easy chair: L\$250
- Executive bookcase: L\$150
- Table: Free



Deals on Wheels

In a land where flying is as easy as clicking a button, cars are purely a status symbol. (Unless, of course, you get one that can fly as well.) This sporty little 2005 SLR McLaren was a steal for just L\$499.



Land Ho

Second Life offers some respite, at least, from the real world's astronomical real estate prices.

A tiny two-story condo in the Volpe district goes for L\$8000 (about \$30), while a handsome split-level island retreat in Azores Flores comes furnished for L\$60,000 (\$225). But a private island doesn't come cheap, even in a world where you can make an island with some keystrokes. To start with, the land alone costs L\$443,875 (\$1675), and land-use fees can run you another L\$78,175 (\$295) per month.

Accessorize Your Avatar

Using a prefab avatar is like buying your clothes at JC Penney. You'll want to augment your virtual self with designer clothes, tattoos, and accessories; you can even buy new skin or preprogrammed dance moves. This avatar's outfit cost L\$690 (about \$2.60), including L\$85 for his sunglasses, L\$45 for his sword, and L\$200 for his blinding yellow sneakers.





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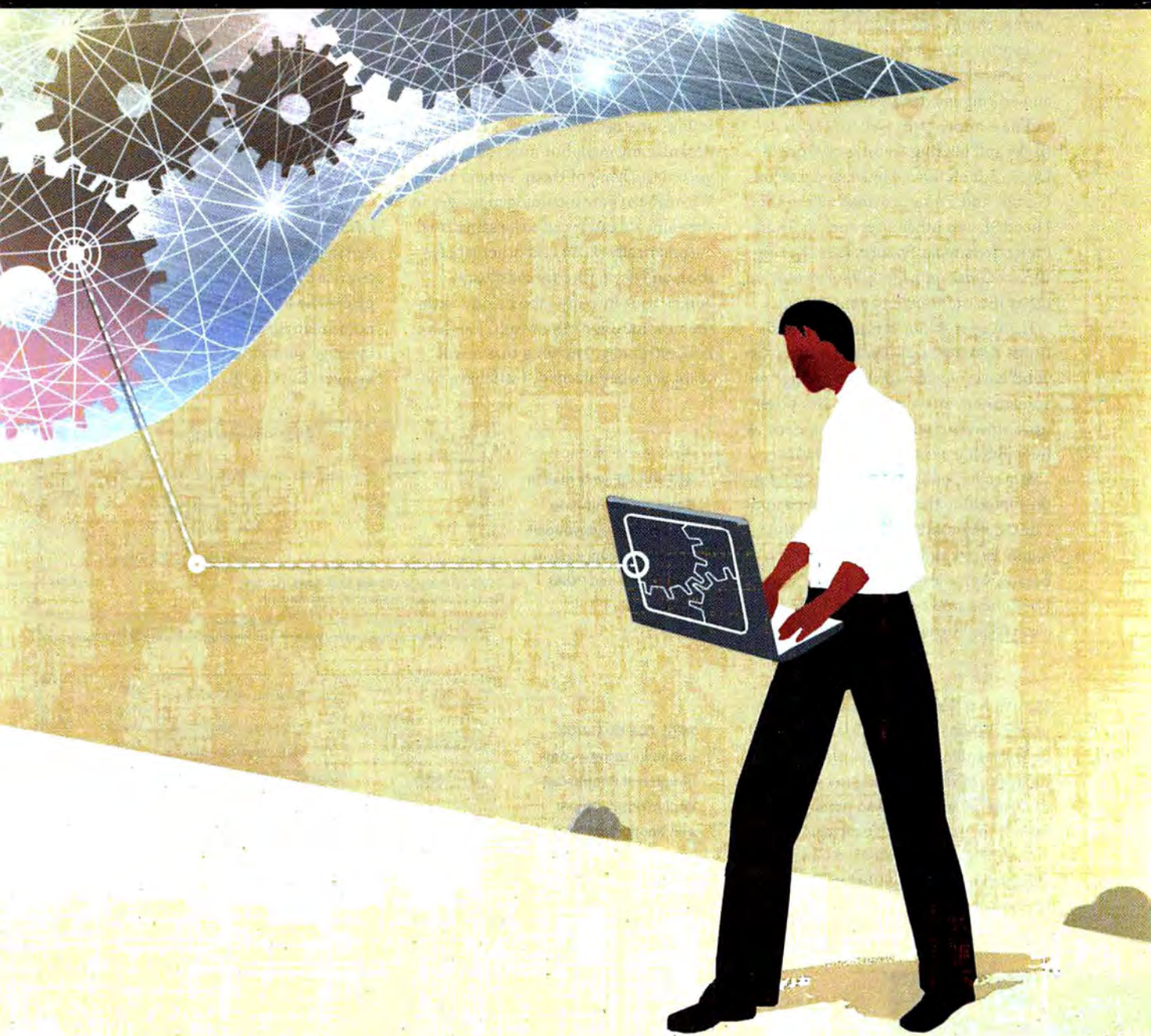


Go to find.pcworld.com/58570

Life Without Software

PC World asked me to give up desktop applications for a week and work solely on the Web—and I still haven't gone back to the desktop. »

BY SCOTT SPANBAUER



I'd written this kind of story before. My editor asked me to give up the programs on my PC for a week and rely instead only on Web-hosted applications. Afterward, I could go back to my "real" programs and report on my amusing experiences with the online substitutes.

But my little adventure had an unexpected ending: Three weeks later, I was still living on the Web, with no plans to return permanently to Office or most of the other productivity applications I used to find indispensable.

Sure, online applications can't do certain things—like rip and burn CDs, or capture screen shots. But for most of my work, the convenience of storing and editing my documents and e-mail online compensates well for the drawbacks and missing features of Google Docs, Zoho Office, Gmail, and the like. Google and Zoho provided all the tools I needed, and other sites such as Think-Free offer similar features (see the *Clip & Save Guide* on page 129 for details on other Internet-hosted applications).

The Web may not replace your traditional desktop apps if your needs go beyond basic e-mail, word processing, and spreadsheet tasks, or if your Net hook-up is slow. But you may be surprised at how much you can do in a browser.

Moreover, online office suites let you do something that locally installed apps can't: collaborate with others on documents in real time, regardless of each person's physical location. Here's how I became a true believer—and what you can expect if you take the plunge.

The End of an Addiction

My name is Scott, and I'm an Outlook-oholic. While I can take or leave the rest of Microsoft's office suite, the mere prospect of relinquishing my precious desktop e-mail client and personal information manager gave me *agita*.

Nevertheless, I configured Gmail to start picking up the POP3 mail that I previously used Outlook to download. Since I had set up Outlook to leave

messages on the server for two weeks, Gmail gathered up almost all of my current e-mail business, smoothing the transition significantly. It was easy to configure Gmail to use my POP3 account's reply-to address instead of my Gmail address, too. No one noticed that Outlook was out and Gmail was in.

I did have to adjust to using Gmail's labels—topic tags you create and assign to messages that remain in the user's inbox—instead of Outlook's folders to organize my mail, but now that I've gotten the hang of them, I prefer them. With labels, new incoming messages in the same thread receive the same label automatically (I can add other labels, too), and the entire thread always comes back into my inbox along with the new message. As a result, I archive mail intrepidly, knowing that it will reappear when needed. I still have to

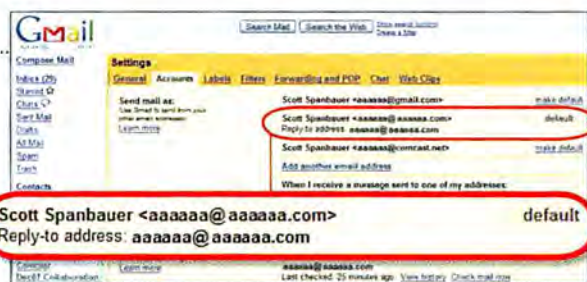
deal with my inbox daily, but now it's almost always practically empty.

Finally, I exported my Outlook contacts and calendar to CSV files (read step-by-step instructions at find.pcworld.com/58917), imported them into Gmail and Google Calendar, respectively—and just like that I was Outlook-free.

Gmail doesn't offer an easy way to import your old e-mail from desktop clients (this would be great, guys), but the couple of times I needed to see an old message, I simply fired up Outlook, took a look, and then shut it down again. People who use IMAP e-mail wouldn't even have this problem, as all IMAP mail is stored on the server, and Gmail can easily gather it there.

At the outset, I worried about losing Outlook's ability to integrate e-mail and calendar tasks. You can drag an Outlook message and drop it on your calendar to create an appointment; Outlook places the body of the e-mail in the appointment description and uses the message subject as the appointment subject. But Google is even better:

GET ALL OF your mail in Gmail by configuring the service to download messages from each of your Gmail and POP3 accounts.



REPLACE OUTLOOK online by using a combination of Google Calendar (right), Gmail, and Google Notebook.



Choose *Create Event* while viewing a Gmail message, and the program will search the message for dates and times and fill in the various Calendar fields for you. This method works only if the message is written in English, however.

Words and Numbers

It's too soon to tell whether I will encounter a show-stopping shortcoming in Google Docs. I like the collaboration features: If someone I have invited to edit my document accepts and begins working on it, a little box appears at the bottom of the screen, informing me that the person is editing the document. The changes take effect when the editor clicks Save; and I can see the changes when I click Save or refresh the browser.

But I did run into problems. First, my documents printed with tiny headers and footers. Eventually I discovered that these were inserted by the browser (duh!), and I figured out how to make them go away. Also, neither Google Docs nor Zoho Writer could correctly display or print a tabular Word document that used space-bar characters—rather than tabs—to align table elements vertically. Both OpenOffice.org and Word rendered the file correctly.

And though you can send a Google document to someone in your contact list with a single click, Google Docs and Spreadsheets insisted that one *PC World* editor's address was invalid (it worked fine in Gmail, however).

If a glitch like that one leaves you reluctant to give up your desktop apps, you might like Zoho Office's plug-in for synchronizing local Office files with Zoho's server, making them available both online and off. Unfortunately, Zoho Show had trouble properly displaying several complex PowerPoint presentations. And Zoho Viewer mysteriously refused to open a 5MB PDF file, though its file size limit is 10MB and it had no difficulty reading other

PDFs. (Many online applications do put a limit on permissible document size.)

Though I never got into using Microsoft's One Note for organizing research, I now rely heavily on Google Notebook. Zoho Notebook is even better—but using linked applications is just so easy. For example, I can send documents from Google Docs to Gmail with a single click; to mail a Zoho doc with Gmail, I

is fully compatible with Google Gears.

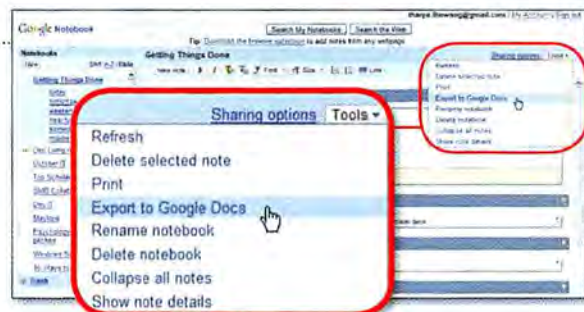
Via Google Gears, Zoho Writer offers partial compatibility, permitting you to cache and view read-only versions of documents while offline. But by the time you read this, the company may offer full offline synchronization.

Another major concern about online apps: What happens if a natural disaster or server outage wipes out my data?

ZOHO WRITER LOOKS more like Word than Google Docs does, with document tabs, a button bar, and lots of formatting options.



GET ORGANIZED USING Google's handy Notebook application (right)—or Zoho's even more richly featured notebook application.



must first save it to disk or manually cut and paste a Web link between the two.

Still, Zoho's suite of online tools includes several that are conspicuously absent from Google, including Zoho Creator for designing databases.

Wherever I Go, There I Am

Connectivity obviously matters with Web apps. Long flights and train rides are likely to separate you from your Web-hosted data (not an issue for me, as I bike between work and home).

Even this problem could vanish in the near future, however. Google's engineers are perfecting an offline synchronization plug-in, Google Gears. But to this point only Google's RSS feed reader

Google says that it backs up data files almost as often as users change them, and Zoho's official response is "do not worry." But to be cautious, individuals should download and archive their key documents regularly—another reason why high-speed access is vital if you exchange desktop for Web apps.

Privacy concerns may scare off some people. You have to trust a third party to protect your unencrypted e-mail and other data on their servers (for more on this subject, see find.pcworld.com/58905).

But for me, the convenience outweighs the risk that Google will fumble the ball on security. I like being only an Internet hookup and a mouse click away from my documents on the Web. ●

September 3, 1995: eBay's first auction—a broken laser pointer for \$14.83.

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Beyond Google: 10 of the Most Useful Web-Hosted Applications

GOOGLE'S HIGH-PROFILE ONLINE applications may not always be the best options. Here are some other Web-hosted utilities and sites that let you live large online.

E-Mail

1 Yahoo Mail (mail.yahoo.com): Yahoo's "classic" Web mail provides standard contact, calendar, and spam-filtering features in a utilitarian interface. But click on the link for the new beta version, and you'll be treated to an updated interface that organizes the same options on screen more efficiently, leaving room for lots of advertising. Banishing ads costs \$20 per year.

2 Windows Live Hotmail (mail.live.com): Microsoft's Web-hosted mail service replicates Outlook's traditional interface, with features such as folders, spam filtering, contact management, mailing-list-like contact groups, and a calendar. Though it lacks some Gmail innovations, including labels and the ability to grab and consolidate mail from other POP accounts, Windows Live Hotmail works well and for free.

DON'T FORGET TO remember whatever you need to remember, by using the straightforward online to-do lists of Remember the Milk.

Calendars and Lists

3 Planzo (www.planzo.com): Like Google Calendar, Planzo allows you to share your calendar with other users or with the Web-browsing public. You also get handy to-do lists and notebook features.

4 Remember the Milk (www.rememberthemilk.com): The focus of this awkwardly named but elegantly designed site is on three lists—tasks that are due tomorrow, due today, or overdue—and the locations (pinpointed on a Google map, if you wish) where they occur. You can share tasks with other Rtm users, take them offline via Google Gears support, and synchronize them to a Windows Mobile phone with a \$25-a-year Remember the Milk Pro account.

Document Creation and Editing

5 Zoho Office (www.zoho.com): Zoho applications look and feel quite a lot like Microsoft Office apps. They include a word processor, a spreadsheet, presentation software, a database, and a note-taking program. But Zoho doesn't stop there, offering business-oriented CRM, project-management, and Web-conferencing tools, plus poll-taking and wiki apps. Zoho Mail, which is still in closed beta testing, provides a calendar and 1GB of free file hosting.

6 ThinkFree Office (www.thinkfree.com): Billed as the free online alternative to Microsoft Office, ThinkFree has Word, Excel,

and PowerPoint clones that replicate the classic Office interface, plus real-time collaboration. Users get 1GB of online storage space, too.

File Storage

7 Scribd (www.scribd.com): Recognized as the YouTube of documents, Scribd lets you upload Word, PDF, text (.txt), PowerPoint, Excel, PostScript, and LIT (.lit) files for private use or public sharing. As on YouTube, files may not appear instantaneously.

8 Windows Live SkyDrive (skydrive.live.com): This site offers 500MB of free file storage. Share uploaded files with the world or with selected friends (Windows Live ID required), or keep them private.



SHARE YOUR DOCS with the world—if you want to—using Scribd's YouTube-like upload service.



Graphics

9 Pixenate (www.pixenate.com): Adobe plans to provide an online version of Photoshop Express soon. Until then, use Pixenate to zoom, crop, resize, banish red-eye, and otherwise enhance images. When you're done, either upload the image to Flickr or download it to your hard disk. Pixenate even spiffs up Facebook photos.

Audio

10 MediaMaster (www.mediamaster.com): Tired of ripping CDs only to realize that the files are then trapped on a single computer? After creating a free MediaMaster account, you can upload MP3, AAC, or WMA music files to the site's server, and later play them back on any PC, Treo, or Windows Mobile phone. Though you can't subsequently download and burn your music (a limitation that probably represents a concession to the record industry), you can turn it into a public Internet radio stream. ●



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How the Web Works:

Google's Street-Scene Machine

BY TOM SPRING



THESE SPHERICAL, 11-lens cameras create the images in Google Maps' Street View.

USING THE STREET View feature in Google Maps to see 360-degree images of a neighborhood really is almost as good as being there. You can "walk" along a street, checking out store windows, reading street signs, even making out a frown or smile on the faces of pedestrians. Turn left or right, and you can explore the sights on a side street.

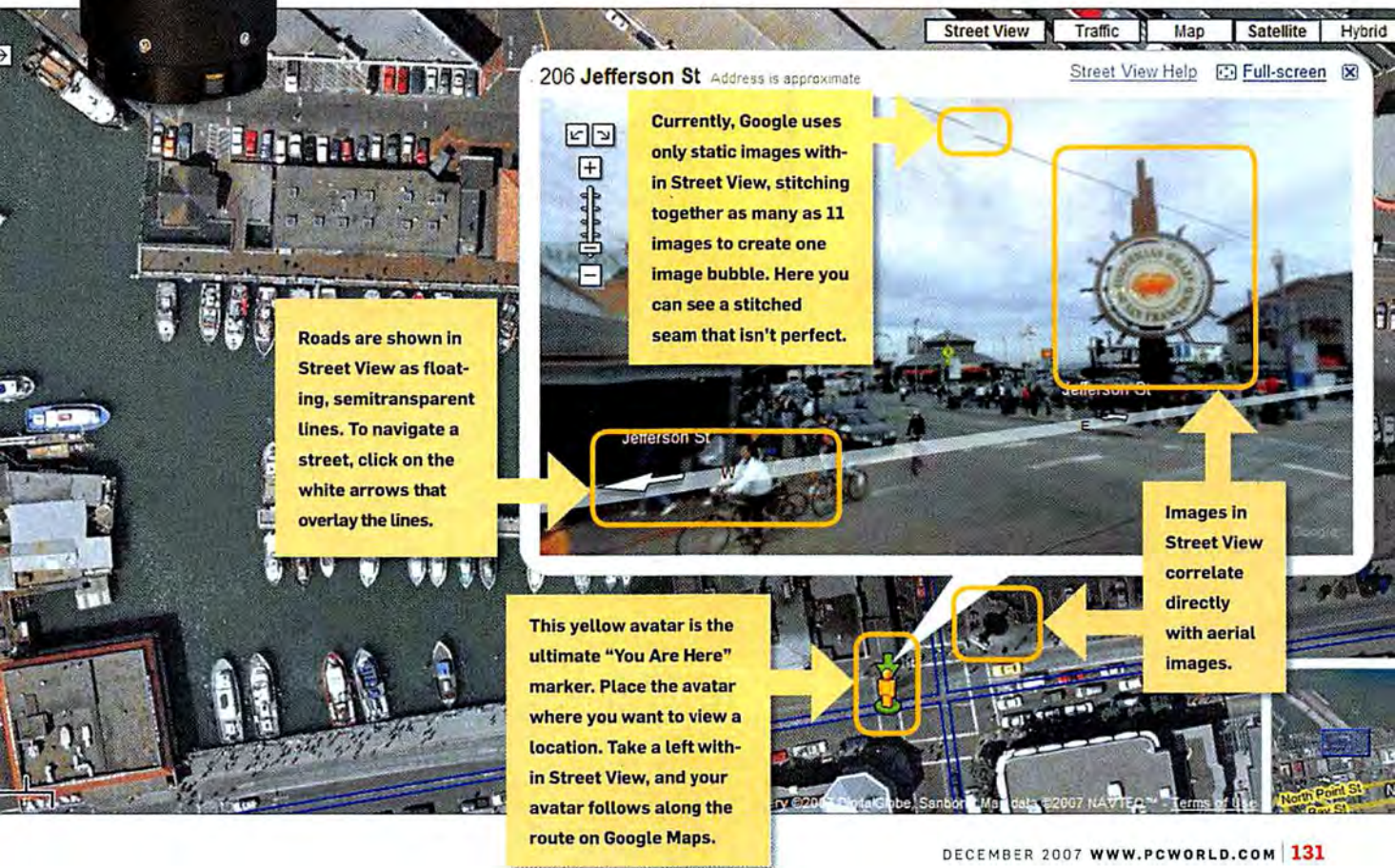
Google and its partner Immersive Media create the Street View images by driving cars that have 11-lens, spherical digital cameras mounted on the top. The Dodeca 2360 cameras simultaneously

shoot 360-degree video and still images at 30 frames per second at a resolution of 1024 by 768 pixels. In addition, Google captures imagery using a similar 360-degree camera called a LadyBug.

The cameras also capture GPS and other positional and geospatial location data. This so-called Rich XML information is embedded into each of the images created, allowing Google to overlay the Street View data with its existing mapping database.

If the Street View cameras capture someone doing something they'd rather not have documented, Google will blur the person's face if they request it.

Street View images are available for 15 cities, including Chicago, Denver, Houston, Las Vegas, Los Angeles, Miami, New York, Philadelphia, Phoenix, Pittsburgh, San Diego, and San Francisco.



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Best of the Mobile Net

When it comes to the Web, not all phones and sites are created equal. We pitted the iPhone's Safari against other mobile browsers, and also found ten powerful, pocketable services you'll want to try. »

BY CHRISTOPHER NULL



You can see a lot of the Internet on a mobile phone these days. More developers are offering stripped-down, mobile versions of their Web sites (find *PC World's* at mobile.pcworld.com), and more handsets can display the full sites themselves.

Of course, the experience isn't perfect. Sometimes you get a site's mobile version; other times you don't. Your hardware and your cellular connection can limit your speed. And then there's your cell phone's preinstalled browser: While designed, in theory, to work with your cell-phone hardware, most phones force you to scroll around endlessly and can mangle Web pages, and none can yet display desktop-style Flash content.

With the right setup, however, having instant access to online content becomes downright addictive. To test the five predominant Web browsers—Apple's Safari, Microsoft's Internet Explorer Mobile, Palm's Blazer, RIM's BlackBerry Internet Browser, and Symbian's S60—we grabbed a representative smart-phone handset and loaded some mobile Web pages



BEST BET **IPHONE'S**
Safari,
our mobile browser
winner, displays
Web pages the best.

and lots of standard Web pages (the true test). We checked JavaScript support and measured the speed at which each browser rendered

individual pages. But at least on some phones, you aren't limited to a single browser, so we also evaluated three third-party browsers. And you need good sites to visit, so we culled a long list of mobile Web sites down to ten essential ones.

Apple Safari

More than any other mobile browser, Safari renders Web pages so that they look like pages produced on a computer. Of course, few Web sites fit readably on the iPhone's screen, but that is where the killer features of Safari kick in. It lets you drag the cursor around with ease, invoke a two-finger "pinch" gesture to zoom in to whatever page size you'd like, and then use a single finger to scroll the page.

Safari renders most Web pages perfectly—even ones that use complex CSS layouts. Its ability to display multiple Web pages is the closest thing to tabbed browsing you'll find on a phone. And its integrated search system, which works in much the same way as the Google toolbar, is a godsend.

All this overhead means Safari isn't fast, but it isn't as slow as you'd think, even on AT&T's pokey EDGE network. Use it for a day, and you'll find other mobile browsers painful.

Ten Essential Mobile Web Sites

A WHOLE PARALLEL Web universe is out there just for phone and PDA users. Here are a few of our favorite sites designed for mobile phones (some require membership to use fully). Three are iPhone-only; the rest work across the five platforms we tested.

Amazon Anywhere The mobile version of Amazon.com lets you search the entire online storefront, view your account history, and even use one-click ordering to get a *Heroes* box set with a minimum of screen tapping. find.pcworld.com/58705

EBay Mobile It's a nearly complete version of eBay, just miniaturized and streamlined for mobile devices. The site permits you to

search for and bid on items, though trolling through all 724 pages of Hummel figurine auctions on a 2-inch screen could be a daunting challenge. find.pcworld.com/58704

Facebook for iPhone

This is one of the best-looking sites on the iPhone. While it doesn't have every feature of the full site (no add-on applications), it comes awfully close and includes the vaunted news feed, your inbox, and access to your Face-friends. iphone.facebook.com



► **Flickr Mobile** When you get sick of reading, look at some pretty pictures with the mobile version of Flickr, which lets you search for keywords or simply browse recent shots. Sign in, and you can leave comments via your mobile phone, too. m.flickr.com

National Weather Service Mobile There are many ways to check the weather on your smart phone, but the National Weather Service's efficient site offers a broad array of weather-related features, including a seven-

Symbian S60

Second fiddle to Safari is Symbian's S60 browser, which we tested using the Nokia E61i. It made the most of the E61i's relatively low-resolution display and lack of a touch screen. Like Safari, S60 tries to portray Web pages as they look on your PC. You can use the phone's navigation pad to scroll horizontally and vertically through the page or move an on-screen pointer incrementally. This works better than it sounds, but getting around on a large page is tiring.

S60 renders both mobile and full Web pages accurately and a bit faster than the iPhone, but many large pages led to phone stuttering, and S60's promise to stream video via its integrated RealPlayer application was a no-show. The browser shows an error message when you try to stream video, regardless of video format or network connection.

Palm Blazer

Palm's Blazer, which we tested on a Treo 755p (you'll find it on all Palm OS-based Treos), came in a distant third. The large font and smallish screen on most Palms means that you'll be

scrolling a lot. Plus, Blazer reformats pages by stripping out most of their design. In the relatively simple pages of the Internet Movie Database (www.imdb.com), photos overlapped text. Your best bet with Blazer: Switch it to Fast Mode, which strips all formatting and graphics from a Web page, giving you straight text.

The touch screen on Palm handsets makes navigating

PALM'S BLAZER BROWSER lets you keep graphics and formatting, but it's better to view pages without them.



day forecast, animated long-range radar, and access to weather discussion groups. find.pcworld.com/58706

Netflix Mobile This pint-size version of Netflix lets you browse for movies, add them to your queue, and see what's on your wish list. You can't remove films from your queue or alter their order in the lineup (other than by moving a film to the top), but for topping off your rental list with a few new titles, this mobile app works great. www.netflix.com/mobile



OneTrip Trying to use the iPhone's Notes application for any meaningful purpose will send you running back to Post-Its in despair. Enter OneTrip, an iPhone-only Web-based application designed to handle that most common of note-taking tasks, the shopping list. It's clean, it's simple, and it gets the job done. onetrup.org

➔ **Orbitz Mobile Flight Status** Don't waste your time hunting on individual airline Web sites trying to figure out whether a flight is going to be on

time. Orbitz offers easy access to flight information on every airline from ATA to Virgin. Many foreign carriers are included as well. find.pcworld.com/58706

Seeqpod This iPhone-optimized Web site lets you input song or band names and access playable music clips across various blogs and sites. Its search function is fast, and you can see popular and recent searches. www.seeqpod.com

Yelp Mobile The popular restaurants-and-local-businesses search site goes mobile, with features such as photos and reader reviews intact. We're hungry just browsing it. mobile.yelp.com

April 1996: Jennifer Ringley launches JenniCam, a Webcast of her life.

Blazer-rendered pages fairly speedy. To scroll a page, you can either use the scroll bars or enable the Tap and Drag command to move the page via the stylus. That method works, but the process isn't as convenient as with Safari's interface.

BlackBerry Internet Browser

On a par with Blazer is this BlackBerry browser, which we tested on RIM's BlackBerry 8300 Curve smart phone. You can tweak it to strip the images and formatting from pages—which would be wise, as it's hardly a master at graphics. It's fast, but the Curve's trackball—present on newer BlackBerry devices—slowed things down. (BlackBerrys don't have touch screens.) You can control whether the browser renders elements such as tables, CSS, and background colors—but viewed pages will still look chunky.

Internet Explorer Mobile

Microsoft's Internet Explorer Mobile, the default browser on many Windows-based smart phones, ranks last. Some sites looked perfect; others were unusable. Even major sites like Digg and the Yahoo home page (their full versions) were mess-

BLACKBERRY'S BROWSER
renders pages fast, but it's
not great with graphics.



MICROSOFT'S
ubiquitous
Internet
Explorer
Mobile is
slow and
clunky.

es on our test phone, a T-Mobile Wing.

Still, Windows Mobile is the only OS of the five we looked at that comes installed on hardware both with and without touch screens, and the browser's

default font is compact and easy on the eyes. But it's the little things—like a bug that abruptly overwrites the URL you have nearly finished typing—that make it so aggravating to use. And worse yet: It was the slowest mobile browser we tested.

Christopher Null is a veteran journalist who covers technology topics daily on his blog at find.pcworld.com/56216. ●

PHOTOGRAPHS: ROBERT CAROTH

Top 3 Third-Party Browsers

YOU MAY NOT have to put up with the browser that came preinstalled on your phone. Third-party options are available for every platform except the iPhone. Remember, however, that not every browser will run on every device, even if it says it supports the device's OS. Also, many browser builders target service providers and developers instead of consumers, so support can be spotty. Some offer limited-time trials.

Opera Mini 4 beta 2 (find.pcworld.com/58709) runs on virtually every smart-phone platform, with free versions

available for BlackBerry, Palm, Symbian, and Windows Mobile devices. (The similar Opera Mobile runs only on Symbian S60 and Windows Mobile handsets.) Opera Mini is a very small, very fast browser with no frills and no rendering problems. The current beta version is a bit buggy, but it's the way—the

only way—to go if you want a single consistent interface across multiple devices.

If Palm's Blazer doesn't float your boat, give the \$30 **Mobirus Xiino 3.4E** (find.pcworld.com/58710) a spin. It generally does a better job than Blazer at displaying

complex Web pages, though it still reformats them into a single-column view. The bookmarking system is somewhat better, too. (Blazer's bookmarks are rendered in childish buttons.) For heavy browsing on your Palm device, it's a worthwhile upgrade.

Just as you can replace Internet Explorer on your PC with the open-source Mozilla Firefox, you can replace IE Mobile with the free **Mozilla Minimo 0.2** (find.pcworld.com/58711), which runs on Windows Mobile 5 and above. Minimo is a large download (4.5MB), and it runs slowly. It's also prone to crashing. But for a beta browser, it's certainly worth a peek as an alternative to IE (it even has a tabbed browsing system).



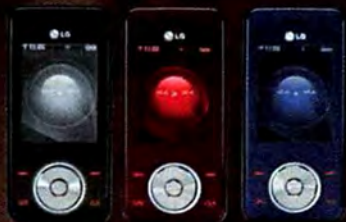
January 17, 1998: The Drudge Report breaks the Lewinsky scandal.

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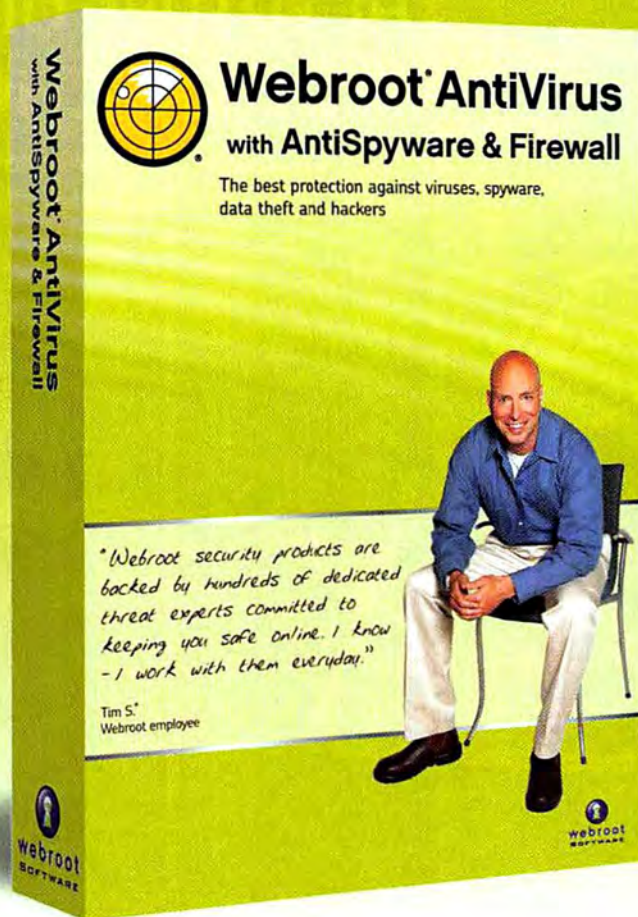
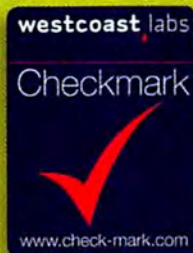
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How the Web Works:

The Malware Marketplace

BY ERIK LARKIN

TODAY'S ASPIRING INTERNET crooks don't need any programming skills. They just need to know where to shop. An entire shadow economy has arisen online, with suppliers, service providers, and other middlemen ready—for a fee—to help the unethical entrepreneur. Shown here is an example of how easy it is these days to become a bot herder, someone who sets up a vast network of remote-controlled, bot-infected computers and then rents the malicious services of that zombie army to spammers and other bad guys.



Bot Store

For a few hundred bucks, you can buy custom-built bot software, complete with tech support. The malware is guaranteed to evade antivirus programs and turn the unlucky computers it lands on into zombies ready to respond to your every command.



Browser Burglary Kit

MPack will set you back a cool grand, but it's a powerful software tool that'll load up a Web site with exploits that can take over a browser and force it to download malware.



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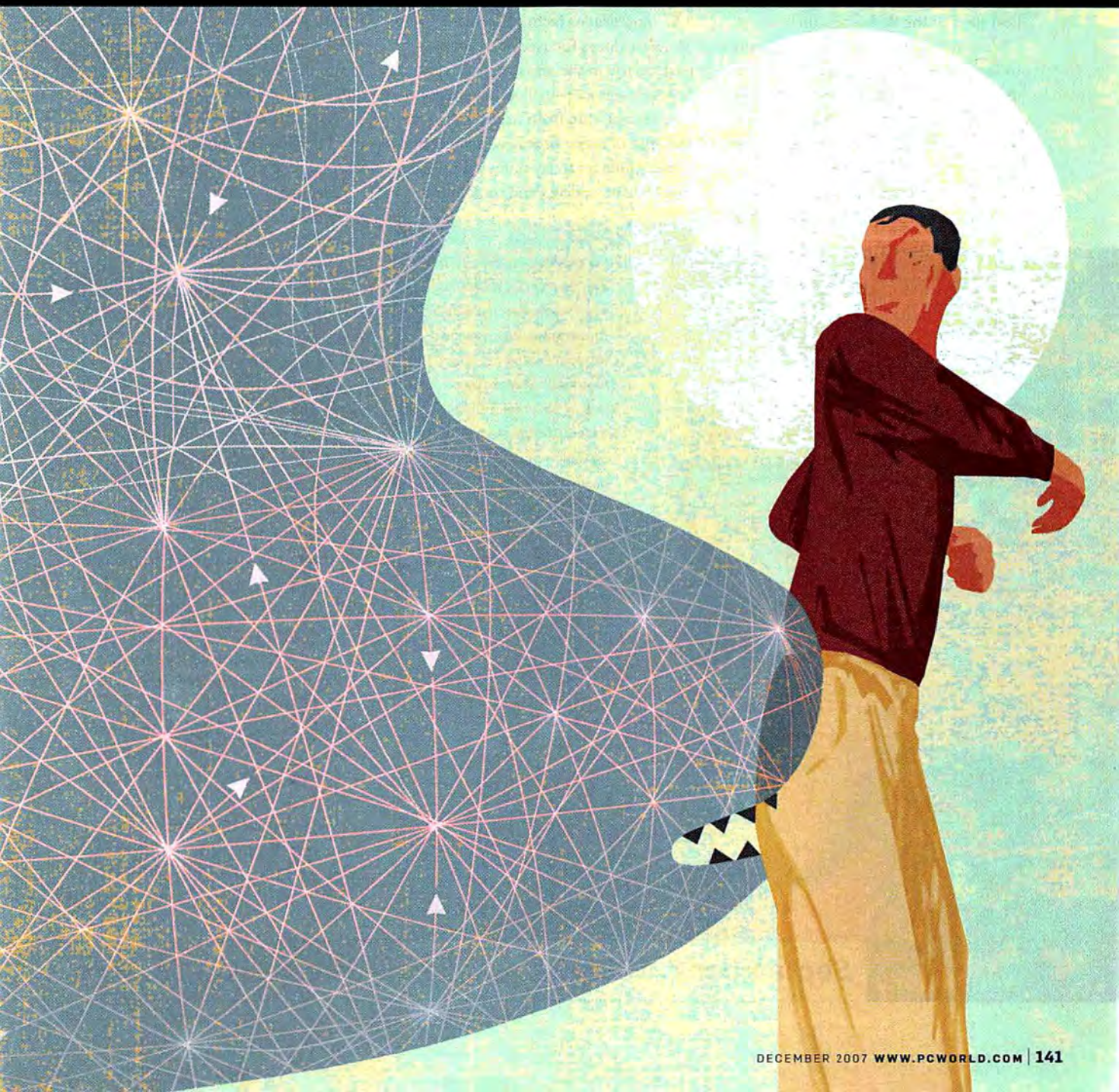
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The 10 Biggest Web Annoyances

The "new improved Web" will remain the old unimproved Web until sites detail what they do with your private data. And online tech support gets better. And... »

BY RYAN NARAINÉ



In its relatively short life, the World Wide Web has already made many of our most mundane, tedious tasks quicker and easier to perform. But there are still a surprising number of activities—from helping us buy concert tickets to protecting our privacy—that, for one reason or another, the Web still can't get right, stirring the ire of even the most patient users. We look at ten of the worst of them.

Beyond obvious, nagging problems such as e-mail spam, phishing lures, viruses, and spyware, a great many commonplace online frustrations—some dating all the way back to the earliest days of the Web—remain unfixed.

We asked visitors at our online forums to identify what they consider the most dysfunctional aspects of the Web; then we polled our readers to find out which of these problems they see as the most aggravating. For each difficulty, we identified an “aggravation factor”—the percentage of readers who were either

“very annoyed” or “infuriated” by the issue. We start with the ones that irk our readers most, and work our way down.

1 Dubious Privacy Policies

Aggravation factor: 69 percent

Many business-focused Web sites—particularly in the areas of health and financial services—collect sensitive private information from users. The vast majority of these sites have established privacy policies to lay out what information the site collects and to delineate

customers' rights. But the legal jargon in these policies is often laid on so thick that customers can't understand it, leaving them unsure about whether their private data is truly safe from misuse.

Amazon.com's online privacy notice, for example, is a 2700-word document that links to a 2600-word conditions-of-use page jam-packed with arcane legalese. Good luck figuring out your rights if you don't have a J.D. after your name. Privacy policies at some Web sites grant the sites very broad discretion in handling private data, including the right to use the data to market other products and services to members, and the right to share data with unknown, unnamed third parties—leaving the person who supplied the data feeling exposed.

Consumer advocates have found this problem exceedingly difficult to correct because site owners (via their attorneys) go to extremes to avoid legal liability. Of course, you can refuse to patronize any site that you suspect might take liberties with your data. But short of hiring a lawyer to analyze the privacy policy, how do you determine that a site is untrustworthy before it's too late?

2 Difficult Online Forms

Aggravation factor: 65 percent

Filling out a simple form online—be it for something as important as a loan application or as mundane as a news site registration—can turn into an endless cycle of annoying browser refreshes. That's because online forms often mix required and optional fields without clearly distinguishing between the two. While filling out the form, you inevitably skip one of the required fields and then sometimes have to start all over again because the site wipes the page clean. To be fair, things have improved in recent times as companies figure out that user frustration can hurt business. Still, since the problem is so easy to fix, its continued existence is >>



PC WORLD READER Roberta Dikeman of Dublin, California: “I hate when I am on a forum and people just post random comments about how much somebody is a jerk or how their religion saves. Can we please stay on topic—or post that drivels on your own sites!”

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TICKETMASTER SLAPS a \$9 "convenience charge" on each \$32.50 concert ticket. But the online purchase is just as convenient for Ticketmaster, which doesn't have to hire people to staff a ticket booth.

The screenshot shows the Ticketmaster checkout process. At the top, there are three tabs: 1. SHIPPING, 2. BILLING (selected), and 3. CONFIRMATION. Below the tabs, a message states: "Please complete this page within 240 minutes. After 240 minutes, the tickets you're buying will be released for others to buy." The event details are: "Event: Interpol, 68 Oranienburg Auditorium, San Francisco, CA, Sat, Oct 20, 2007 08:00 PM". Under "Review Your Order", there is a table with two columns: Item and Charge. The table lists "Tickets (Interpol)" with a charge of "US \$32.50 x 2". Below this, "Total Convenience Charge(s)" is listed as "US \$9.00 x 2". At the bottom, "Order Processing Charge(s)" is listed as "US \$4.90". A red circle highlights the "Total Convenience Charge(s)" line item.

Total Convenience Charge(s) US \$9.00 x 2

TO SUPPLEMENT ITS "convenience charge" income, Ticketmaster adds a \$4.90 "processing fee" to each order.

The screenshot shows the "Select Delivery Method" page. A message at the top states: "A processing fee per order is applied in addition to the delivery price per order listed below." Below this, there is a table with three columns: Delivery Method, Price Per Order, and Please Note. The table lists several delivery methods, including "UPS 2 - Business Day Morning", "UPS 2 - Business Day Evening", "UPS 2 - Business Day Evening", "UPS Saturday", and "Bill Call". The "Bill Call" method is selected, and its price is listed as "US \$20.00". A red circle highlights the "A processing fee per order is applied in addition to the delivery price per order listed below." message.

A processing fee per order is applied in addition to the delivery price per order listed below.

mind-boggling. Site designers should clearly mark all required fields in a different color (red would work just fine). And if a user makes an error anyway, there's no reason to wipe all the fields clean. To move things along smoothly, Web site developers should highlight any field that still needs to be filled in.

3 Overcommercialization of the Web

Aggravation factor: 62 percent

Pop-ups; pop-unders; noisy Flash commercials; strobe-lit banner ads; video advertisements that load without user action... Just another day on the Web.

The idea of pushing advertising in exchange for free Web services has led to overcommercialization of the Web—a major turn-off for surfers. At MySpace, Yahoo, and even (we have to admit it) PCWorld.com such advertising has grown more aggressive, increasingly annoying, and impossible to avoid. On

cluttered Web pages, ads jostle against each other and vie for screen real estate with the content that visitors actually came to see. The result? Slower connection speeds, slower page loads, and far less user control over their browser.

Advertisements affect Web content, too. When sites measure the value of content by how many eyeballs it attracts to the ads, unusual, diverse, or niche content can get squeezed out in favor of more-reliably popular middle-of-the-road stuff. "I think in many ways, we have missed the potential of the Web—much like we did with television," says Mike Tinsley, a disappointed Web user in Columbus, Indiana. "When [the Web] was new, it held so much promise to be so useful for education, information, and even entertainment. However, much like TV, the Web has sunk to the lowest common denominator, and I'm not sure we can ever get it back," Tinsley says.

The ad-driven online content industry

will continue to devise innovative, eye-catching, and obnoxious advertising formats, so things won't change for the better anytime soon. At the same time, browser makers and other software utility vendors may be able to offer some respite with features designed to restrain advertising annoyances. Browser producers like Microsoft and Mozilla should, by default, block animations or video ads from taking complete control of a Web page and obscuring the content a surfer is trying to view. At the very least, they should provide users an easy way to adjust the settings manually so as to block such intrusive annoyances.

4 Need for Standards

Aggravation factor: 58 percent

Few things are more infuriating than going to a Web site and being told, "The page you have requested requires Internet Explorer to function properly."

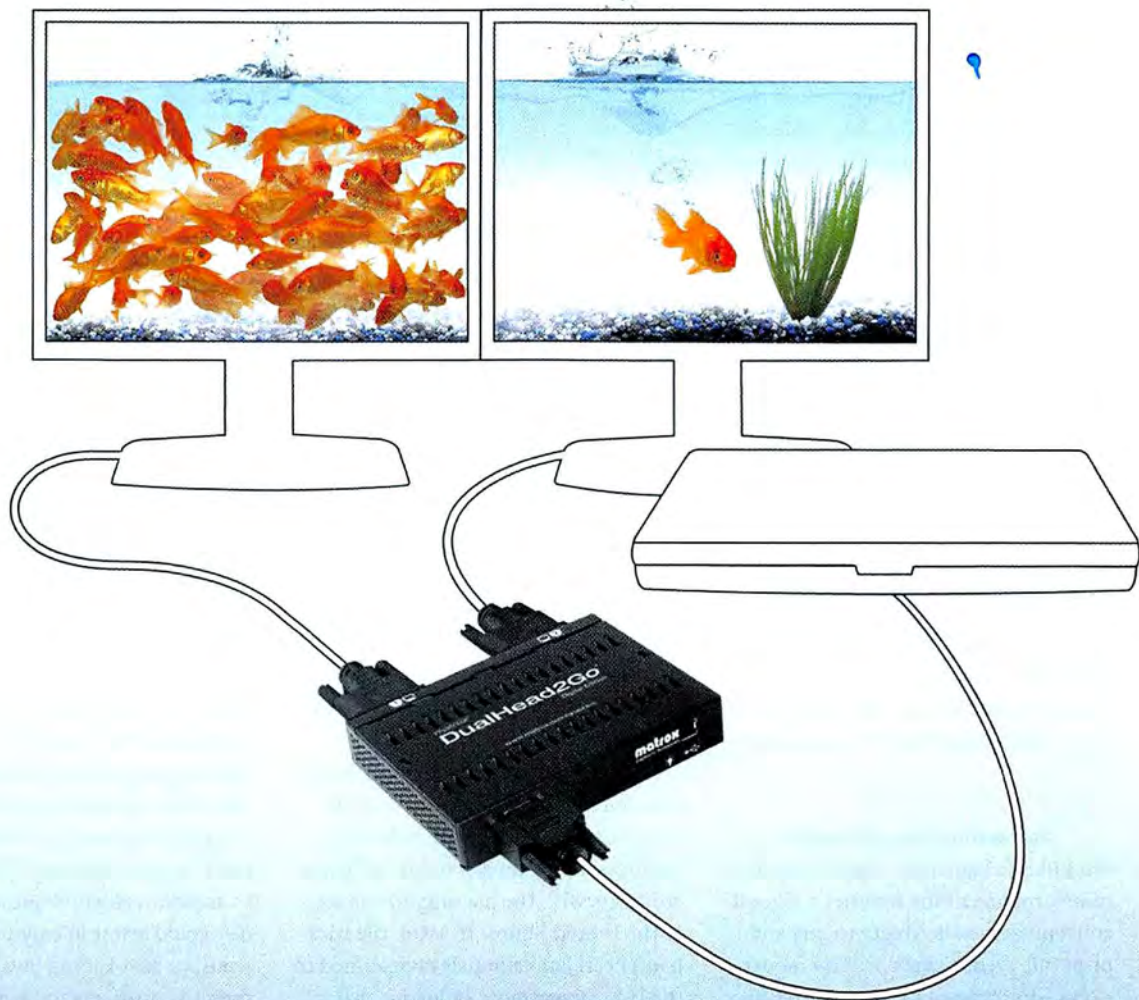
The historical origin of this problem is Internet Explorer's incomplete (and sometimes incorrect) support for the core standards that are used to build Web pages. Because IE commands the largest market share among browsers, many Web designers build pages not to conform to standards, but to conform to IE. With Firefox's success, more and more sites (with the notable exception of some Microsoft sites) work properly in Mozilla's browser. But that leaves users of Opera or Safari out in the cold still. From online banking applications to newer Web 2.0-style sites, pages may not load properly on all browsers, which forces people to use different browsers for different sites.

If browsers were built to meet a consistent set of standards, this hiccup would disappear. Though each new version of IE has improved its support for standards, the problem persists because so many Web site developers continue to code only for IE, or IE and Firefox.

Among the high-profile offenders ➤

January 15, 2001: The first entry is posted on Wikipedia.

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in this area are Google Docs, Washington Mutual, and Yahoo—none of which supports the Opera and Safari browsers.

5 Trolls in Forums

Aggravation factor: 58 percent

The Internet can be a spacious platform for all sorts of community interaction, provided that the participants conduct themselves in a civil manner. Too often, though, they don't. Hiding behind the pseudonymity of a Web alias, trolls disrupt useful discussions with ludicrous rants, inane threadjackings, personal insults, and abusive language, deliberately baiting forum regulars into pointless controversy and disharmony.

Trolls lurk everywhere—in Google and Yahoo newsgroups, in blog comment areas, and on specialty message boards created to offer technical help to users.

The free and fruitful exchange of ideas on the Web suffers when Web community owners have to moderate discussions and keep a tight rein on membership. But such actions are among the few effective ways to maintain civility and sanity in online forums. Another approach is for users to police the community themselves by collectively ignoring or dismissing malicious interlopers.

6 Buying Event Tickets

Aggravation factor: 54 percent

Sites like Ticketmaster have managed to transform one of the Internet's biggest conveniences—the ability to buy and print out event tickets in a few mouse clicks—into one of its biggest rip-offs. Never mind that automated ticketing companies have dispensed with much of the traditional overhead (staff, rent, equipment) associated with selling tickets at a physical location. Never mind that they don't have to print the tickets you buy or ship them to your home.

Ticketmaster.com, the world's largest ticketing agent, adds a \$9 "convenience charge" to the price of every \$32.50

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THE GOOGLE DOCS online suite does not yet support users on the Safari Web browser.



HAVING TROUBLE CREATING a new document in Google Docs? The site's advice is so simplistic that it is unlikely to solve any real problems.

To create a new document:

1. From the Docs list page, click the **New** button at the top of the left sidebar.
2. From the drop-down menu, select **Document**.

A new document opens.

ticket for a concert in San Francisco, for example, plus a \$4.90 "processing fee" on top of every order. So if you buy one ticket, you pay 42 percent of the face value of the ticket in fees to Ticketmaster! In contrast, assuming that the show isn't sold out, you can buy the same ticket at the venue's box office sans convenience fees for the base price of \$32.50—a savings of nearly \$14.

One reason that Ticketmaster can impose such prices is that it faces little competition in the events ticketing business; the company holds exclusive contracts with the majority of venues in the United States. In 1994, the rock band Pearl Jam famously complained to the U.S. Department of Justice that Ticketmaster's high prices were made possible by a monopoly, but the DOJ ultimately decided that Ticketmaster hadn't broken any antitrust laws.

7 Web 2.0 Help Doesn't Help

Aggravation factor: 49 percent

Web 2.0 technology supports the delivery of useful applications in snazzy interactive Web interfaces, but if you

need help wading through the site, the help section is often a dead end.

That's because the answers to many frequently asked questions presented there are too generic or obvious to be useful. For example, an application may not work properly because an essential browser plug-in is missing or because other software on the system is incompatible with the new app; but the FAQ and help pages on most sites don't address these problems specifically.

Rather than posting unhelpfully generic help sections and FAQs that fail to answer real-world questions, companies could invest in easy-to-use forums, wikis, or chat rooms, and offer incentives to customers to assist each other in a community-driven environment.

8 The Expense of E-Books

Aggravation factor: 41 percent

Publishing and distributing books in electronic format should be a lot cheaper than doing it the old hard-copy way. No trees get pulped, and shipping costs vanish. So why should readers pay the same amount (or more) for the digi- ➤

March 2003: Friendster opens, kicking off the social networking craze.



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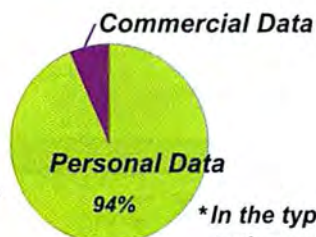


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tal version of a book? Here's an example: At eBooks.com, Rhonda Byrne's *The Secret* retails for \$15.29. Meanwhile, at Amazon.com, a hardcover copy of the same book (shipped to your doorstep) costs \$13.17. Bizarre.

On average, publishers have set e-book prices for mass-market titles at between \$8 and \$16, the same range that they charge for the corresponding physical books. Supposedly, much of the sticker price goes to authors, who receive the same amount in royalties per book sold, regardless of the book's form. Publishers say they are still "working out the pricing models"—that is, figuring out what people are willing to pay for the novelty of an e-book and what effect e-book sales will have on sales of hard copies.

9 Disappointing Web Video

Aggravation factor: 38 percent

The picture quality of video delivered over the Internet gets better by the day, but the absence of top-shelf content continues to deter many would-be viewers from making the jump to online video.

Some major networks—especially ABC and CBS—have begun putting TV shows on the Web, but consumers are still struggling to find their favorite programs at a reasonable price.

In its "TV Shows" section, Apple's

HOLLYWOOD HAS yet to embrace the Internet as a preferred way to sell movies and television shows.



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CHAPTER 2

One mile away, the hulking albino named Silas limped through the front gate of the luxurious brownstone residence on Rue La Bruyère. The spiked *cilice* belt that he wore around his thigh cut into his flesh, and yet his soul sang with satisfaction of service to the Lord.

iTunes Music Store offers episodes at \$1.99 a pop, but Rafat Ali, who tracks digital media at PaidContent.org, says that not all shows are available because large content owners (including HBO) believe that making online versions of their shows available will dilute the market for their cable television offerings.

"I can't go online and buy the last season of *The Sopranos* because HBO won't put it online. That's a big disappointment for a lot of viewers who love HBO's content," Ali says. "There are still a lot of hesitant content owners unwilling to put everything online."

10 Boring Virtual Worlds

Aggravation factor: 9 percent

Given the promise and hype surrounding virtual worlds, or metaverses, like Second Life, we found it interesting how few of our readers care about them. More than half of our survey takers said as much, while another 25 said that they aren't bothered at all by the quality of virtual worlds.

Yankee Group analyst Christopher Collins points out that while social networks like MySpace and Facebook continue

to show phenomenal growth, the biggest virtual world, Second Life, has experienced a lower rate of traffic growth since its October 2006 peak.

Newcomers to virtual worlds (many of whom were attracted by the media hype) often leave for good after struggling with the basics of moving their avatar around or communicating with others "in-world." Their efforts aren't helped by the sites' often-clunky user interfaces or by regular software glitches. As of October 7, 2007, according to Second Life's statistics, its virtual world had almost 10 million "total residents" (people signed up for the site), but only 1.3 million (13 percent) of them had logged in during the preceding 30 days. And only about 338,000 of them had logged in during the previous seven days.

To attract wider audiences, virtual worlds will have to become at least as user-friendly, navigable, and full of things to do as the real world. And they just might achieve that goal if the companies that operate them improve their software, introduce new technologies, and learn lessons from their users. ●

August 28, 2005: Eyewitnesses blog on Hurricane Katrina's devastation.

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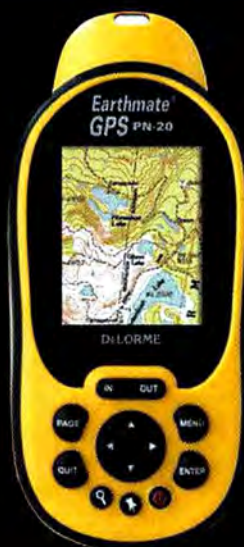


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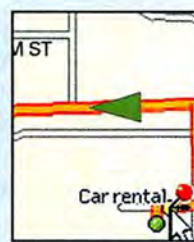
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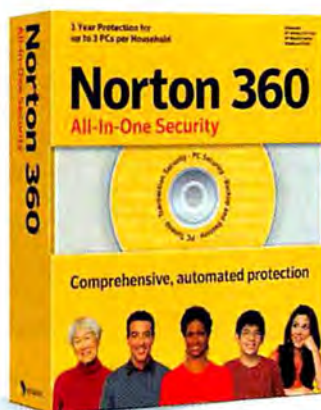
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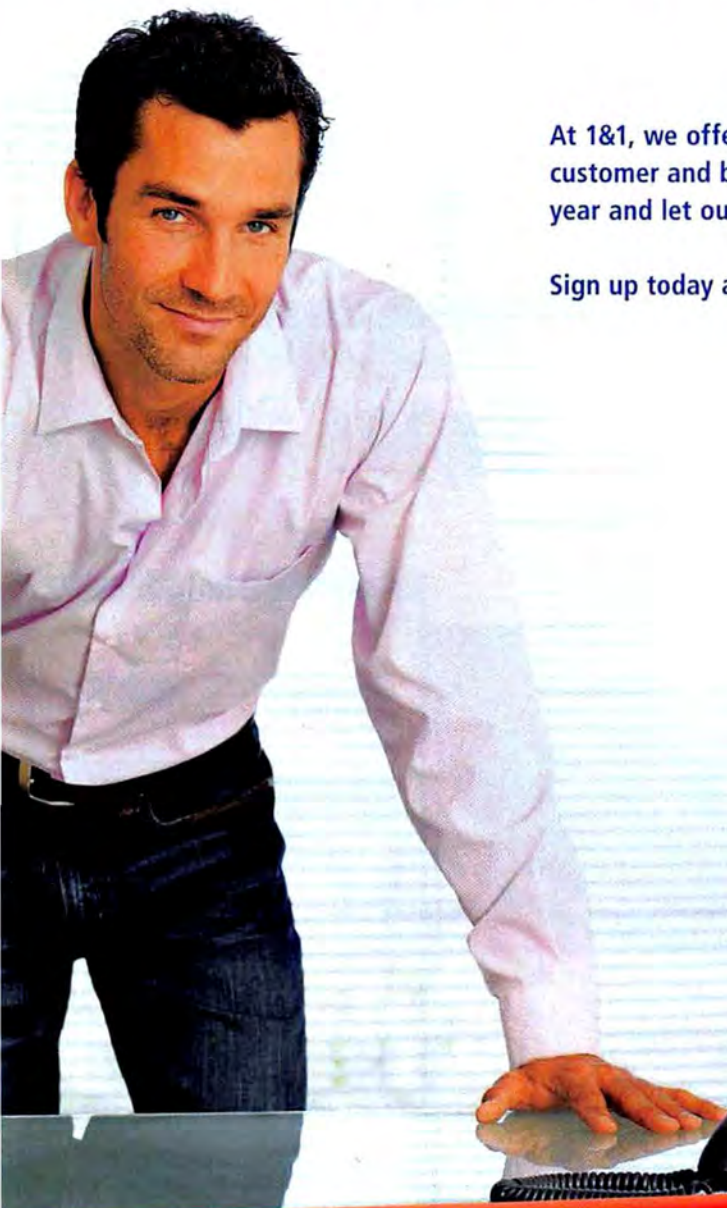
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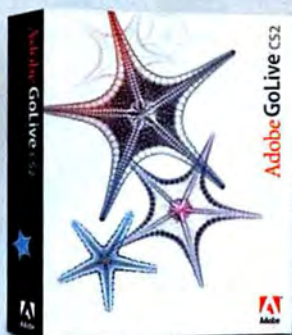
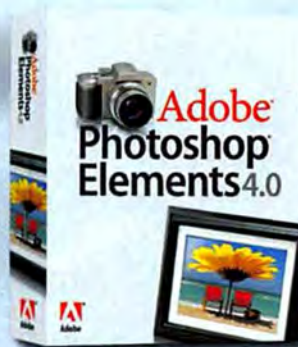
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Step 3: Communicate with your



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So what are planning to fill it with? Dust off that outline you made and start figuring out what's going to appear on each of those pages. I'm not talking about graphic elements that will be consistent throughout your site, I'm talking about the rest...

Images! Do you need tables, charts, diagrams, pretty pictures, thumbnails, crazy fonts, animations, movies... Now's a good time to figure that out. It can take a while to get the images you need. Maybe you need to buy images from a stock photography site such as Getty Images. Maybe you need to hire a photographer or an illustrator. Maybe you need to get that roll of film developed before you forget where it is.

1&1 Blog

Share your ideas with the world

Start your own blog today. This personal publishing medium is included free with all Linux Web Hosting packages and is a great way to share your thoughts, activities, developments or interests on a regular basis. As an out-of-the-box solution, your blog can be installed quickly with no programming necessary.

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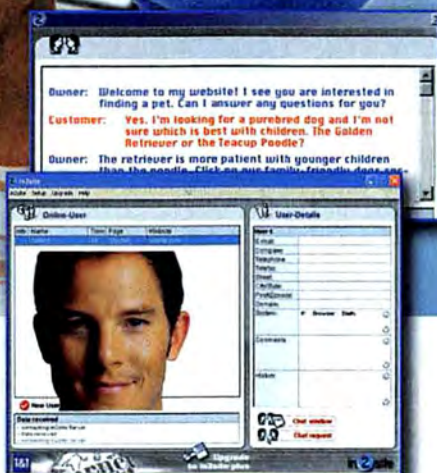
visitors



E-Mail Marketing Tool

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Chat Channels

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Mailbox Size	2 GB	Unlimited	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
Ad-free Blog	✓	✓	Freeware
Geographic Map	✓	✓	-
Dynamic Web Content	✓	✓	-
Web Statistics	✓	✓	✓
Chat Channels	✓	-	✓
1&1 Marketing Center	✓	-	-
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

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Mailbox Size	2 GB	Unlimited	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
Ad-free Blog	✓	✓	Freeware
Map & Driving Directions	✓	✓	—
Dynamic Web Content	✓	✓	—
Web Statistics	✓	✓	✓
E-mail Newsletter Tool	✓	\$10/month	\$3.99/month
In2site Live Dialogue	✓	—	—
Chat Channels	✓	—	✓
Form Builder	✓	✓	—
1&1 Marketing Center	✓	—	—
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
SPECIAL OFFER FOR 1 YEAR	\$50 off*	\$14⁹⁶ first 2 months	10% off
TOTAL/YEAR	\$69⁸⁸	\$229⁴²	\$161⁸⁸

~~\$119⁸⁸~~

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	ENTERPRISE I	Conroe 3060 Series - SATA	Dual Opteron 246-2
CPU	Dual Core AMD Opteron 1218-2.6GHz	Dual Core Intel Xeon 3060 Conroe Processor-2.4 GHz	2 x AMD Opteron™ 246 2.0GHz
RAM	4 GB	2 GB included, add \$50 for 4 GB	2 GB
Useable Disk Space	400 GB	250 GB	320 GB if no RAID
RAID	RAID 1 Included (2 X 400 GB HD)	Add \$40/mo for RAID 1 + \$20/mo for second HD	Customer dependent 2 X 160 GB HD
BackUp	Full 400 GB Backup Included	Add \$80/mo for 80 GB Backup	Add \$320/mo for full 320 GB Backup
Monthly Traffic (GB/month)	4000 GB/month	2500 GB included, add \$175/mo for 3500 GB	2000 GB/month
Total Monthly Fee as Configured	\$299	\$574	\$549
	ENTERPRISE II	Dual Woodcrest Series - SATA	Dell PowerEdge 1430-2
CPU	2 x Dual Core AMD Opteron 2216-2.4 GHz	2 X Intel Woodcrest 5130 Dual Core Processors-2.0 GHz	2 x Dual Core Intel Xeon 5120-1.86 GHz
RAM	8 GB	2 GB included, add \$270/mo for 8 GB	2 GB
Useable Disk Space	500 GB	500 GB	500 GB if no RAID
RAID	RAID 1 Included (2 X 500 GB HD)	Add \$40/mo for RAID 1 + \$30/mo for 2 X 500 GB HD	Customer dependent 2 X 250 GB HD
BackUp	Full 500 GB Backup Included	Add \$80/mo for 80 GB Backup	Add \$500/mo for full 500 GB Backup
Monthly Traffic (GB/month)	5000 GB/month	3000 GB included, add \$175/mo for 4000 GB	2000 GB/month
Total Monthly Fee as Configured	\$399	\$954	\$839

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ICANN Fee	Included	\$0.20	Included
E-mail Account	FREE 2,000 MB Mailbox Size	FREE 25 MB Mailbox Size	NO Mailbox Included
Total Annual Cost	\$2⁹⁹	\$17¹⁸	\$18⁹⁵

Offer is limited to 25 domains per customer.

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Go to find.pcworld.com/58076

Here's How

Give Your Facebook Page a Much-Needed Lift

Transform your network to enhance your personal and professional life.

BY SCOTT SPANBAUER

OUTGROWN MYSPACE?

SECRETS OF THE New Web

Locked out of LinkedIn? Don't worry:

Facebook is emerging as the top site for connecting with friends and business contacts.

Though anyone can join, Facebook's streamlined appearance and its controls on who can contact you have prevented it from morphing into another MySpace free-for-all. The service recently added installable third-party applications, making it a strong competitor to Netvibes, Pageflakes, and other personalized portal sites. These tips and tricks will help you add new dimensions to your profile.

Any online activity involves some risk. The question is: When does the risk outweigh the benefits? Your Facebook profile can say a lot about you, or just a little. In fact, nothing prevents you from creating a completely fictitious persona on Facebook by using an anonymous e-mail account when you register. Such accounts appear to be rare, however, because the value of Facebook lies in its ability to help you con-

nect with people you know.

Still, you should exclude your home address, phone numbers, and other sensitive information from your profile unless listing the data is absolutely necessary. Avoid identifying the city you live in, your age, and other exploitable stats as well. Head to find.pcworld.com/58641 for more tips on protecting yourself while engaging in social networking.

Don't accept Facebook's security defaults, either. A lot of people configure their

but your friends from seeing your profile (nonfriends can still see your name and profile photo, and they can send you a message requesting to be your friend). For a more granular approach to privacy, block nonfriends from viewing specific profile features, or from reading your contact information—including any e-mail addresses, phone numbers, and IM screen names—by choosing *only my friends* under each contact type that is listed in the Profiles and Contact Informa-

world community. After school-based networks, the most popular networks on Facebook are linked to geographical regions.

To join a regional network, click the down arrow next to Networks in your profile's menu bar, choose *Join a Network*, and type your city in the City/Town field. (If you entered a location when you signed up, this page will list your region.) Facebook will offer a list of like-named burgers in different states or provinces; select yours.

Your town may have its own network, be part of a larger metropolitan network, or both (see the screen at left). If Facebook offers you a choice, pick the network you want to join. To finish, click *Join Regional Network*. You can belong to only one regional network at a time, but you don't have to live in the one you select. For example, if you have always dreamed of living on Maui, joining the Hawaiian network might be the first step toward making your island fantasy come true.

Get schooled: If you start out on a regional network, you can join a college network on the same screen described above (whether active student or grizzled alum) as long as you have a valid e-mail address at the school. Just type the address



JOIN A NEW NETWORK in Facebook if you want to meet new friends and business associates who reside in your geographical area.

profiles so that only friends can see them, which helps prevent creeps from spying on their vacation beach photos. To do this, click *privacy* in your profile's menu bar, and then *profile*. Choose *only my friends* in the Profile drop-down menu to block anyone

tion sections of the page.

Join a local network: Now that Facebook is open to nonstudents, your chances of making useful connections in the real world have multiplied—the trick is to get out and join other networks. Start with your real-

Make Your Facebook Page Your Own by Adding These Freebies

APPLICATIONS, the newest wrinkle in Facebook pages, hook you up with your friends in various ways. Unfortunately, not every application in Facebook's library delivers real benefits to you and your buds. Here are some of my favorite Facebook extras; truly useful apps are few and far between. The applications also have a viral quality that you need to be wary of. The best way to avoid page clutter is by resisting the temptation to install frivolous apps.



YES, YOU ABSOLUTELY have to know exactly what your friends are doing and thinking right now—and this app tells you.



THERE'S NOTHING LIKE reinforcement to help you learn a language. This add-on keeps class in session.



SHARE SNAPS in seconds by adding the My Flickr app.



SOMEDAY I MAY tire of silly, painful-to-watch YouTube videos, but I haven't yet.

RADIO AS YOU'VE never heard it over the airwaves comes straight to your Facebook page via MediaMaster Radio.



into the School Email field, and click *Join School*.

Find company: School and regional networks are a fun way to build your personal social network, but what about your business network? Facebook still has a long way to go to catch up with LinkedIn and other work-oriented services. But depending on your circumstances, you may be able to build a sizable group of professional contacts. In fact, Facebook may already have a network dedicated to your firm. To join your company's Facebook network, click the arrow next to Networks in

your profile's menu bar, select *Join a Network*, type your company e-mail address into the *Work Email* field, and click *Join Work Network*. If a Facebook network already exists for your company, you'll be prompted to confirm your join request, and Facebook will send you an e-mail confirmation at the address. If Facebook doesn't already have a network for your firm, it displays a message to that effect, along with a link where you can suggest that the site create one (see the upper screen on page 174). The key requirement, as with school networks, is a

corporate e-mail address. Unfortunately, Facebook does not promise to create a network for your company within a particular time frame—or at all. Your chances may improve if you can persuade your coworkers to chime in with similar requests.

Get grouped: If you're a rootless, self-employed vagabond who eschews higher education, the pack you run with may not fit into any of Facebook's three main categories (region, school, and work). But you can still manage to gather friends and associates around a common meeting place by creating

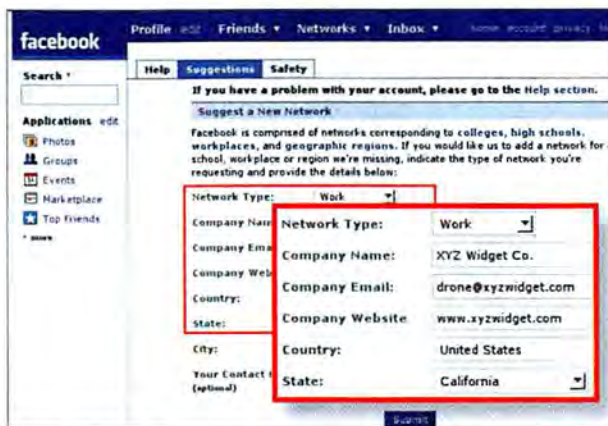
your own Facebook Group. Click the *Groups* link in your profile's left column to see the groups that you and your friends belong to, or use appropriate keywords to search for a group. Click the group's title to view its page, and select either the *View Group* or the *Join Group* link if you want to throw in with its members. Alternatively, choose *browsing groups* in the right pane to peruse Facebook's groups.

Time to Socialize

To create your own group, click *Groups* in the left pane, and select *Create a New* >>

Group. Enter a name and description for your group, and choose which network it will belong to. Selecting the Global network makes your group available to every member of Facebook. Choosing a work, school, or regional network limits it to the members of that network; this could make a lot of sense if your new group is strictly work-related, or if it's intended only for students at your school. Pick a category and type for your group in the Group Type drop-down menu to allow Facebook users to browse for your group by its content. The remaining information fields are optional. Note the default settings near the bottom of the page—you control nearly every aspect of what the group home page displays, as well as who can see and join the group. Click *Create Group* to continue. Next, upload a picture to serve as the group's profile photo and click *Continue*. Facebook offers you the option of inviting friends to join the group. Once you're done, click *Finish and View* to complete the creation of your group. Then return to the group's page by clicking its link in the Groups list in your profile page's central column.

Check the news feed: People, groups, and applications make Facebook valuable, but how do you find them? One of the easiest ways is to check your news feed. To do so, click the Facebook logo in your profile's upper-left corner. You'll see a list of your friends' activities, including new friends they've made, groups they've joined,



TAKE FACEBOOK TO WORK by joining your company's existing Facebook network—or if it doesn't have one, suggest that the site add it.

and applications they've installed and removed. The news feed's main column also shows new photos and status messages that your friends have posted, along with the occasional advertisement or message from Facebook itself. The smaller right-hand column summarizes your recent status notifications, plus another crucial item: your friends' upcoming birthdays. As with most other aspects of Facebook, you can control how much and what kind of information Facebook delivers to your news feed. To adjust feed settings, click *Preferences* at the top of the News Feed column. Hover over each slider control to display its name above it, and move the slider up or down to increase

or decrease the amount of each that the feed displays. If you'd rather not be notified every time one of your friends hooks up with a new love interest, for example, slide the Relationships control all the way down. You can adjust the news flow on individual friends by entering their names in the 'More About These Friends' or 'Less About These Friends' feed at the base of the page.

Tidy your layout: The first thing to know about Facebook is that you control the horizontal and the vertical. With a few notable exceptions, if you don't like where your photos, your wall (a place to scrawl public messages), or your zillions of other applications are located, you can drag and drop



TAKE CONTROL OF YOUR Facebook page's appearance by deleting unwanted applications and reining in the bad behavior of others.

them to a new spot. Here are the exceptions: You can't drag anything in or out of the left column, which is reserved for your applications list and for the all-important vertical advertisement box. Your default network's friends display has to be the first item in the central column (just below your profile photo), and the mini-feed is always the first item in the right column (just below your basic profile information). In some cases, applications or other Facebook-supplied elements won't move to an adjacent column because they are too narrow or too wide—in these instances, Facebook simply displays an error message and restores the item to its previous location. If your application list is cluttered with items that you've never heard of and never use, get rid of the dross: Click *edit* next to Applications in the left pane to display the list of applications in your profile. Click *Remove* next to each application to uninstall it, or click *Edit Settings* to control how and where the application displays, among other behaviors. For example, a few applications install links to themselves in your friends' profiles just under their profile picture. To spare your friends this intrusive behavior, uncheck *Add a link below the profile picture to any profile* in each application's settings, and click *Save* (see the screen at left). To remove these unwanted links from your own profile, click *Remove* next to the link in the Applications list.

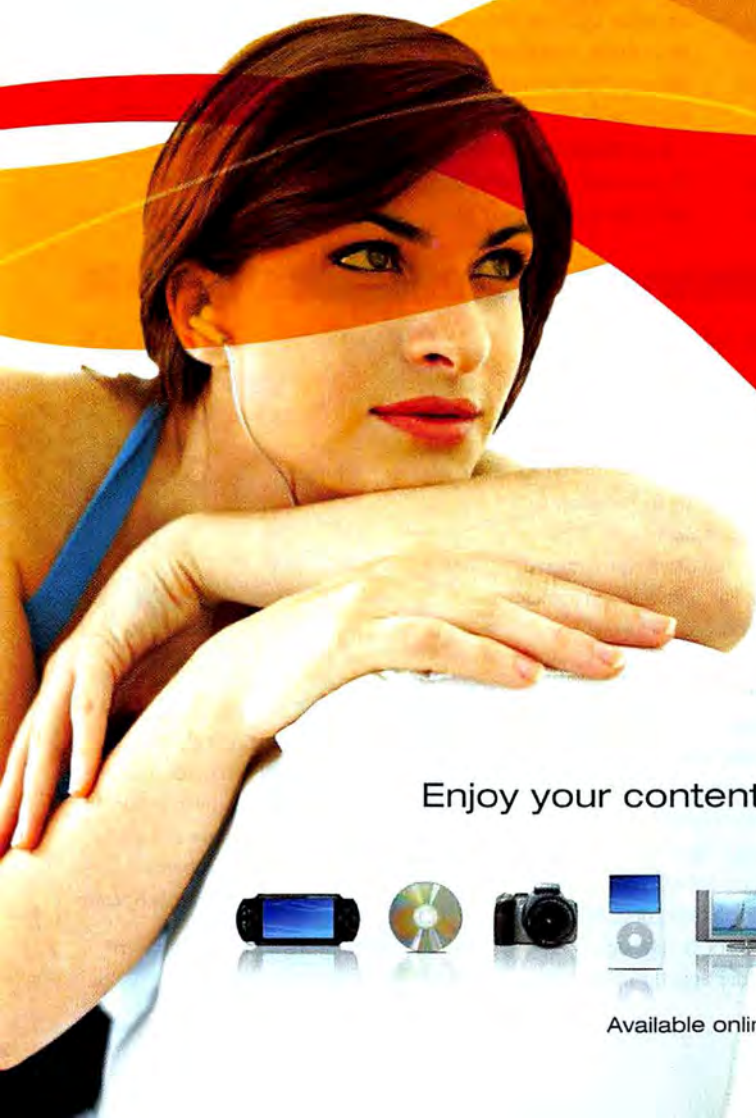
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The Express Route to Windows' File and Folder Paths

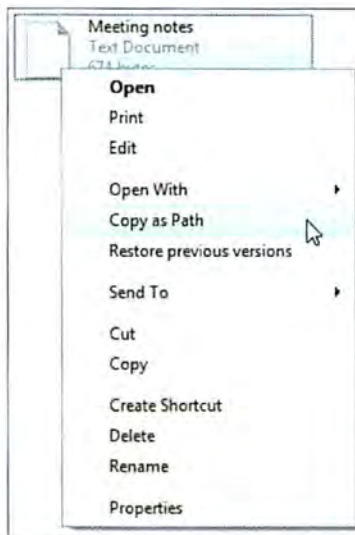
WHEN YOU CREATE a shortcut or perform some other operations in Windows, the OS will ask you to enter the complete path to a program, folder, or file. You may also need this information if you want to e-mail someone the path to a network file. Perhaps my favorite use for this information is when I need the path to a program file—along with one or more “switches” or options that I type at the end of the path—so that I can open the file from a command-prompt window. You could click Explorer's Address bar to select the path, and then copy it to the Clipboard, but you'd still have to type the file name on the end of that path. Here are the fastest tracks to Windows' paths.

Add file paths to the Run box: In all Windows versions,

press <Windows>-R to bring up the Run box, press <Delete> to remove the existing entry, and drag the file or folder from an Explorer window into the Run box.

Copy file paths in Vista: To copy a path in Vista, hold the <Shift> key and right-click a file or folder. Choose *Copy as Path* (see the screen at right). Vista will add the path to the Clipboard, and then you can paste it anywhere that accepts text.

Copy file paths into command lines (older Windows versions): In Windows versions prior to Vista, if you need a file or folder path to show in a command-prompt window, simply locate the file in Explorer and drag it into the command-prompt window. Add any switches



VISTA'S RIGHT-CLICK MENU lets you copy a file's path to the Clipboard.

or other options you want to include, and then press <Enter>. Unfortunately, this trick doesn't work in Vista.

Copy file paths with Clip This: If you need a file path for other purposes, your best

bet is to install Clip This (find.pcworld.com/58347), a freeware program. The utility lets you right-click any file or folder and choose *Send To>Clip This*. Then paste the path anywhere that accepts text.

Clip This does not add quotation marks around a path; you may need such marks when working with paths that have spaces or long file names. Also, though the utility is installed by default in the Send To folder of All Users, I could make it work only if I moved it to the Send To folder of the current user profile. In Windows 2000 and XP, that folder is C:\Documents and Settings\username\SendTo. In Windows Me, move it to C:\Windows\SendTo.

—Scott Dunn

ANSWER LINE

How can I get valuable documents off a virus-infected flash drive?

Muhammad Salau, Lokoja, Nigeria

WHAT A PROBLEM! It's scary just to plug in such a dangerous drive.

Since most malware is operating system-specific, use a non-Windows computer, such as a Mac or a Linux machine. For an easy and safe way to boot Linux on your own PC, go to find.pcworld.com/58695 and scroll down to “Boot Without Windows.”

If you must use a Windows-based PC, update Windows itself along with all of your security programs before attaching the infected drive. Next, unplug all of your Internet and local network connections, so that the virus can't communicate.

Now turn off AutoPlay for your flash drive. Windows XP users should do this with Tweak UI (find.pcworld.com/58697), a free Microsoft PowerToy. Once you have in-

stalled and opened Tweak UI, navigate its left pane to *My Computer>AutoPlay>Types*. Uncheck *Enable Autoplay for removable drives*, and click *OK* or *Apply*.

If you use Vista, click *Start*, type *autoplay*, and press <Enter>. For “Software and games,” select *Take no action*, and click *Save*.

Plug in the drive and move the files you need to another removable storage device (not your hard drive). The documents could be infected, so move only the ones you're sure you can't do without to a folder on the removable medium, and scan that folder with every security program you have.

Finally, shut down the PC, remove and throw away the flash drive, plug the PC back into the network, and reboot.

Always remember Spector's First Law of



Safe Computing: Never, ever rely on one copy of anything. If you had made backups of those documents before the infection hit your flash drive, you could have dumped the drive at the first sign of problems.

—Lincoln Spector

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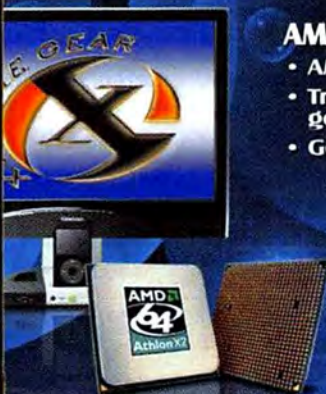


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Sound Advice: Record Like a Pro

WHETHER YOU'RE chasing your first Grammy, cutting deals over a VoIP phone, or dictating the next Great American Novel to your PC, the more accurately your system captures audio, the better you'll sound.

In many instances the sound processors built into PC motherboards provide adequate quality for VoIP calls, voice-recognition applications, and other audio uses. But audiophiles, musicians, and others who have discriminating ears will want the superior processing power and input quality of a high-grade sound card.

Windows' Sound Recorder app lets you test your on-board sound hardware and microphone: In XP, click *Start•All Programs•Accessories•Entertainment•Sound Record-*

er, and in Vista click *Start•All Programs•Accessories•Sound Recorder*. Make a short recording of your voice or of other sounds, and then play it back. If you hear static, popping, or other unwanted noises, you may need to buy a new microphone or sound card.

You don't need an internal sound card. An external USB audio interface permits easier access to connectors, and you can move it between PCs in a jiffy. USB audio boxes range from Griffen Technologies' \$40 iMic (find.pcworld.com/57748) to Cre-

ative's \$130 E-MU 0202 (find.pcworld.com/57747). For me, Turtle Beach's \$80 Audio Advantage SRM (find.pcworld.com/57749) offers a great balance of performance and features for the price.

External audio boxes digitize analog signals that the microphone captures before they enter the electrically noisy interior of the computer's case. This is especially important if you're recording sound through a laptop.

Whether you buy a new sound card or stick with your current one, make sure that you have the latest driver from the manufacturer's Web site.

Windows XP's Sound Hardware Test wizard checks your microphone for proper configu-

TURTLE BEACH'S AUDIO card (shown with \$150 Ear Force headset) ousts internal static.

ration. Click *Start•Control Panel•Sounds (Sounds, Speech, and Audio Devices in Category view)•Sound and Audio Devices•Voice•Test hardware*, and step through the wizard. In Windows Vista, click *Start•Control Panel•Ease of Access•Set up a microphone*.

To access XP's volume controls and balance settings for your microphone, line-in, and other audio input channels, return to the 'Sound and Audio Devices Properties' dialog box, select the *Volume* tab, and click *Advanced* under 'Device volume' (for some higher-end products, the settings are listed under the *Audio* tab). Choose *Options•Properties*, and under 'Adjust volume for', select *Recording*. Click the desired input channels, and select *OK*. Next, you'll see a window with the Windows volume mixer panel. In Windows Vista, click *Start•Control Panel•Hardware and Sound* (in Categories view) *•Sound*, and select the *Recording* tab. Double-click the desired channel, and select the *Levels* tab (see the screen above left).



ADJUST YOUR MICROPHONE volume and balance more precisely via the Microphone Properties dialog box.



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CONNECTING TO YOUR printer wirelessly lets you print from PCs located anywhere in range of your wireless net—no host needed.

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- If your printer lacks built-in Wi-Fi or ethernet and you want a new router anyway, look for a model with a USB printer port, like Apple's AirPort Extreme Base Station (about \$179 online; find.pcworld.com/57787), which supports draft-802.11n.

- Buy a dedicated adapter—such as Belkin's Wireless-G Print Server (about \$110 online; find.pcworld.com/57788) or D-Link's AirPlus G Wireless USB Print Server (1; about \$95 online; find.pcworld.com/57789)—that lets you plug in one or more printers and then connect to your router via Wi-Fi. If you have a multifunction printer, look for D-Link's \$100 RangeBooster G Multifunction Print Server (2; find.pcworld.com/57790) or Linksys's Wireless-G Print Server with Multifunction Printer Support (about \$110 online; find.pcworld.com/57791), either of which lets you share scanning and printing with many all-in-one printers.

—Becky Waring

—Kirk Steers





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Create a Shortcut to Paste Plain Text Into Word

I SPEND SO much time pasting text from spreadsheets, Web sites, and other sources into Word documents that I've worn grooves in my <Ctrl>, C, and V keys. But 99 times out of 100, I want to paste just the text—not the formatting, graphics, or other baggage—from the source. So instead of endlessly repeating the File•Paste Special•Text Only•OK four-step, I altered my <Ctrl>-V keyboard shortcut to paste the text, the whole text, and nothing but the text. And I still have a keyboard shortcut for pasting the whole enchilada.

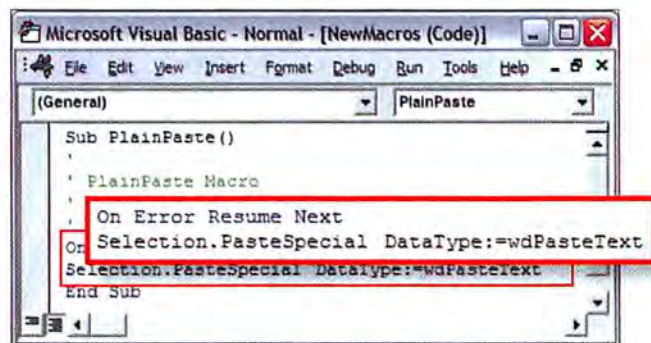
First, create a macro for pasting plain text. In Word 2003, click **Tools•Macro•Macros**; in Word 2007, select the ribbon's **View** tab and click

Macros. Type **PlainPaste** in the Macro name field at the top of the dialog box (name it as you like, but don't use spaces or punctuation), and on the 'Macros in' drop-down menu at the base of the screen, select **Normal.dot** (global template) in Word 2003 or **Normal.dotm** (global template) in Word 2007. Click **Create** to enter the Visual Basic Editor. Place the cursor at the start of the line above 'End Sub', and type these two lines of text exactly:

```
On Error Resume Next
Selection.PasteSpecial
```

```
DataType:=wdPasteText
```

Click **File•Close and Return to Microsoft Word**. To test the macro, select text from any file, press <Ctrl>-C to copy it to the Clipboard, open Word, click **Tools•Macro•Macros**



MODIFY YOUR PLAIN-PASTE macro with these two lines of text to convert your <Ctrl>-V shortcut so it pastes unformatted text only.

(**View•Macros** in Word 2007), and double-click **PlainPaste**. You should see only the text from your selection, in the format of the open Word file, not of the source.

Next, make this macro your <Ctrl>-V option. In Word 2003, click **Tools•Customize•Commands**. With **Normal.dot**

selected on the 'Save in' menu at the bottom of the dialog box, choose the **Keyboard** button. In Word 2007, select the **Office** button in the top-left corner, choose **Word Options**, click **Customize** in the right pane, and pick the **Customize** button next to 'Keyboard shortcuts' at the bottom of the window. In both versions, choose **Macros** under **Categories**, select **PlainPaste** in the **Macros** window, click in the 'Press new shortcut key' box, and press the <Ctrl>-V combination. Confirm that **Normal.dot** (**Normal** in Word 2007) is selected on the 'Save changes in' menu. Click **Assign**, and **Close** twice (**Close** and **OK** in Word 2007).

Now <Ctrl>-V won't paste the graphics, formatting, or other metadata in the selection, and the text will appear in the document's style. To paste more than plain text, choose **Edit•Paste** (in Word 2003 only); click the **Paste** icon on the **Standard** toolbar in Word 2003 and under the **Home** tab in Word 2007; or if you prefer to use keyboard shortcuts, press <Shift>-<Insert>.

—Preston Gralla

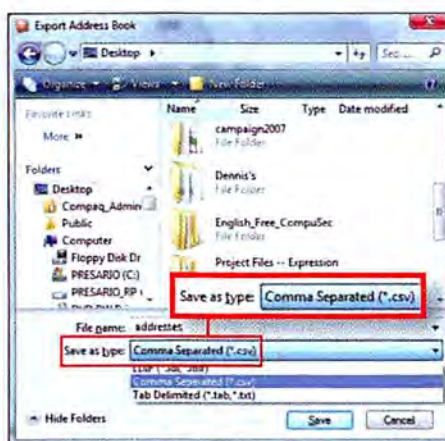
—Dennis O'Reilly

Import Your Contacts to Gmail

THE FASTEST WAY to transfer contacts from an e-mail program into Gmail is to use the comma-separated values (.csv) format to import them en masse as one file. In Outlook 2003 and 2007, select **File•Import and Export•Export to a file**, click **Next**, select **Comma Separated Values (Windows)** as the output format, and click **Next** twice. Name the file, and browse to the folder you want to store it in (if you want to put it elsewhere than your default). Click **Next•Finish**. In Outlook Express, choose **File•Export•Address Book**, select **Text File (Comma Separated Values)** as the output format, click the **Export** button, and save the file in a convenient place.

If you use Mozilla Thunderbird, open the address book, click **Tools•Export**, and select **Comma Separated (*.csv)** from the drop-down menu, prior to choosing a folder to save the file in (see the screen above right).

To import the .csv file into Gmail, click the **Contacts** link on the left side of Gmail's main screen. Select **Import** at the top right, and



USE THE COMMA-SEPARATED values (.csv) format to export your e-mail address book to Gmail.

choose **Browse** in the **Import Contacts** dialog box. Navigate to and select your .csv file, choose **Open**, and click **Import Contacts•Close** to see your contacts. (Click **All Contacts** above your addresses, if necessary.)

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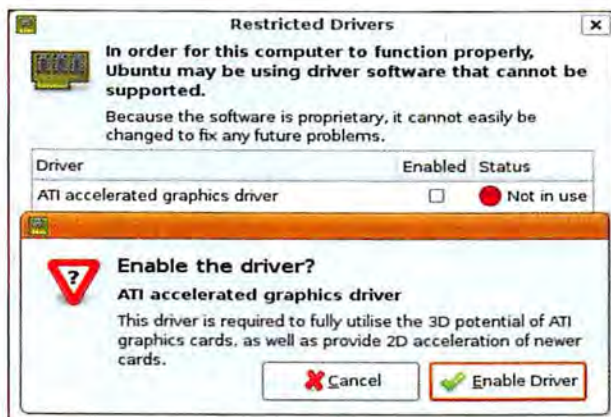
Linux Tip: Teach Ubuntu How to Play MP3 Files

UBUNTU OWES MUCH of its popularity to its easy installation. But the OS's open-source pedigree makes configuring proprietary sound and other drivers and codecs tricky. The free Automatrix application-installation utility (find.pcworld.com/57809) adds these proprietary products, but some users report having trouble with the program.

Fortunately, you can install crucial codecs and drivers in Ubuntu 7.04 without using a separate utility: Select **System•Administration•Restricted Drivers Manager**, and enter your administrative password if prompted to do so. The Restricted Drivers Manager application shows a list of available proprietary drivers for hardware that it has detected on the system. Check *Enabled* next to the driver you want to install, and click *Enable Driver* in the confirmation dialog box (see the screen below). Ubuntu will download and install the driver, which it will use the next time the system starts.

When you play an MP3 file in Ubuntu, a dialog box will ask you whether you want to download and install the codec. If you'd prefer to install most codecs and plug-ins (including Java, Flash, and TrueType fonts) at once, choose **Applications•Add/Remove**, type **Restricted** in the search field, select *All available applications* in the Show menu, and click *All* in the left pane. Check *Ubuntu restricted extras* in the Application window, and click *OK* and *Apply* to install the programs. After you enter your administrative password, Ubuntu downloads and installs the software. This doesn't add DVD playback support, which would require software that violates the Digital Millennium Copyright Act in the United States. For instructions on how to set up Ubuntu to play DVDs, consult the Ubuntu Documentation page, "RestrictedFormats/Playing-DVDs" (find.pcworld.com/57811).

—Scott Spanbauer



UBUNTU'S RESTRICTED DRIVERS Manager takes the sting out of downloading and installing drivers and codecs for the Linux distro.

ANSWER LINE

How do I prepare an emergency boot disc so I'm ready in case Windows becomes unbootable?

Paul Lopez, Allentown, Pennsylvania

BOOT FROM ONE of the discs that came with your PC, and examine the menus (don't select anything that might wipe your drive). You're looking for emergency utilities.

Windows XP CDs and Vista DVDs have tools for diagnosing and repairing unbootable PCs. If you don't have a Windows disc, borrow one; don't reinstall Windows, but if the borrowed disc has the same version of Windows as your PC, use its repair tools.

If you're booting from an XP CD, press **R** at the 'Welcome

to Setup' screen to access the Recovery Console, a DOS-like command-line environment with a number of utilities. See the chart below for a description of the most useful of these repair options.

If you are booting from a Vista DVD, click *Repair your computer* to open the System Recovery program, which has options for fixing boot problems, restoring your hard drive from an image backup, diagnosing memory, and performing a system restore.

—Lincoln Spector

The XP CD's Boot Tool Kit

ENTER THESE COMMANDS in Windows XP's Recovery Console to perform CPR on your disks and files.

COMMAND	Action
Attrib	Changes the attributes of a file or directory.
Batch	Executes the commands specified in the text file.
Bootcfg	Controls boot file (boot.ini) configuration and recovery.
ChDir (Cd)	Displays the current directory or changes the directory.
Chkdsk	Checks a disk and displays a status report.
Cls	Clears the screen.
Copy	Copies a single file to another location.
Delete (Del)	Deletes one or more files.
Dir	Displays a list of files and subdirectories in a directory.
Disable	Disables a system service or a device driver.
Enable	Starts or enables a system service or a device driver.
Exit	Exits the Recovery Console and restarts your computer.
Format	Formats a disk.
Help	Displays commands you can use in the Recovery Console.
Listsvc	Lists the services and drivers available on the computer.
Logon	Logs on to a Windows installation.
Map	Displays the drive-letter mappings.
Mkdir (Md)	Creates a directory.
Rename (Ren)	Renames a single file.
Rmdir (Rd)	Deletes a directory.
Type	Displays a text file.

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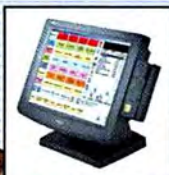
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Access Online Files With Windows' FTP Utility

IF YOU HAVE an account with an Internet service provider, you probably get some amount of online file storage and Web hosting as part of the deal. For example, Comcast gives each subscriber 25MB of file storage through its Personal Web Pages feature. Despite the fancy name, PWP is a standard file-transfer protocol (FTP) server that lets you upload and download files to and from your little corner of the Comcast server. Downloading is easy: Just type the complete URL of the file that you uploaded into the address bar of Windows Explorer or any Web browser, and the connection will start (after asking you for a user name and password, if the directory you use is password-protected).

ENTER THESE COMMANDS in Windows' built-in FTP program to transfer your files to and from your ISP's Web servers.

Uploading files is a different story, however. Most Web design programs include FTP client software for uploading your completed Web pages to the server. But sometimes you just want to upload an individual file quickly and without fuss. Windows has provided a command-line FTP client

within the operating system since Windows 95, and the app is reasonably easy to use once you know how. Choose *Start>Run* (just *Start* in Vista) and type `cmd.exe` to open a command prompt. Now type `ftp` to launch the FTP program's own command prompt. To see a list of available commands, enter `?` (see

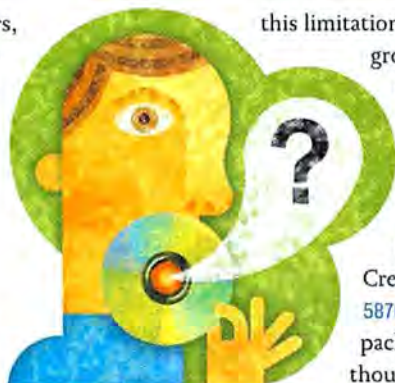
the screen at left). To begin uploading, connect to the FTP server by using the command `open server`, where *server* is the URL of the FTP server. For example, the command for connecting to Comcast's server is `open upload.comcast.net`. The server will then prompt you to enter a user name and password. To see a list of all the files and folders stored on the server, simply enter `ls`.

Before you can start uploading, the FTP program needs to know whether the files you plan to transmit are text files (such as `.txt` or HTML files) or binary files (just about any other type of file). If you apply the wrong setting to a file before transmitting it, you'll render it unreadable. To set FTP for text transmission, enter `ascii`; for binary files, type `binary`. To start file transmission, enter `send`. The FTP program will prompt you to supply the local file name; type or paste it in (be sure to enclose it in quotes if it contains spaces), and press `<Enter>`. To make this part easier, change the command prompt to the directory that contains the file you intend to upload before you launch the FTP program. That way, you need type only the file name, not the entire path. Next, enter the file's name, and press `<Enter>` again. Finish the task by typing `close` (to disconnect from the server) and then `quit` (to close the FTP program).

Why Can't I Rewrite CD-RW Discs?

PETER SEGEL, of Fort Myers, Florida, asks why some supposedly rewritable CD-RWs can't be rewritten to. Compact discs were originally intended as a read-only medium, and the standards for erasing and rewriting discs had to be added without losing backward compatibility. That's why you need special software to write to CD-R and -RW discs, and why—even with this software in place—CD-RWs behave like reformatable CD-Rs, and not like genuinely editable storage devices along the lines of flash drives.

Good packet-writing programs get around



this limitation by running in the background and, in effect, fooling Windows into seeing an inserted CD-RW as a hard drive. Nero's \$80 Nero 7 Ultra (find.pcworld.com/58699) and Roxio's \$70 Easy Media Creator 9 (find.pcworld.com/58700) each come with a packet-writing program, though Nero's InCD isn't part of the default installation.

Roxio calls its program Drag-to-Disc.

Flash drives may be a better choice than CD-RWs for erasable, portable media because they don't have this problem.

—Lincoln Spector

—Scott Spanbauer

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STEVE BASS'S HASSLE-FREE PC

Got XP Annoyances? Try These Four Smart Fixes for Windows Woes

Stop boot-up hiccups, zap folders that keep popping up, make Windows Explorer more reliable.

WINDOWS XP IS loaded with annoyances, but what else is new? The following tips will stop XP from crashing, scanning your disk every time you boot, and hanging when you don't expect it to. Even if you're not hassled by these problems today, clip and save the page, because these gremlins strike when you're least ready.

Boot Error-Check Overload

The Hassle: All I wanted was for Windows XP to perform its Error Checking routine on my NTFS-formatted drive—just once. But now Error Checking appears every time I boot up, and unless I tap a key within a few seconds, it starts running.

The Fix: At some time in the past, you must have opened the Error Checking dialog box (to get to it, right-click the drive's icon in Explorer and choose *Properties*•*Tools*•*Error-Checking*) and clicked 'Scan for and attempt recovery of bad sectors', which tells XP to check the drive the next time you boot. I'm not sure what caused the recurring check-on-boot hiccup (talk about slow boot time, eh?), but I have a fix. After your drive completes the error check, click *Start*•*Run*, type `cmd`, and press `<Enter>`. Now type `chkntfs /x c:` (change 'c:' to your drive's letter, if it's different, and don't forget the space before and after the '/x') and press `<Enter>` again. Your boot-up disk scans will be ancient history.

Quick Digital-Photo Tip: If you've accidentally deleted images from your digital camera's memory card or somehow corrupted

the card, get them back with Art Plus's Digital Photo Recovery tool (find.pcworld.com/58649). This freebie tries—usually successfully—to recover JPEG, TIFF, and some RAW files. Unfortunately, it can't restore MOV video files. Be prepared for a wait, too: It took almost an hour to wend its way through my 2GB SD Card. Browse to find.pcworld.com/58672 for tips on recovering almost anything.

Pinch a Persistent Folder

The Hassle: Whenever I boot my PC, a folder loaded with the contents of System32 pops open. What a pain in the posterior!

The Fix: A string value in one of your Registry entries is corrupt. You can follow Microsoft's long-winded advice and fiddle with the Registry if you want to, but there's a quicker solution: Go to find.pcworld.com/58650 to download and run Kelly's System32 Folder Opens Upon Boot, a Visual Basic script that automatically tweaks your Registry as necessary.

Jump-Start Disk Cleanup

The Hassle: I don't know what I did (or didn't do) to cause this, but when I try to run XP's Cleanup tool to empty my Temp folder, my system hangs.

The Fix: Cleanup is probably choking on one or more corrupted temporary files on your system; these files can also cause PC crashes. Clean the Temp folder this way: Click *Start*•*Run*, type `%temp%`, and press `<Enter>`. Press

`<Ctrl>`•`A` to select all the files, and then press the `<Delete>` key. If that doesn't do the trick, try deleting your Internet temp files as well: Click *Start*•*Settings*•*Control Panel*•*Internet Options*, and choose *Delete Files*. Make sure to check *Delete all offline content*.



THE ART PLUS flash-memory file-recovery utility restores images deleted from your camera's card.

READER DISCOVERY

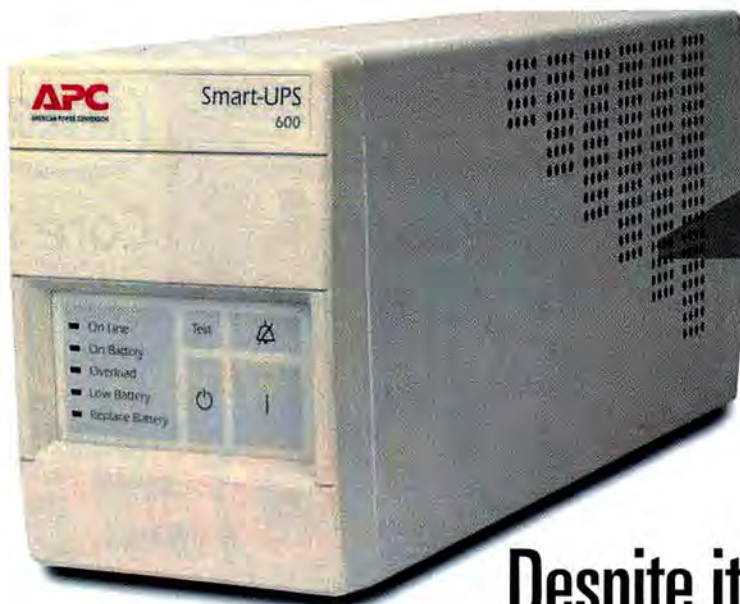
Shortcuts to System Tools

I PLACED SHORTCUTS on my desktop to Control Panel applets and system tools that I use frequently. To do this on your PC, open Windows Explorer and navigate to your `\windows\system32` folder. In XP, look for files ending in '.CPL'. In Vista, click the *Type* tab and look for Control Panel Items. Right-click those you access most often (such as `sysdm.cpl` for System Properties, or `devmgmt.msc` for Device Manager), click *Send To*, and choose *Desktop* (create shortcut).

Jon Bjerke, Champaign, Illinois

Control Explorer Crashes

A while back, I had to track down why Windows Explorer was unexpectedly crashing on my PC. (It turned out to be a malfunctioning third-party shell extension, which I removed and shot.) But in the course of my troubleshooting, I discovered a neat trick: When you open folders as separate Explorer tasks—and thus in separate memory locations—a Windows Explorer crash won't bring down the whole system. Open Folder Options in Control Panel (it may be in 'Appearance and Themes'), select the *View* tab, and check *Launch folder windows in a separate process*. You'll need to reboot for the setting to take effect. The downside: The workaround requires additional system resources for each folder, which may cause your computer to run more slowly. Minimize the slowdown by reversing the procedure once you've identified the Explorer problem. ●



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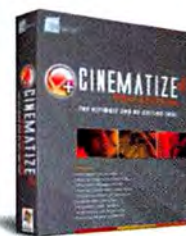
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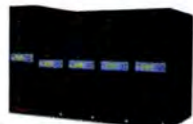
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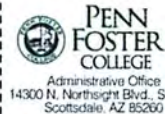
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STEPHEN MANES



Today's Web: Use at Your Own Risk!

SECRETS OF THE New Web

DEVIOUS. SNEAKY. UNDERHANDED. Those are the words that increasingly come to mind when I consider the "new Web" that's the subject of this special issue. What else would you call a world where providers unilaterally change the way their services work without even attempting to notify you, and "terms of service" and "privacy policies" are incomprehensible to anyone but the lawyers who wrote them?

I've long used Google Toolbar for Firefox to track my search history. When Google's Gmail came on the scene, I signed up. Then somewhere along the line, purely by accident, I happened to notice that when I hadn't bothered to log out of Gmail, Google's search results pages (but not the home page) included an item called "Web History." I quickly discovered that this meant Google was keeping track of my personal surfing—not just my searching.

Huh? I view that information trail as a personal matter between me and my own local browser. I don't want anybody looking over my shoulder as I surf and recording my Web travels on a server somewhere. But Google never even tried to notify me that it had started doing just this.

Apparently the company has other customers who feel the same way I do. Its Web History help page offers an entry called "I didn't sign up for Web History; why do I have it?" and instructions on how to eliminate it. The page that lets you take that step strongly suggests you first read the "Web History FAQ"—but when you click on that link, you get, instead, the "Search History FAQ," which is a very different thing.

And when you finally find the right FAQ, you see some vague, weaselly language that hints, but does not actually state, that even if you delete it, your Web browsing history may nevertheless stick around—indefinitely?—

in a "separate logs system for auditing purposes..."

That's par for the course on today's ad-dominated Web. Google has separate terms of service and privacy policies, plus bonus policies for individual services. These tend to be vague and puzzling—except for the stern disclaimers by which Google basically denies responsibility for anything, as in the warning that "you use the Services at your own risk."

Among my favorites is clause 6.3 of the terms of service, which states, "If you become aware of any unauthorized use of your password or of your account, you agree to notify Google immediately," and provides the link to report it. Fair enough. But what does Google agree to do in response? Unless I misread the document...nothing!

Google isn't alone. Web providers can change their privacy policies and other terms of service at their whim. If you doubt this, check out U.S. Patent 7,269,853, "Privacy Policy Change Notification," recently awarded to Microsoft (go to www.uspto.gov, and search and navigate from there). The document describes a method of notifying users about changes and getting their acceptance. At least in this scenario, the provider asks your permission—but here a screen informs you that if you do not agree to the reworked terms, "Your account will be closed... You will no longer be able to use

this e-mail address to sign in to participating sites or services... Someone else could register a new account using this e-mail address... You may lose access to any participating sites or services you now use, and to information that you provided to those sites or services."

Or to say it another way, the Web service provider holds all the cards. As Microsoft's patented permission system puts it, "To accept the revised privacy statement, click Accept."

But I bet you won't smile when you do it. ●

Sites want the right to snoop on you. But just what do they promise to give you in return?



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