Smart Computing

& CONSUMER ELECTRONICS

In Plain English

Holiday
Gift Guide

- Desktops & Notebooks
- Monitors & TVs
- Keyboards & Mice

- Home Theaters
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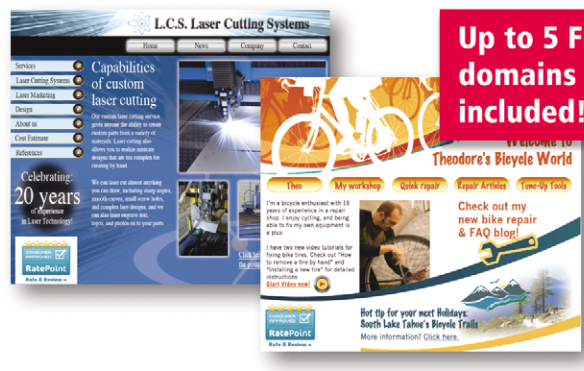
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Consumer Electronics

We tell you what you really need to know about various types of consumer electronics products. This month, we cover:

Smart Solutions

D E S K T O P S   &   L A P T O P S

Sony VAIO TT:
Small In Size, Heavy On Features

Sony has come stampeding into the ultra-light notebook market with its VAIO TT Series, which boasts a carbon fiber casing and weighs a scant 2.87 pounds. Despite its diminutive frame, this device packs quite a wallop under its hood.

Although the VAIO TT (www .sonystyle.com) is less than an inch thin, certain models include a Blu-ray player that can record, store, and play back content on high-capacity BD (Blu-ray Disc) media. These notebooks have an 11.1-inch widescreen LCD with XBRITE-DuraView technology that delivers 100% color saturation for realistic picture quality, and an energy-efficient LED (light-emitting diode) backlight produces a bright screen.

This extra-wide LCD has a 16:9 aspect ratio, making it compatible with the format of many HD (high-definition) films. The notebooks also include an HDMI (High-Definition Multimedia Interface) output connector, so users can connect the VAIO TT to a compatible HDTV to view Blu-ray movies in full 1080p resolution.

The cream of the crop is the VAIO TT VGN-TT190UBX ($4,344.99), which features a 1.4GHz, 3MB L2 cache Intel SU9400 Core 2 Duo processor; 4GB of RAM; and two RAID (redundant array of independent disks)-connected 128GB SATA (Serial Advanced Technology Attachment) solid-state drives (for a
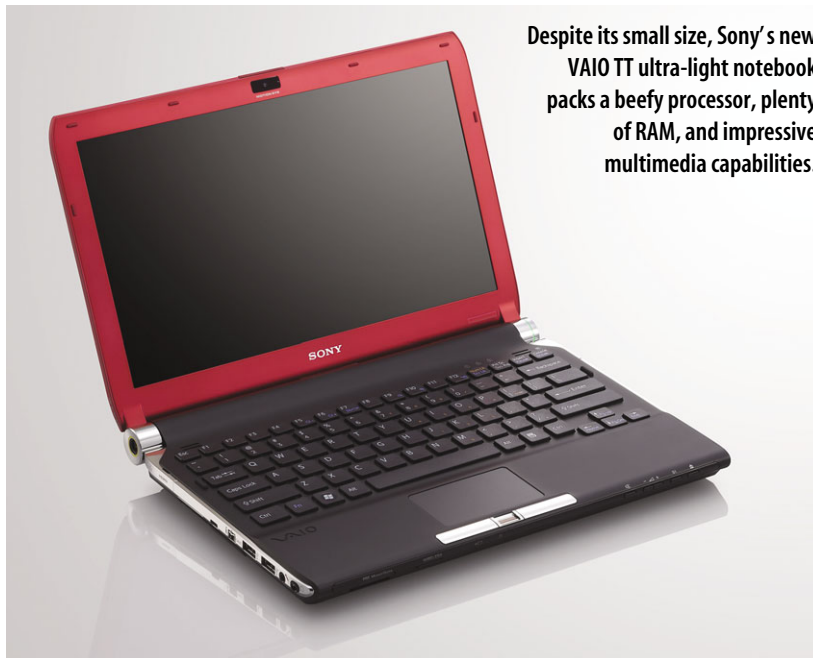
Despite its small size, Sony's new VAIO TT ultra-light notebook packs a beefy processor, plenty of RAM, and impressive multimedia capabilities.

total of 256GB of storage capacity). It includes a Blu-ray drive, fingerprint sensor, Web cam, Bluetooth connectivity, a trusted platform module, noise-canceling headphones, Windows Vista Ultimate, and 802.11n wireless LAN (local-area network) technology. Also included is a multimedia card reader that has one Memory Stick PRO (Standard/Duo) media slot with MagicGate (copy-protection technology) functionality, one ExpressCard/34 slot, and one SD (Secure Digital) slot. This model has black carbon fiber casing.

The VAIO TT VGN-TT190NIB ($2,144.99) features an Intel SU9300 1.2GHz Core 2 Duo processor, 2GB of RAM, a 160GB hard drive, CD/ DVD burner (no Blu-ray drive in this model), Web cam, Bluetooth, fingerprint sensor, trusted platform module, black carbon fiber casing, noise-canceling headphones, and Windows Vista Business.

If you're looking for a splash of color, consider the VAIO TT VGN-TT190EIN or VGN-TT190EIR, which are each $2,094.99 and have champagne gold and crimson red carbon fiber casings, respectively. These models also use the Intel SU9300 1.2GHz Core 2 Duo processor and include the same components as the VGN-TT190NIB, but they include Windows Vista Home Premium instead of Windows Vista Business. ▮

STORAGE

Intel Brings Its Expertise To The SSD

Solid-state drive technology continues its ascent toward storage domination, with Intel now joining the fray and shipping two SSDs for desktop and notebook PCs. The X18-M (1.8 inches) and X25-M (2.5 inches) are based on Intel's MLC (multilevel cell) NAND flash technology.

"By combining our experience in flash memory design with our processor and computing expertise, we have added advances such as our parallel 10-channel architecture, proprietary controller, firmware, and memory management algorithms that address write amplification and wear leveling issues to redefine SSD performance and reliability for computing platforms," says Randy Wilhelm, vice president and general manager of Intel's NAND Products Group.

The SSD drives are available in 80GB capacities, and samples of a 160GB are slated for availability by the end of the year. The 80GB drive features read speeds up to 250MB per second, write speeds of up to 70MB per second, and read latency of 85 microseconds. Feedback from early testing indicates that the drives could be faster than most other drives in the market today—regardless of whether they use SSD or conventional hard drive technology.
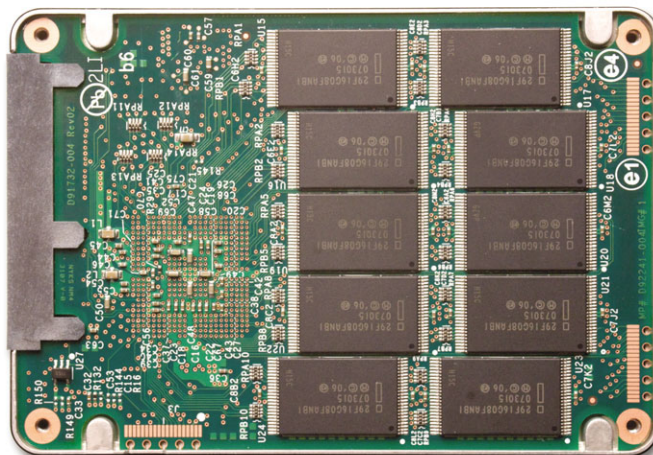
In typical Intel fashion, the company has entered the SSD (solid-state drive) market with drives that incorporate a boatload of Intel-exclusive technologies to help boost performance.

DISPLAYS

Dell Goes Green With Notebook Displays

Most consumers already know that LCD monitors use far less power (about one-third the amount) of CRT (cathode-ray tube) displays. But for some manufacturers, there is still work to be done to reduce energy consumption and otherwise help the environment. In fact, Dell has announced plans to transition all of its new notebook displays to LED (light-emitting diode) technology in the next year.

"Our customers have made it clear that they want the greenest technology possible," Jeff Clarke, senior vice president, Dell Product Group, said at the company's recent mobility summit. "As an industry, we can shape the future of green innovation and significantly reduce the carbon footprint associated with mobile computing."

The company says that as of Dec. 15, two-thirds of Dell Latitude E-Family laptops—including the Latitude E4200, E4300, E6400, E6400 ATG, and E6500—will be shipped with mercury-free LED backlights as a standard feature. Also shipping with LEDs will be the Dell Precision M2400 and M4400 mobile workstations.

LED displays are not only highly recyclable (thanks to the absence of mercury), but they're also far more energy-efficient than the CCFL (cold cathode fluorescent lamp) technology often used in LCDs. How much more? According to Dell, its 15-inch LED displays consume an average of 43% less power at maximum brightness.

Dell notebooks, such as this Latitude E6500, will soon begin shipping with LED (light-emitting diode) displays, which are mercury-free and use far less energy than their LCD counterparts.
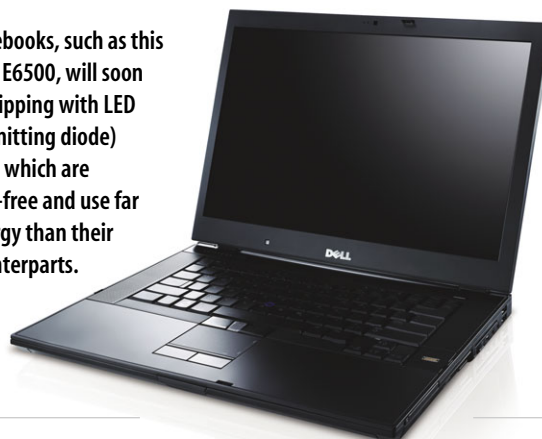
Late-Night Computing Just Got Easier

How many times did your mother tell you not to watch television in the dark? Probably plenty—but that probably doesn't stop you from watching it in the dark now, nor does it stop you from computing in the dark. But computing in the dark does bring its own peculiar challenge—it's tough to see the keyboard.

Logitech's Illuminated Keyboard ($79.99; www.logitech.com) does away with dark keys by incorporating backlight technology that is optimized through a combination of microlens reflectors, a multilayer painting process, and laser etching. According to the company, these technologies produce a backlit experience that's brighter, sharper, and easier to read.

Amazingly, you don't have to sacrifice much style to get your light on. The Illuminated Keyboard has a profile of just 9.3mm (millimeters), giving it a sleek look that's enhanced even further with the illuminated keys. Also, the keyboard's PerfectStroke key system increases the distance for each keystroke (also known as key travel), which can improve the typing experience by increasing the fluidity of the keystroke. Also included are a soft-touch palm rest and one-touch multimedia controls for instant access to applications. ▮

Logitech's Illuminated Keyboard uses a unique combination of technologies to create a backlight that allows for sharp, bright display of keys.

Researchers Stack The Chip Odds

Today's computer processors use two-dimensional circuits, but the future could eventually see more three-dimensional circuitry, which promises far greater efficiency and power in just a fraction of the space required by 2D processors. This technology is already in the works at the University of Rochester, where researchers have an actual 3D chip up and running.

While previous 3D chips simply stacked conventional processors on top of each other, the 1.4GHz chip at Rochester was designed and built to optimize processing in a vertical fashion through multiple processor layers (conventional chips optimize processing functions horizontally).
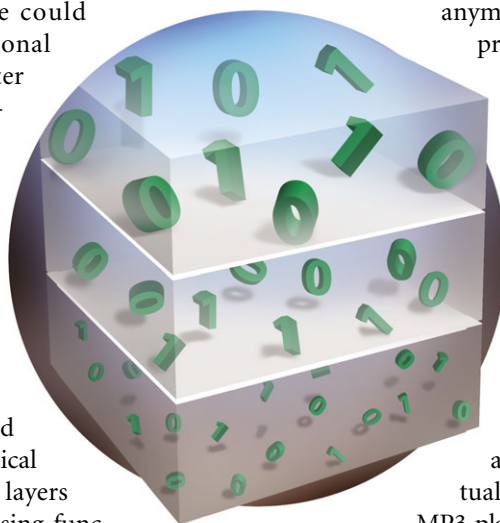
"I call it a cube now, because it's not just a chip anymore," says Eby Friedman, distinguished professor of electrical and computer engineering at Rochester. "This is the way computing is going to have to be done in the future. When the chips are flush against each other, they can do things you could never do with a regular 2D chip."

As devices demand more power, the idea of stacking chips on top of each other becomes more relevant, but it also creates space and efficiency problems. According to Friedman, the key is designing a 3D chip that interacts as a single system. The result could eventually lead to chips inside devices (such as MP3 players) that could be shrunk to a tenth of their current size but deliver 10 times the speed. ▮

New Music Format Takes Digital To New Places

When it comes to physical music formats, the music industry has been fairly limited for years—the CD and a handful of less popular formats are all that's available. But music publishers are finally stepping into the digital age with a new format called slotMusic (www.slotmusic.org), which comprises high-quality, DRM (digital rights management)-free MP3s preloaded on microSD cards.

Publishers including Universal, Sony BMG, Warner, and EMI, along with retailers such as Best Buy and Wal-Mart, have jumped aboard the slotMusic train. slotMusic cards will appear as albums available for sale at both brick-and-mortar and online stores, allowing consumers to

The new slotMusic standard aims to break digital music from the shackles of PCs by offering music-loaded cards available for sale at both brick-and-mortar and online shops.

purchase digital music without needing a PC or Internet connection to do so.

Further, the cards can be used with not only microSD-compatible devices such as mobile phones or MP3 players, but they will also be packaged with a small USB sleeve that allows use on any USB-compatible computer using any consumer operating system (Windows, Mac, or Linux). The MP3 tracks will be encoded at up to 320kbps (kilobits per second) for high-quality sound.

Early critics of the slotMusic format claim that the effort is several years too late, but it remains to be seen whether the format can indeed catch on with the massive base of devices that can accommodate it. ▮

Whenever I plug my USB flash drive into my PC case, Windows tells me that the drive is unknown.

This generally occurs for one of two reasons. First, check that the USB ports on the case are correctly wired to the motherboard. If you're certain the wiring is correct, it's possible the case isn't compatible with USB 2.0. Enter your BIOS (Basic Input/Output System) and change the USB mode from HiSpeed to FullSpeed.

I can see my Desktop only when I boot into Windows Safe Mode.

If your PC boots completely but shows no display, boot into Safe Mode. Next, go online and download the latest drivers for your video card and install them. In most cases, the reinstalled drivers should fix any corruption problems that likely led to this issue.

Sheets of paper constantly get stuck when my printer attempts to feed pages through.

The primary suspects here are the rubber-based feed rollers that pull the pages through the printer. These can become dry over time, in turn limiting their ability to grab pages. Try using 90% (or higher) isopropyl alcohol to clean the rollers. If this

doesn't work, you might need to buy replacements.

I am having trouble getting the pushpins to work on my CPU's heatsink.

Pushpins cause plenty of headaches for PC owners because they require the perfect amount of pressure and precision to install correctly. If you're having problems, try taking the motherboard out of the PC case and then installing the heatsink. This can give you the leverage necessary to implement the pushpins and avoid damaging your motherboard. ▮

CONVERGENT TECH: PDAs & SMARTPHONES

Android Debuts In The New T-Mobile G1

The wait is over. About a year after Google unveiled the Android mobile platform, the first Android-powered device has arrived. The T-Mobile G1 is ready to give Apple's iPhone some serious competition, and its wide range of features and software potential could make it a serious player in the smartphone market.

Out of the gates, the G1 ($179.99 with a two-year contract; www.t-mobileg1.com) has a feature that many iPhone users likely will envy: a QWERTY keyboard that hides behind a hinged screen. Measuring 4.6 x 2.16 x 0.62 inches (HxWxD) and weighing 5.6 ounces, the G1 has a 3.17-inch touchscreen with a resolution of 480 x 320. Wireless support is provided for Wi-Fi, GPS (global positioning system), Bluetooth, and a range of 3G services, including GSM (Global System for Mobile Communications), GPRS (General Packet Radio Service), EDGE (Enhanced Data for GSM Evolution), UMTS (Universal Mobile Telecommunications System), and HSDPA (High-Speed Downlink Packet Access). The G1 also includes a 3.1MP (megapixel) camera, a microSD slot (a 1GB card is included), and a dedicated search button.

From a pure hardware perspective, the G1 certainly isn't unique. What is unique about this device is the open-source Android platform, which will accommodate a huge selection of
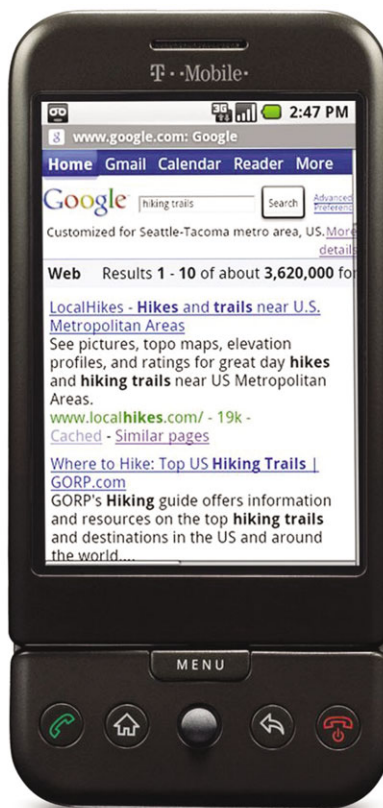
The T-Mobile G1 features Google's Android platform, and with its wide range of features and software potential, it could become a serious player in the smartphone market.

software. For starters, the Google-created Android in the G1 comes pre-loaded with Google applications such as Gmail, Calendar, and Google Talk.

Google Maps is also included, and it's this application that will likely prove to be the "killer" application in the early months of the G1's release. Using the Street View feature of Google Maps, users can view panoramic street-level photographs of real locations—but unlike using that feature on a computer, they can physically move the phone in different directions to change the view of the location on the screen, just like standing on the actual street and moving your head to change the view.

The G1 also provides one-touch access to Android Market, an online site that lets users buy, download, and rate applications and games for their device. The site is expected to provide a massive selection of software because content providers simply need to register as a merchant, upload and describe their content, and publish it. This structure differs from Apple's online store for iPhone applications, which has received criticism for placing far too many restrictions on developer content. ∎

News From The Help Desk

Our Most Common Tech Calls

COMPILED BY SETH COLANER

Each month, we receive numerous technical support calls and email messages. Some computer problems are fairly common, and we find that many callers struggle to resolve the same issues. In this article, we cover some of the most common or timely tech support questions and provide our solution for each of them.

Q I downloaded an antivirus program called Vista Antivirus 2008. When it scanned my system, it told me my computer was infected and prompted me to buy the software. Is this a legitimate program, or am I being scammed?

A Offering a free virus scan but not removing malware until you buy the software isn't uncommon, even for legit antivirus programs. However, this particular "antivirus" program is a complete fraud. It is not, in fact, antivirus software at all; rather, it's software that either plants fake errors in your Registry or simply makes up false positives in an effort to get you to buy it. While the software is running, it will periodically inform you that your computer is infected or is under attack. In reality, your computer is infected, but from the software itself.

Do not purchase this program. It is not a piece of software from Microsoft, despite the misleading name. Rather, it's designed to cheat you out of your money and, worse, acquire and most likely subsequently sell your credit card or bank account information. If you are snookered into paying for this software, contact your bank or credit card company immediately to conduct damage control. Also, remember that in addition to possibly having your financial information pilfered, you're going to be charged for this software, so be sure to cut that off at the pass.

Like the devil, this nasty program and its derivatives go by many names, including Windows Antivirus 2008, Antivirus 2008, System Antivirus 2008, XP Antivirus 2008, XP Antivirus 2009, and XPAntivirus.

It's tough to manually remove Vista Antivirus 2008 (or whatever other name it's called in your case) once your computer is infected. Note that even if the version infecting your system has an Add/Remove option in the Control Panel, that method of removal will not always work. Furthermore, manually removing files and folders in the Registry can get risky and may cause damage to your computer or operating system if incorrect changes are made. Therefore, we recommend checking your anti-malware software (the real one) for updates that will get rid of Vista Antivirus 2008—every good publisher of anti-malware software will be working hard at finding ways to defend against it.

Although any reputable antivirus program should be able to remove the offending software for you, Malwarebytes' Anti-Malware (free to try, $24.95 to buy; malwarebytes.org) has proven very capable of the task. Download and install Anti-Malware. Open the application and select Scan, and the program will guide you through the remaining steps. Once it finds all the entries associated with the malware, delete them.

Q When I download anything onto my Windows Vista-equipped computer, it automatically saves the item in my Downloads folder. I'd rather the downloads be saved onto my Desktop. How do I change this?

A In Firefox, click Tools and then select Options. When the window appears, click the Main tab. Under Downloads, click Browse to alter the Save Files To option. Click Desktop (or wherever you want to save your downloads) and click OK. Click OK to close the window.

In Internet Explorer, click an item to download it. Click Save, and when the window appears, click Browse Folders and navigate to where you want to save your download. Click Save. IE will remember this choice the next time you download something.

Q Is it possible to buy a new computer with Windows XP as the installed operating system instead of Vista?

A Yes. Although Microsoft maintains that WinXP will eventually be phased out in favor of Vista and/or the

Malwarebytes' Anti-Malware is a useful tool to get rid of Vista Antivirus 2008 and its derivatives.

upcoming Windows 7 operating system, many computer manufacturers still offer WinXP on new systems.

However, some other options to consider include buying a refurbished computer from a trusted manufacturer or having a computer custom-built. In the case of the former, many manufacturers offer refurbished computers for sale at reduced prices. This is generally a good way to get a bargain on a computer, as you can still get a warranty from the company. However, because so many brand-new computers have Vista installed, going the refurb route opens up your options for getting all the features you want on a computer that also has WinXP.

Having a computer custom-built by a professional is a great way to ensure that a computer has every option you want, including a WinXP operating system. One drawback is that you won't necessarily have the same kind of comprehensive warranty you can buy from a major manufacturer, although that will vary depending on what your custom builder offers.

Q I just replaced my old mouse with one that has some fancy buttons, including a scroll wheel. However, not all the functions of this new mouse seem to be working. What's wrong?

A More than likely, your mouse needs drivers installed. An installation disc should have accompanied the mouse. This disc should contain all the drivers you need. Just insert the disc into your CD or DVD drive and follow the on-screen instructions.

You can also check the mouse manufacturer's Web site for any drivers that are more recent than the ones on the installation disc. On the Web site in question, select the drivers you need and install them.
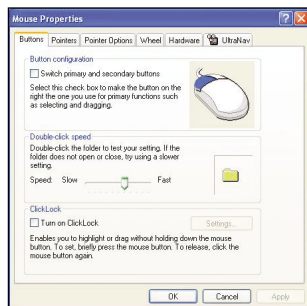
Once you have downloaded and installed the most recent drivers for your mouse, check the Mouse Properties window found in the Control Panel to see if you need to enable any other features.

You also may need to enable particular options regarding your system's settings. In WinXP, click Start, Control Panel, and Appearance And Themes. On the left side of the window, click Mouse Pointers. In the resulting dialog box, click the Wheel or Buttons tabs to see if any options need to be selected or enabled. (Click Start, Control Panel, Hardware And Sound, and Mouse to find these options in Vista.)

Q A trusted friend sent me a file with an extension that is unfamiliar to me. I have no doubt that it is a legitimate file, but Windows can't find a program to open it. What can I do?

Feature Package Topics

Each *Smart Computing* issue includes tips, reviews, and information about a variety of topics. However, each issue also has a featured group of articles about a selected topic. Below is a list of the Feature Packages from the previous year. As a *Smart Computing* subscriber, you have access to all of our archived articles at www.smartcomputing.com.

December 2007:	Laptops Take Over
	Get It All: Power, Price & Portability
January 2008:	Time For A PC Tune-Up: Improve
	Speed, Performance & Reliability
February 2008:	Get More Out Of Your PC:
	Here's What You Can Do!
March 2008:	Solve Common PC Problems:
	Fix It Yourself Step-By-Step!
April 2008:	The Perfect Home Network: A
	Step-By-Step Guide
May 2008:	Protect Your PC & Your Privacy:
	Block Intruders & Malware
June 2008:	Go Wireless: Share Audio, Video &
	Data Without Cable Clutter
July 2008:	Clean Out Your PC:
	Preventive Maintenance
August 2008:	Troubleshoot Software:
	Get Rid Of Glitches
September 2008:	Do It Yourself: Notebook Repair
October 2008:	Boost Your PC's Performance: Optimize
	Windows & Upgrade Hardware
November 2008:	Reinstall Windows:
	Breathe New Life Into Your PC

A All computer users grow accustomed to certain file extensions and know them by sight. For example, .EXE is an executable file to install a program; .DOC is a Microsoft Word file; and .XLS is a Microsoft Excel file, to name a few.

Some file extensions are generic and universally used. For example, regardless of the publisher of the software, every piece of Windows software needs to be installed with an .EXE file. However, other file extensions, such as .DOC and .XLS, are proprietary, meaning they denote a specific type of software from a specific company (in this case, Microsoft). There are thousands of proprietary file extensions out there, in addition to universal extensions that most computer users don't encounter on a regular basis.

If Windows can't find a program on your computer to open a file, visit www.fileinfo.net to look up the file extension in question. Enter the extension in the Search box and click Go. You'll be given plenty of information, including the type of file, how common it is, what category of file it falls under, and programs that can open it. From there, you can decide if you need to acquire that software. ▐▌

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Jennifer Johnson

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Freedom is important to all of us. Though the way we define and think about freedom changes over time, all of us have a desire to be free. However, even though we live in a free country, we have plenty of responsibilities tying us down. Bills, family, jobs, and other activities sometimes dictate our life more than we'd like. Constraints don't stop there: Cellular providers also limit our freedom to travel or switch carriers without paying outrageous roaming or early termination fees.

One way to free yourself from a carrier's constraints is to buy an unlocked phone. These phones have no ties to carriers, so they allow us to travel around the world and switch carriers with a lot more flexibility.

No one ever said freedom was free, however. Unlocked phones often cost hundreds of dollars more than their subsidized-by-contract counterparts. Still, sometimes, this ability to roam is worth it.

PAQ An Unlocked Phone

HP recently sent me its latest unlocked smartphone, the iPAQ 910c Business Messenger. This smartphone has plenty of bells and whistles. Reminiscent of a BlackBerry handheld at initial glance, the iPAQ 910c has a similar layout, with a QWERTY keyboard below a rectangular screen and a scroll wheel on the side of the device.

Still, the iPAQ 910c is distinctly different from a BlackBerry in terms of software and some hardware functionality. For example, the iPAQ 910c runs on Windows Mobile 6.1, Microsoft's latest mobile operating system, and has mobile Microsoft programs, including Excel Mobile and Word Mobile.

The iPAQ 910c also has a built-in GPS (Global Positioning System) radio, which can be used with paid or free navigational applications to help you find your way in unfamiliar cities. The iPAQ 910c comes with Google Maps preloaded, so you'll be ready to go with mapping functionality right out of the box. You can install additional GPS routing software if you would like after purchase.

With the iPAQ 910c's 3MP (megapixel) camera, you can take pictures worth printing and sharing. Though a standalone camera will likely take better shots than any camera phone, there's something to be said for "good enough," especially if you're traveling light.

Voice Controls

Hands-free capabilities are extremely important. Whether you're obeying the laws in your state that mandate hands-free phone use or doing your best to be safe, the iPAQ 910c's Cyberon Voice Commander and HP Voice Reply features will come in handy.

Voice Commander lets you speak commands to the phone, instructing it to call a contact, start composing an email, read email out loud (Microsoft Exchange mailboxes only), set reminders, play music, and more. When the phone read my email, the audio sounded computerized, but I got the point and liked that I could listen to messages when I couldn't look at the screen. Voice Reply lets me reply to emails by recording a short audio file that is automatically attached to an email and sent to my recipient. This let me keep my hands on the wheel and eyes on the road but still respond to emails in a timely manner.

Flexible Connectivity

Of course, part of being "free" means you're able to connect when, how, and where you want. The iPAQ 910c has 802.11b/g wireless, Bluetooth, and 3G (third generation) HSDPA (High-Speed Downlink Packet Access) high-speed cellular Internet capabilities. What's more, because Microsoft Internet Sharing is included, I can use the phone as a high-speed modem for my laptop when away from home.

Have iPAQ, Will Travel

I enjoyed my time with the iPAQ 910c and think it's a phone worth considering for anyone who desires the freedom and flexibility that can only come with an unlocked phone. ▮

Free Video-Editing Software
& Features You Might Want To Pay For

Marty Sems

Send your comments to
marty@smartcomputing.com

If you wait long enough, you'll probably find a free version of any software you want. After all, it happened with browsers, email, office suites, and even operating systems.

Video-editing software is on that list, too. I'll take a look at Pinnacle's free VideoSpin, along with the latest version of Corel's for-pay VideoStudio—and reasons why it might be worth $100 to you. Both applications work with Windows XP/Vista.

Pinnacle VideoSpin

VideoSpin turns video files into wide or full-screen movies upload-able to YouTube and Yahoo! Video. (The free Windows Movie Maker can make YouTube clips, too.) It can create files for the iPod, too, and in formats including DivX and MPEG (Moving Picture Experts Group)-1/2/4.

What VideoSpin *can't* do is capture your camcorder video and burn it to DVD. And to keep using its stereo Dolby Digital, DivX, and MPEG-2/4 capabilities after 15 days, you'll need to buy a $14.99 Advanced Codec Pack.

Perhaps because of its limited scope, VideoSpin is very stable. I've never used a more trouble-free editor. Version 1.1 is a free, 149MB download from Videospin.com, which has tutorials and sample videos.

VideoSpin keeps things drag-and-drop easy, so it's a cinch to learn. Lengthen or shorten a scene with a click-and-drag. To lower a back-ground song's volume, click that section of its volume line and drag it down. Neat!

The software's effects and transitions are basic, but it does let you fade to/from black and dissolve between scenes and photos. You can add moving titles over video, too, or insert premade graphics with customizable text.

And now the bad news: There's no pan and zoom motion for photo slideshows, no color correction, and no "old film" effect. You can't drop a transition on a group of photos simul-taneously, and you can't automatically adjust a slideshow to the duration of a song. Still, within its limitations, VideoSpin works well.

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Corel VideoStudio Pro X2

I can only list some of Corel VideoStudio Pro X2's impressive highlights here (check Corel.com for more). Put simply, it covers all the "prosumer" bases.

If you plan to edit high-def video, plan to pay. The $99.99 Pro version lets you author BDMVs (Blu-ray Disc Movie Videos). The non-Pro version ($69.99) skips BD, but can make AVCHD (Advanced Video Codec High Definition) discs and some high-def files, plus standard-def movies and DVDs. The included WinDVD software (Pro version) and certain BD players can play AVCHD discs (plain DVDs containing high-def video with menus).

The neat thing is, you don't need a high-end PC to edit in high-def. Corel's Smart Proxy minimizes the demand on your system.

VideoStudio's welcome screen gives you a choice of applications from expert to simple. There's the full VideoStudio Editor, the Movie Wizard, and the DV-to-DVD Wizard.

Most of the cool stuff resides in Video-Studio Editor. Its pan and zoom automatically zeroes in on people's faces in still pictures, but you can fully adjust the motion effect for each image. There's a broad range of camera effects, transitions, and picture-correction options, and they're categorized in a very intuitive way. Also included are sound effects and professional menu and title backdrops.

Want to "paint" your child's name over your video or circle something on-screen? Click the Painting Creator icon. Want to hear screeching tires from the left-rear speaker to the right front of your 5.1-channel Dolby Digital sound system? Use the Audio View. There's support for YouTube and iPods, H.264 high-profile video, blue screen/chroma key, picture-in-picture. . . . To be honest, in my days with VideoStudio, I felt as though I'd barely scratched the surface.

The DV-to-DVD Wizard didn't properly capture video from my miniDV camcorder to my Vista PC, but that was the only glitch I en-countered. Whatever your skill level, Video-Studio Pro X2 gives you the tools you need. ❚❚
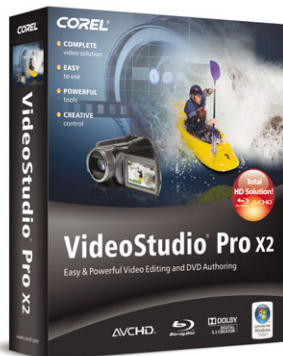
Face-To-Face
Keep In Touch With Web Cams

TARA SIMMONS

Premium Autofocus Webcam
$79.99
HP
(800) 752-0900
www.hp.com

QuickCam Pro 9000
$99.99
Logitech
(800) 231-7717
www.logitech.com

Of all the tasks I perform with my computer, communication is one of the most important to me. It's simple to send friends and family digital photos, coordinate plans among multiple people via email, and keep up-to-date on important events. Cute, new rapidly growing additions to the family provide even more incentive to keep up with (and see) friends and relatives. These days, Web cams let friends, family, and co-workers meet face-to-face even if they're miles apart. (Web cams also let people broadcast videos of themselves dramatically singing along to Swedish pop tunes, but that's a topic for another day.)

If you don't already have a Web cam, it's worth considering if you use your computer to communicate as much as I do. There are plenty of options available, and setting up a Web cam to chat with others is usually a straightforward process. Two models I recently used are the HP Premium Autofocus Webcam and the Logitech QuickCam Pro 9000.

HP Premium Autofocus Webcam

HP is better known for its computers than its Web cams, but the Premium Autofocus is a decent option. It offers live video at resolutions of up to 640 x 480 at 30fps (frames per second). Overall, the image quality is fair. Shooting in low light produced images that were grainy in dark areas, but making adjustments to sharpness, contrast, etc. using the included software helped some. Providing plenty of direct light produced the best results.

Most Web cams will work with popular IM (instant message) and VoIP (Voice over Internet Protocol) applications such as Windows Live Messenger and Skype (check documentation to be sure). The Premium Autofocus works with AIM, Windows Live Messenger, Yahoo! Messenger, and Skype. I used the Web cam with Yahoo! Messenger. They cooperated well, and the built-in wide-angle microphone easily picked up my voice as I sat at arm's length from the camera.

Three Quick Launch buttons on top of the camera start applications for chatting, recording video, or taking photos. The buttons made it easy to start a chat session with my sister, but because the clip that held the camera on my monitor wasn't sturdy, pressing the buttons often sent the camera tumbling.

From filters to avatars, there's plenty to keep you entertained while chatting (though, I'm not sure how long anyone would want to chat with a Mona Lisa avatar). The Logitech QuickCam Pro 9000 offered the same sorts of effects and recording capabilities but with one difference that I appreciated. With the QuickCam, I could start all of these features from one neatly ordered toolbar, while I had to launch different applications from various places to use similar features with the Premium Autofocus.

Logitech QuickCam Pro 9000

The QuickCam provides clear video out of the box with a resolution of up to 1,600 x 1,200 pixels and a frame rate of up to 30fps. After some fine-tuning, the Quick-Cam produced colorful and truly impressive images even in moderate to low light. Logitech credits this clarity to the high-quality Carl Zeiss optics and the auto-adjust RightLight technology.

The QuickCam can be used with the same chat applications as the Premium Autofocus, and it worked well in my tests. The QuickCam also has a built-in microphone that picked up voices from a comfortable distance. Furthermore, the included clip held the QuickCam securely to my monitor without slipping. Logitech also offers a similar model specifically designed to clip on notebooks (Quick-Cam Pro for Notebooks, also $99.99). It's slightly smaller than the QuickCam Pro 9000 and comes with a travel case.

The QuickCam also has a button on the side that launches the QuickCam capture software and snaps pictures. The QuickCam's superior image quality, fun extras, and the fact that it's simple to use make it worth considering for full-time use. After all, whether you're watching your grandson babble or making a music video that's sure to sweep the Internet, great images are a must. ▮▮

A Sense Of Motion
Movea's Gyration Air Mouse Takes To The Air

BLAINE FLAMIG

SEND YOUR COMMENTS TO
BLAINE@SMARTCOMPUTING.COM

From a "wow" standpoint, among the most impressive hardware I set hands on in 2008 were a keyboard and mouse. That's right, input devices. Still, there's nothing simple about Movea's new Gyration Air Mouse or the Optimus Maximus, a nearly unfathomable $1,742.82 keyboard from Art Lebedev Studio (www.artlebedev.com) that builds a 48- x 48-pixel OLED (organic light-emitting diode) into every key for seemingly endless configuration options. Want to loop an AVI video clip in the Optimus Maximus' ENTER key? I did it using a clip of my daughter. Want to create a design in Paint and plaster it on the Shift key? No problem with the Optimus Configuration software. Want to embed a Gmail icon in the Spacebar to launch that email client? Done. Despite all the coolness the Optimus reeks, however, it's among the worst boards for typing I've used. Conversely, the Air Mouse, a cordless 4-ounce ambidextrous wonder, not only oozes configuration options, it performs admirably.

Chief among the Air Mouse's awesomeness is its integrated MotionSense technology and ability to control upward of 60 media, Internet, and Windows functions via the mouse's buttons and scroll wheel. Want to launch Internet Explorer with a left-click? No problem. How about starting iTunes via the mouse's right Media button or forwarding to the next slide in PowerPoint via a quick swiping motion while holding the mouse in the air? Does muting Windows Media Player's volume with a scroll wheel click sound promising? How about launching Outlook by merely placing the mouse cursor in the upper-right corner of your monitor screen? The Air Mouse does all this and more. Better, configurations take only seconds using the bundled GyroTools software.

Combined, GyroTools and the Air Mouse's buttons offer seemingly endless options, albeit some more useful than others. Still, configurations amount to little more than drags and drops or right-clicking and selecting an option from a context menu. No sifting through scores of submenus. No coding. No fuss. Further, GyroTools can save configurations to different profiles for various scenarios. Say you need to give a presentation to a computer club. In GyroTools you can create a profile that puts a fleet of presentation tools (Display Image, Zoom, Laser, etc.) within reach of the Air Mouse's buttons.

GyroTools' interface is about as straightforward as it gets. Tabs provide Mouse, Swipes, Hotspots, Other Events, and Preferences options. Additional tabs offer General, Internet, PowerPoint, Presentation, Media, Input, and Windows choices. Clicking the Mouse tab, for example, displays a graphic of the Air Mouse complete with an empty square next to each button. Click the Internet tab at the bottom, and icons for Web-related functions display, such as Browser Activate, Browser Home, Forward, etc. Drag an icon to a square, and that function is set for that mouse button. You can also right-click a square and choose among the Replace Tool options that appear.

Equally impressive is the fact that you can control all these functions on a desktop in the traditional mouse fashion or off the desktop using "Shake Gestures" or "Swipes" while holding the Air Mouse in the air. These airborne movements take some practice but work well. On or off the desktop, the Air Mouse works up to 100 feet from a computer via 2.4GHz RF (radio frequency) technology. Additionally, the Air Mouse is barely palm-sized, making it a solid mobile choice. Further, the mouse's USB receiver stores inside a slot in the mouse during travel. Two AAA batteries are required to power the mouse.

Movea has also packed the patented MotionSense technology in its new Air Music Remote, a universal remote that can control both home-theater gear and mousing chores on Windows XP and Vista systems. The remote has a Windows Media Center button and related WMC buttons built in, as well as an LED (light-emitting diode) to view and wirelessly control WMP and iTunes libraries. The remote comes with or without a wireless keyboard ($229.99 and $179.99, respectively). ▮▮

Gyration Air Mouse
$99.99
Movea
(408) 416-4600
www.gyration.com

Powerful Web Design
Fireworks CS4

Before we review this product, we must say one thing. If you or anyone in your family aches to create or explore high-end multimedia design and you have deep pockets or are eligible for an educational discount, run—don't walk—to purchase one or more of Adobe's new CS4 (Creative Suite 4) products. The entire suite is broadly updated and tightly integrated, making it easier than ever to produce absolutely stunning results.

With that said, most of CS4 is beyond the reach of the average consumer, both in price and complexity. However, we found Fireworks to be an interesting and affordable program. Although it is intended mainly as an easy-to-use prototyping program for Web designers, its broad file-format support and user friendliness makes it quite suitable for consumers. Here's why.

All-In-One

Originally designed by a different company for Web-art creation, Fireworks can now handle start-to-finish Web design. It can output to HTML format for upload to the Internet, Flash for playback in any browser with the Flash plug-in, or PDF format for printing. That's great for Web designers wanting to share their ideas with clients, but it's also great for consumers wanting a single design for desktop-printing, email sharing, and Web site use.

Fireworks is highly intuitive and WYSIWYG (what you see is what you get), meaning you can design in real-time without needing to know coding. The program can import and optimize Web-based images and bitmap (photo) file formats including TIFF (Tagged Image File Format), JPEG (Joint Photographic Experts Group), GIF (Graphics Interchange Format), and PNG (Portable Network Graphics). It also imports files from several drawing programs including any file saved in EPS (Encapsulated Post-Script) format. Think about it—you can bring together all the elements you would normally use in either Web or print design and convert them for use in either.

Fireworks handles type intelligently and powerfully with features such as text on a path, found mainly in print design products. It lets you customize objects and text using built-in, user-defined, or imported styles, and it can connect to online resources that provide ready-made color palettes and other nifty treats.

In Use

For Web work, Fireworks CS4 has a greatly enhanced ability to generate CSS (Cascading Style Sheets), a type of formatting increasingly used on the Internet. It provides an array of ready-to-go buttons, text symbols, animations, and other art elements that you can place, and it compresses or slices your graphics as needed for fast online display. It also offers a handful of basic layout templates to get you started.

Graphics handling is pleasantly nimble, letting you natively create and edit both vector (line art) and bitmap images. You can apply built-in lighting and shadow effects plus blend modes borrowed from Photoshop. In fact, a good deal of Photoshop's image-tweaking engine is available in Fireworks. If you have access to (or decide to purchase) any of Adobe's Creative Suite Web or design products, Fireworks will integrate with them seamlessly thanks to a new universal user interface design.

Fireworks is so intuitive and powerful that we don't have room to detail many of its features here. We recommend you run the free trial, which should be available by the time you read this. Does this mean Fireworks is a good choice for high-end printing? At this price point, there are actually better products if that is your only requirement. Nevertheless, if you want to run with the big dogs and create amazing designs for a variety of uses, Fireworks is an excellent choice. ▋

BY JENNIFER FARWELL

Key Features:
Flexible Web prototyping product.
Can integrate elements from both print and Web formats and save to PDF.

Guided Design
The Print Shop 23 Deluxe

Key Features: Lots of art, templates, and add-on tools make it a snap to see your project from design to distribution.

Print Shop 23 is the newest Vista-compatible version of a consumer "design-and-print-it" classic. In its current iteration, Print Shop offers three versions—The Print Shop 23, The Print Shop 23 Deluxe, and The Print Shop 23 Pro Publisher Deluxe. We reviewed the middle-of-the-road Deluxe edition. Small businesses might want to compare it against the Pro version ($99.99).

We don't recommend Print Shop for projects going to a commercial print shop, because it doesn't readily provide assistance novice users need to ensure designs reproduce properly. However, for consumers designing for Web, email, and desktop printing, it does a very good job. To the core design program, Print Shop adds basic and advanced photo editors, a basic drawing (clip-art) editor, searchable (if basic) graphic organizer, and distribution tools such as an address book.

It offers thousands of QuickStart templates you can use as the foundation for your designs, and it integrates a wide array of features, including many special text and graphics effects. Tutorials are minimal, but with a few minutes of exploration, you can be up and running.

Easy Does It

Getting started in Print Shop Deluxe is easy—after you install and open it, click the New Project tab and select Project Picker to choose from thousands of templates or design your own masterpiece. The diversity of the professionally-designed templates is impressive and can really make your task simpler if you like one of them.

Assuming you select a template, you can then modify text or replace graphics by double-clicking their respective placeholder boxes. We found it odd, given Print Shop's built-in graphics editors, that double-clicking a graphic didn't open one of them for graphics editing. However, that's a minor quibble given that the program devotes an entire tab to accessing these tools.

The Photo Tools tab is just one of 10 vertically-aligned tabs that pop open to reveal menus. From these, you can do everything from applying a drop shadow (Effects tab) or adding an initial cap (Custom Graphics tab) to setting event reminders (Addresses/Events tab). Everything is grouped under its respective tab, so if you can't find an operation you need, consider whether it might be classified by a different category. For example, you cannot crop a photo by rolling in the edges of the placeholder box. Instead, it's easiest to select Photo Tools; Crop and Orientation.

Once you have completed your project, the Finish Project tab will let you email or print your design, share it as an executable file PCs can open (but some may block due to virus concerns), publish to the Web, create a PDF, and more.

Finding Fault

Print Shop has some features we don't like, including a privacy policy that opts you in for coupons and offers automatically (during installation, click Privacy and Practices to locate the opt-out checkbox). It also asks for a lot of personal information; most of this you can skip. Finally, template searches include those not yet installed on your PC, which can make selection frustrating. If you didn't install the Art CD initially, have it at hand as you work.

If you already have a recent version of Print Shop, there isn't a compelling reason to upgrade unless you are moving to Vista. Otherwise, if you want a feature-packed and inexpensive program that makes it easy to design for desktop printing and online sharing, Print Shop is a solid solution. ▐▌

BY JENNIFER FARWELL

Edit & Share Your Pics
Picasa 3 Beta

Linux XP Vista

Key Features: Polishes your pics and lets you create fun collages.
Syncs with Web Albums so you can share your masterpieces online.

Picasa has long been a photo-editing staple for casual photographers. The software's well-designed interface doesn't intimidate new users and its tools let anyone make dramatic changes to their digital pictures. Version 3 Beta keeps the features we love and puts some new tricks up Picasa's sleeve.

Among Picasa's new tools, the Retouch feature is one of our favorites. If a power line mars the corner of your blue sky photo, you can replace the line with blue from elsewhere in the picture. Retouch can't rescue every "What is that thing on his chin?" photo, but it will certainly fix many.

An enhanced cropping tool and support for watermarks and custom captions also make Picasa more fun to use, as does the enhanced Collage feature. In Collage mode, you can pull pictures from your photo library into a virtual collage. You can move pictures around the page and rotate them with ease. Picasa also lets you use your pictures to create movie presentations. It can publish the movie directly to You-Tube (www.youtube.com).
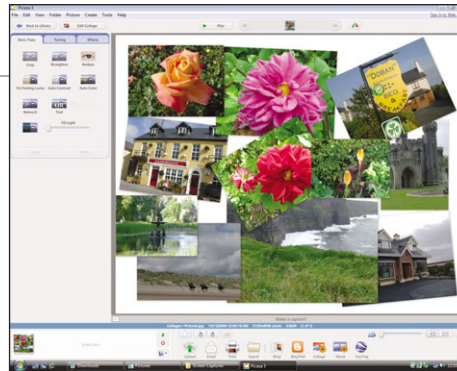
If you've ever used Picasa's I'm Feeling Lucky button, you'll be glad to know that it's still here. Click this button, and Picasa will automatically adjust your picture's brightness and contrast settings (among others), often turning a disappointing photo into a keeper. It's particularly handy for illuminating otherwise dark shots.

Picasa also has better support for Google's online photo-sharing site, Web Albums (picasaweb.google.com). Once Picasa syncs with your Web Albums account, it will relay any photo edits (that you made via Picasa on your PC) to the pictures on the Web Albums. Combine the two, and you have a noteworthy (and free) editing-and-sharing package. ▌▌

BY JOSHUA GULICK

Take A Closer Look
Accell ViewTIFF

Mac 98 Me XP Windows 2000 Vista

Accell ViewTIFF is a nifty Internet browser plug-in that lets you view TIFF (Tagged Image File Format) files in Internet Explorer, Firefox, Opera, Netscape, or Safari (a browser for Macs). In our tests, the zipped program file unpacked and installed in seconds, and as soon as we restarted the browser, we were on our way. With the plug-in installed, TIFFs come up in a nested scrolling frame window like those you see for other uses online. At the bottom is a button bar with one-click access to zoom and rotate features. Purchase the Pro version to gain the ability to print or save images from a drop-down menu.

When we tested the program in Opera, Accell ViewTIFF couldn't take over as the TIFF viewer because another plug-in (QuickTime 7.1.3) was already handling that task. We recommend you download the free version. If you get a message after installation telling you that another plug-in is already handling TIFFs, you do not need this plug-in, and you must disable or uninstall the existing plug-in to use it. Not everyone has the need to view TIFFs online, but if you find that you do need this feature at some point, Accell View-TIFF is a handy solution. ▌▌

BY JENNIFER FARWELL
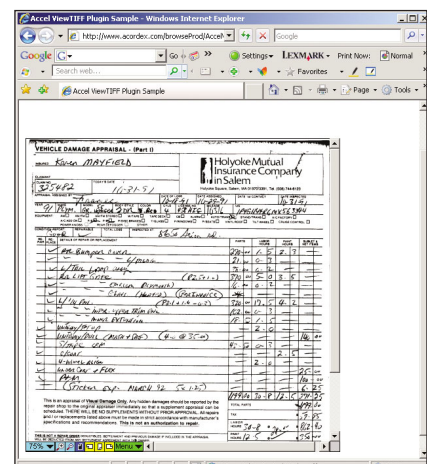
Key Features: Expands functionality of some browsers by letting users view, rotate, and zoom in on and out from TIFF files.

Check Car Problems Off Your List This Holiday!

CarMD Helps Diagnose Hidden Engine Problems From Home Or On The Road

How many times have you seen the "Check Engine" light on your car's dashboard and worried what it meant? Should you pull over? Call a tow truck? Drive straight to the mechanic? Maybe it's just a loose gas cap. Thanks to the revolutionary CarMD handheld device, now virtually everyone who owns a vehicle can quickly and easily solve automotive repair mysteries—right from home.

How It Works

When your car's "Check Engine" light appears, plug the CarMD handheld device into your vehicle's Data Link Connector. (You can find the connector under the dashboard on all 1996 and newer vehicles.)

Within a few seconds, CarMD's built-in LEDs let you know whether you can resume driving (Green = OK; yellow = possible problem; red = service required).

To learn more about your car's problem, connect CarMD to your PC using the included software and USB cable. CarMD customers gain free access to an extensive online database (www.carmd.com) that helps diagnose the cause and estimate repair costs to help you save time and money and keep your mechanic honest.

Features & Benefits

- CarMD works on 1996 and newer OBD2 cars, light trucks, SUVs, and minivans—foreign and domestic. For sale and use in the U.S. only.

- The CarMD handheld device helps buyers identify lemons at used car sales lots.

- Lifetime software updates keep your CarMD device up to speed on car trouble codes.

- CarMD includes toll-free access to ASE Certified Techs.

- Great gift for car and truck owners!

- Plus, *Smart Computing* readers get $10 off when you purchase online at www.CarMD.com using promo code: SmartDec.

COMPILED BY JOSEPH MORAN

Microsoft News

IE8 To Include New Privacy Modes

Most Web browsers help you safeguard your privacy by letting you periodically delete data the browser collects during the course of normal Web surfing. But Internet Explorer 8, which should be out by the time you read this, will go a step further than some by including a new privacy feature that prevents browsing data from being recorded in the first place.

Microsoft®

The feature, dubbed InPrivate Browsing, will ensure that Internet Explorer 8 doesn't save things such as cookies, temporary files, browser history, search queries, and other data. A related feature called InPrivate Blocking will warn you when the sites you visit include content that can track your browsing habits. ▮

Photosynth Creates 3D Environments Using Digital Snapshots

Microsoft Live Labs launched Photosynth (www.photosynth.com), a free software utility and Web-based service that lets you create three-dimensional, 360-degree environments using standard 2D digital photos.

To use Photosynth, you need to start with several dozen overlapping snapshots of an object or area taken from several different angles and vantage points. The Photosynth software will analyze your photos, stitch them together into a 3D environment, and upload them to the Web site where they can be viewed via a browser. ▮

The Zune 120 mixes classic media player features (such as support for music, photos, and video) with radio and Wi-Fi connectivity. Interestingly, you can tag FM radio songs as you listen to them so you can buy the tunes later.

New Zune Hardware, Software Debuts

Microsoft has introduced two new models of its Zune digital media player. The new high-end model, the Zune 120, boasts a 120GB hard drive and carries a $249.99 price tag, while the Zune 16 features 16GB of flash memory-based storage for $199.99.

The Zune's also getting an update on the firmware side, adding features such as the ability to stream and download music via Wi-Fi and tag songs heard on the integrated FM radio for purchase. The Zune software update is free, compatible with all Zunes, and available for download at www.zune.net. ▮

Windows Tips

Change Desktop Icon Size (Vista Only)

If the icons on your Vista Desktop are too small to see clearly, or you think they're taking up too much space, there's an easy way to resize them. When you right-click an empty part of the Desktop and select View, you'll be able to choose between Large, Medium, and Classic (WinXP style and the smallest) icon sizes.

If you're not satisfied with any of the three size options and you've got a mouse with a scroll wheel, you can further fine-tune the size of your Desktop icons. First, click somewhere on the Desktop, then hold down the CTRL key. Now, move the mouse's scroll wheel up or down to grow or shrink the icons. ∎

Block International Spam In Windows Mail (Vista Only)

If you get a lot of spam email, chances are that a sizeable chunk of it comes in from outside the United States. Fortunately, Vista's built-in Windows Mail can filter many such messages based on the country of origin or the language used.
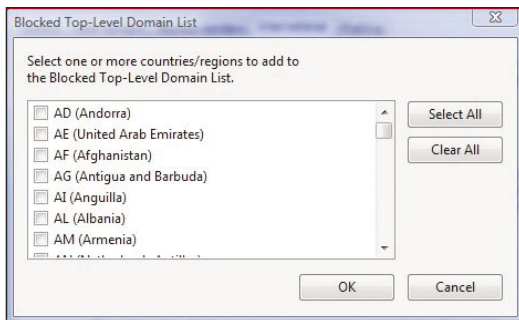
With Windows Mail, you can reduce spam by filtering messages from non-U.S. addresses or those in languages other than English.

From the Tools menu in Windows Mail, choose Junk E-mail Options and then click the International tab. Now click the Blocked Top-Level Domains List button, where you'll see a list of country-specific two-letter domain codes. Put a check next to each country you don't want to receive messages from, and Windows Mail will automatically put messages from email addresses containing those codes into your Junk E-mail folder. (There are over 200 codes in the list so if you're sure you don't need to receive any international email, you can click Select All, but you might also want to deselect .US, the United States national domain code; it's not very widely used right now, but that may change in the future.) When you're done, click OK.

Because not all international email comes from addresses with foreign country codes (some just use plain old .com or .net), Windows Mail can also identify international email messages by their use of non-English characters in the text. From the International tab, click Blocked Encoding List, and check the character sets you don't want to receive messages in. For example, Cyrillic (a mainly Russian and Eastern European alphabet) is used in a lot of spam. ∎

Windows News

Microsoft Offers College Students "Ultimate" Discount On Vista, Office

Any Microsoft software with the word "ultimate" in the title normally carries a hefty price tag, but the company's giving budget-conscious college students the opportunity to buy pricey software at a hefty discount.

Under the The Ultimate Steal program, qualified students can buy Microsoft Office Ultimate 2007, for $59.95 and the Windows Vista Ultimate Upgrade for $64.95 (the list prices are $679.95 and $219.95, respectively). For eligibility requirements or to place an order, visit www.theultimatesteal.com. ∎
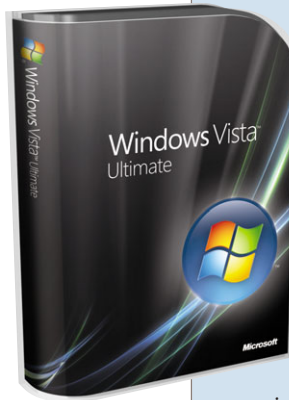
Windows Media Player 11 Gets Critical Security Patch

Microsoft has issued a patch for Windows Media Player 11 to correct a critical security flaw that could allow an attacker to gain complete control of a system when someone with an administrator account in Windows streams a specially-designed audio file.

The security flaw affects Windows Media Player 11—but not previous versions—in both the 32- and 64-bit versions of Windows XP and Vista. Those whose PCs aren't configured to automatically download security updates can download the patch from tinyurl.com/5bhwlr. ∎

Microsoft Sends Windows Gurus To Retail Stores

Hoping to help boost sales of Microsoft software and Windows-based PCs, the company is sending its own team of 155 customer service representatives into retail stores like Best Buy and Circuit City.

The Gurus, who will not be paid on commission, will be available to provide demonstrations and answer questions about Microsoft products available for sale in the store, but they won't provide technical support for products that customers already own. ∎

Windows XP
Beef Up Protection With Windows Defender

If you use the Internet, you're placing your information and computer at risk. Of course, just about anything you do poses some sort of risk. Even paying bills through the mail gives criminals an opportunity to swipe your personal info. Just as we wouldn't recommend you stop paying bills, we can't recommend you log off of the Internet either.

Software can help minimize your online risk. Most everyone uses some sort of antivirus protection, but antivirus alone is no longer enough. Spyware, while perhaps not as devastating as a virus, can cause other sorts of havoc, from just slowing down your computer to sending personal information to third parties, displaying ads on your computer when you're not online, and even changing your system settings without permission. Today, many software security suites (such as Norton Internet Security 2009 [$69.99; www.symantec.com], McAfee Internet Security 2009 [$59.99; www.mcafee.com], and Grisoft AVG Anti-Virus 8.0 [$54.99; www.avg.com]) offer antispyware software along with antivirus and other security applications. If you're running a standalone antivirus application, however, you should look into additional spyware protection. Microsoft's Windows Defender offers free spyware protection for Windows XP and Windows Vista users. We'll show you where to get Windows Defender and how to use it to protect your PC.

Fortifying Your Defenses

Windows Defender comes preinstalled with Windows Vista, but if you're using WinXP, you'll need to start by downloading and installing Windows Defender. You can download the latest version from Microsoft at tinyurl.com/3fvtn4. Click the Get It Now button and follow the instructions to validate your copy of WinXP. (If you're using a browser other than Internet Explorer, you may need to install additional software; follow the instructions provided.) Once validation is

If you select to participate in Microsoft's SpyNet online community during installation, Windows Defender will set you up with a Basic membership. You can change this to an Advanced membership after installation.

complete, click the Download button, and then click Save and select a location to save the file. Once the download is complete, open the directory and run WindowsDefender.msi.

At the Welcome screen, click Next to begin the installation process. Again, click the Validate button to validate your copy of WinXP. Once validation is complete, read and accept the license agreement by clicking the I Accept The Terms In The License Agreement radio button and click Next.

You can opt to participate in Microsoft's SpyNet community by checkmarking Use Recommended Settings at this time. Microsoft uses the information it collects from its SpyNet users to help improve Windows Defender. Microsoft also makes aggregated user information available to other users with an Advanced SpyNet membership. Microsoft notes that Windows Defender may collect some personal information, but it will not use this information to identify or contact you. If you choose to participate in SpyNet, Windows Defender will provide you with a Basic membership. You can change this to an Advanced membership after installation. (Open Windows Defender, click Tools, and click Microsoft SpyNet.) Both Basic and Advanced memberships are free. If you don't want to participate in SpyNet, checkmark the Install Definition Updates Only box and click Next. Choose whether to use a Complete or Custom setup, click Next again, and click Install.

When installation finishes, leave the Check For Updated Definitions And Run A Quick Scan Now box checked and click Finish to download an updated definition file and run a Quick Scan of your PC.

Let The Battle Begin

After the initial scan, Windows Defender will put you back at the Home screen. From here, you can see the current state of your PC and, at the bottom, you can see a status report including the date and time of the last scan.

The basics. Much like an antivirus program, Windows Defender compares the files it analyzes to a definition file Microsoft updates on a regular basis. If Windows Defender discovers a match, it either performs a preset action or prompts you to choose how to handle the file. Microsoft categorizes spyware into one of five Alert Levels: Severe, High, Medium, Low, and Not Yet Classified.
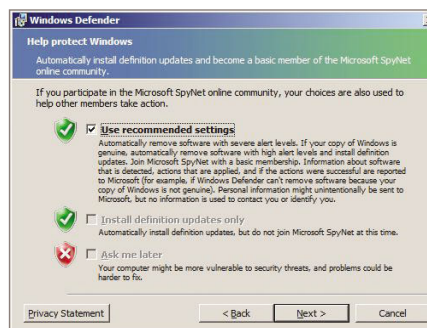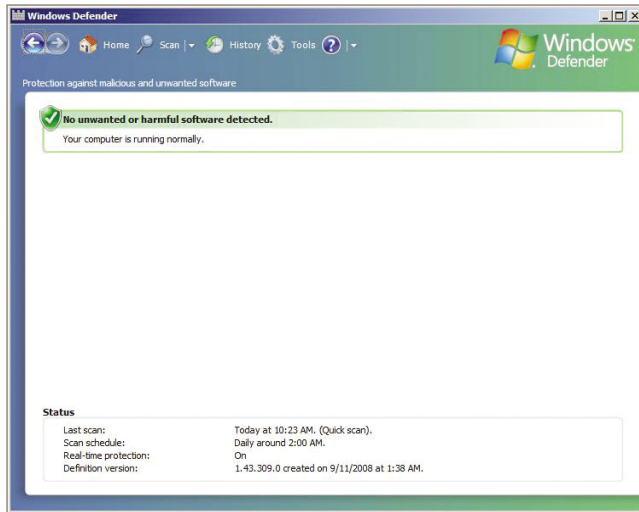
From the Windows Defender Home screen, you can see whether Windows Defender found any suspicious software on your PC as well as the date and time of your last scan and your next scheduled scan.

Spyware is not an easily defined term. Just because a program changes system settings does not mean it's malicious. As a result, Windows Defender may occasionally identify benign programs as spyware. When this occurs, you can opt to Ignore the program for now, in which case Windows Defender will continue to alert you to the program each time it runs a scan, or you can add the program to an Allowed Items list and Windows Defender will no longer monitor the file.

You may also opt to Quarantine or Remove found spyware. Quarantine moves the file to a different directory and prevents it from running until you decide to release it. Remove eliminates found spyware or programs added to your Quarantine list.

Scan time. Windows Defender offers two levels of scanning. Quick Scan only searches folders likely to contain spyware while Full Scan searches the entire hard drive. Your PC may be a bit sluggish during a scan, so Microsoft recommends running Full Scans only when you believe you have a spyware problem.

By default, Windows Defender is set to run a Quick Scan every morning at 2. To change the time or frequency, click Tools followed by Options.

Here you can also set the default actions Windows Defender performs if it finds spyware categorized as High, Medium, or Low. By default, Windows Defender is set to perform the action specified in the definition file. We recommend sticking with the defaults, but you may opt to Ignore, Quarantine, or Remove detected files instead.

Updates. Scanning your computer for spyware on a regular basis doesn't help if you're using outdated definition files. Although Windows Defender downloads new definition files through Windows Update, Microsoft also recommends you set Windows Defender to check for updated definition files before every scan. There should be a check next to Check For Updated Definitions Before Scanning in the Options section. If you prefer to update your definition files manually, click the Down arrow next to the Help icon. Click Check For Updates. Microsoft will notify you if your spyware definitions are more than seven days old.

Defend Yourself

Gone are the days when users could rely on antivirus software to provide all the protection they needed. Antispyware protection is becoming increasingly important, and Windows Defender is one way you can help protect yourself and your PC from unwanted software. ▌

BY CHAD DENTON

Third-Party Software

As we mentioned earlier, a growing number of security suites include an antispyware program along with antivirus and other security tools. The question then becomes whether it's worth it to run Windows Defender if you already have antispyware protection on your PC.

A Microsoft spokesperson notes that some users may see a benefit from running multiple antispyware applications, but at the cost of additional system resources. Furthermore, it's not always clear how great a benefit the user will receive. It depends largely on how each application defines spyware.

Roger Thompson, AVG chief researcher at Grisoft, seconded Microsoft's response, noting that running multiple antispyware applications on the same PC could be a good thing, but only if you can find applications that truly compliment each other. "The simple answer is that it's just not worth it," Thompson said, noting that multiple applications could lead to increased false positives, which only adds to user confusion. According to Thompson, AVG Anti-Virus does not have any conflicts with other antispyware applications, but Thompson still suggests not running AVG alongside other antivirus and antispyware applications.

Symantec was even less enthralled with the idea of running multiple antispyware applications on the same PC. According to Symantec, running multiple applications at the same time can drastically reduce system resources, especially if both applications are scanning your system at the same time.

Our recommendation is to find an antispyware application you like and stick with it. Running a second antispyware application may provide additional protection, but it's almost impossible to know just how much of a benefit that second application provides. It may not be worth the extra system resources to run that second program. ▌

Windows Vista

Basic Photo Tools In Windows Photo Gallery

For all the possibilities that digital photography affords, jumping into this photographic realm isn't as easy as just pushing a shutter button. If you successfully maneuver the often-intimidating process of buying a digicam, you still have to learn to use it. This doesn't mean just mastering a camera's features; it also means learning to transfer photos to a computer, posting images online to share with others, printing shots at home or via an online service, sending photos in email, burning images to DVDs, creating slideshows, and more. And have we mentioned learning to use photo-editing software to enhance your images?

The basic tools to accomplish all the above and more are available in Windows Photo Gallery, which comes free with Windows Vista. We'll detail these tools here, plus projects you can create in Photo Gallery using your photos and videos. Although Photo Gallery's features can't approach those that more-encompassing photo editors contain, it remains a solid, unintimidating resource for new digital photographers to learn the basics.

Photo Gallery automatically saves an original copy of the photo that you can revert back to using the Revert To Original option if you don't like the edits you make to a photo, .

Set The Scene

To start Photo Gallery, click Start and All Programs and select Windows Photo Gallery. Once it opens, you'll see that its window is organized into four sections, including a main Gallery area where thumbnails of the photos on your PC are displayed according to the year taken. Across the window's top are menus and buttons for File, Fix, Info, Print, E-mail, Burn, Make A Movie, and Open, as well as a Search field that can help locate photos based on text you enter.

At the window's left, a navigation tree organizes the thumbnails according to All Pictures And Videos, Recently Imported, Tags, Date Taken, Ratings, and Folders options. On Photo

Gallery's right side, an Info Pane displays data related to a highlighted thumbnail, including the photo's size, resolution, rating (one to five stars), date taken, and tags. (If you don't see the Info Pane, click the Info button.) Tags are labels you give a photo to make locating it later easier. Tagging a group of photos from a recent vacation with "Summer Vacation," for example, lets you pull those photos from your photo library later by clicking the Summer Vacation tag that appears in the navigation tree. The Info Pane also has an Add Caption option to add descriptors to photos.

Toward Photo Gallery's bottom, a magnifying glass button increases or decreases the thumbnails' size in the Gallery using a slider bar. Other options here include a Play Slide Show button, Forward and Back arrows, and buttons to rotate individual photos. Viewing an individual photo in Photo Gallery is as easy as double-clicking its thumbnail. Double-clicking a video's thumbnail plays that clip in Photo Gallery. Clicking the Play Slide Show button resizes a photo that's highlighted to fit the monitor screen and starts a slide show of the photos in Photo Gallery. Within a slide show, a Themes menu contains options to change how photos display and transition with such options as Fade, Pan And Zoom, and Travel. A sprocket-shaped button, meanwhile, has options to alter the transition speed (Slow, Medium, and Fast), shuffle photos, loop the slide show, and mute any audio playing.

Put Photo Gallery To Work

As mentioned, Photo Gallery's tools are fairly limited compared to those in more advanced programs. Still, the basics are here. Better, Photo Gallery puts the majority of its tools within easy reach via the top menu bar. From the File menu, for example, you can add a folder; import images from a camera, scanner, or CD/DVD; and Rename and Delete photos. There's also a Revert To Original option that's handy
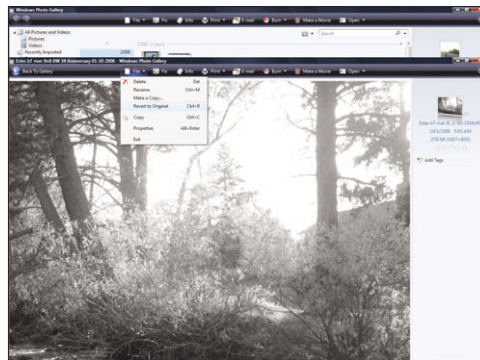
Photos in Photo Gallery display as thumbnails within the program's Gallery section. Viewing an individual photo simply requires double-clicking it.

show, complete with audio added from your music library. DVD Maker's Options link, meanwhile, provides access to a Play Video In A Continuous Loop setting that enables a DVD to automatically play upon inserting it into a DVD player and loop continuously.

Creating a movie with Photo Gallery entails highlighting photos and videos and clicking Make A Movie. This exports the photos and video to Windows Movie Maker, placing them in the program's Storyboard with randomly selected photo transitions. You can change the transitions from Movie Maker's Tasks pane by clicking Transitions and dragging one of the choices to the Storyboard. The Tasks pane also contains effects and the ability to add titles, credits, and audio.

if you edit an image using the tools in the Fix menu (more on these later) but decide later you don't like the changes.

Although Photo Gallery automatically saves edits and displays them in the Gallery, it also saves a copy of the original. Thus, if you crop a photo but decide you prefer the original, Revert To Original returns the photo to its original state. If storage space is tight, configure Photo Gallery to move copies of original photos to the Recycle Bin after a certain period by clicking File, Options, and the General tab and adjusting the Move Originals To Recycle Bin After drop-down menu.

Click Photo Gallery's Print menu and Print and you'll find expected print options, including selecting preset print sizes (wallet, 3- x 5-inch, 8- x 10-inch, etc.); fitting a photo to a frame; and selecting the number of copies to print. If your PC is connected to the Internet, however, the Order Prints option in the Print menu will launch an Online Print Wizard with a list of retailers in your area that process online print orders. After you select a company, the wizard uploads photos you select to the online service and walks you through ordering prints and registering an account if necessary.

Elsewhere, the E-mail button guides you through attaching photos to an Outlook or Outlook Express message and can resize large photos to bandwidth-friendly sizes. The Open menu, meanwhile, lets you open an image in a different program.

Arguably, Photo Gallery's most far-reaching options are Burn and Make A Movie, both of which show off Photo Gallery's integration with other Vista apps. From Burn, you can not only burn photos to a data disc, you can create a Video DVD containing photos; slide shows; and movies using various themes, menu styles, transition speeds, font types, audio, and other choices. Choosing Video DVD exports selected photos to Windows DVD Maker, where you can add additional photos via the Add Items button or by dragging and dropping photos from Photo Gallery to DVD Maker. DVD Maker can also automatically create a slide

The Fix Is In

Perhaps Photo Gallery's greatest shortcoming is its lack of tools for editing photos. What is available you'll find by clicking the Fix menu, including Auto Adjust, Adjust Exposure, Adjust Color, Crop Picture, and Fix Red Eye. Auto Adjust gives Photo Gallery control over an image's exposure and color. If you're not satisfied with the changes, an Undo button is available. Adjust Exposure provides slider bars to alter an image's brightness and contrast, while Adjust Color has sliders to alter color temperature, tint, and saturation. Crop Picture provides both manual and preset options to resize photos. Fix Red Eye, meanwhile, amounts to dragging the mouse cursor on a photo to draw a rectangle around a subject's eye and replacing the red-eye effect a camera's flash creates with a less-distracting gray tint.

Although Photo Gallery is well-suited for quick edits, basic projects, and ordering online prints, you'll likely outgrow the program's abilities eventually. Fortunately, there are plenty of programs to step up to. Google's Picasa (free; picasa.google.com), for example, integrates directly into Google's Blogger service (www.blogger.com) to add photos to a blog. Picasa also integrates into Google's online Web Albums. Other examples of advanced functionality include Adobe's Photoshop Elements 7 ($99; www.adobe.com), which has a Scene Cleaner tool to wipe unwanted elements from photos, and Corel's Paint Shop Pro Photo X2 ($79.99; www.corel.com), which can replace a background in a photo. Ulead's PhotoImpact X3 ($69.99; www.ulead.com) includes a Cloud Pen to add cloud shapes to photos and also packs more than 200 templates to create calendars, cards, etc. with photos. ▌▌
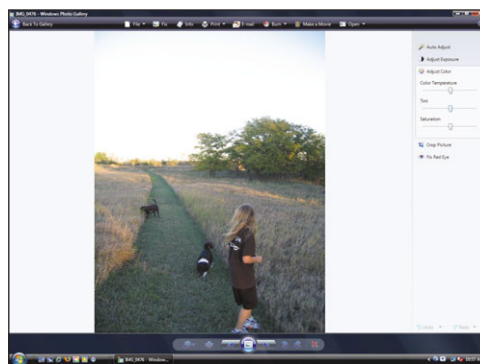
One of Photo Gallery's weakest points is its lack of photo-editing tools, which you access from the Fix menu.

BY BLAINE FLAMIG

The Big Switch

TV Broadcasts Go Digital

You've seen the announcements on TV, the articles in the paper, and the direct mailings from local broadcasters and other television service providers. The end of analog television broadcasts is nigh, and the era of DTV (digital television) is upon us. Although the incessant reminders are enough to make you think the sky is falling, in reality, the transition to all-digital broadcasts will go unnoticed by most viewers. In fact, unless you get all of your television channels using an antenna, there's a good chance you're already watching digital broadcasts, regardless of your television's built-in capabilities. Even if you aren't affected by the Feb. 17, 2009, transition deadline, it is still important to know what's happening, why it's happening, and how to separate hype from fact when it comes to dealing with this move to all-digital broadcasts.

Analog vs. Digital

Since the advent of the TV, over-the-air broadcasts have relied on analog radio waves to transmit audio and video to television antennas throughout the United States. The current rush to convert from this tried-and-true standard to digital broadcasts may seem arbitrary, but there are some very compelling reasons to switch. The most important thing is that digital signals allow for compression, a process that compacts data so that it takes up less space than the original analog signal required. Compression makes it possible to squeeze multiple channels into the same frequency range required by a single analog channel, letting broadcasters transmit more channels simultaneously.

Compression is especially important for HD (high-definition) signals, which contain several times the amount of data contained in an SD (standard-definition) broadcast. Without digital compression, broadcasters can offer only a handful of HD channels. With compression, they can offer dozens, depending on the type of compression that is used.

Better still, digital broadcasts offer superior sound and video quality compared to their analog counterparts. They are not prone to the interference that can create static or ghost images that degrade analog picture quality, and the compression allows for surround-sound audio instead of the 2-channel stereo audio we associate with standard analog broadcasts. Remember when we transitioned from tapes to CDs and VCRs to DVD players? The transition from analog over-the-air broadcasts to digital broadcasts will, in most cases, come with a similar jump in multimedia quality.

Another advantage to digital is that it lets broadcasters piggyback extra information onto the signal. For example, programming information is added that can be displayed on your screen to show you what is currently showing on each channel and what is playing later.

An important thing to understand during this transition is that digital does not equal HDTV. Digital signals can (and will) be used to transmit both standard-definition and high-definition video. While you do need an HDTV to enjoy digital high-definition signals, you don't need an HDTV to view digital standard-definition channels. In fact, most converter boxes (including equipment from the cable and satellite companies) can convert a high-definition signal to a format that an older standard-definition television can display. You won't see the extra detail that was present in the high-definition signal in cases like this, but at least you can still

enjoy watching the channel regardless of what type of television you own.

Don't Panic

Despite the constant, urgent reminders that the big switch is coming, only people who use antennas to pull in over-the-air signals need new equipment. If you watch TV this way and your television lacks an integrated digital tuner, the TV will no longer display over-the-air signals after your local broadcasters make the switch to digital. If your television does have a digital tuner, you won't need to purchase any additional equipment to display the new digital over-the-air signals.

There's no reliable way to tell if your TV is equipped with a digital tuner short of contacting the manufacturer or checking the specifications in the TV's manual to see if that feature is included. Labels on the front of the TV (or in accompanying marketing material) can be misleading, because although they may claim the TV is digital, that doesn't necessarily mean it has a digital tuner. It just means the TV can display digital signals provided by external devices such as certain cable boxes.

If you have a TV with an analog tuner, there are two options. One is to subscribe to cable or satellite service and let the provider take care of the hardware necessary to display digital signals on your TV. In most cases, these services require digital tuner boxes to handle the hundreds of channels and interactive programming they offer, and as soon as one of these devices is connected to your TV, you're all set.

Even if you just want to subscribe to basic cable and not use a box, you're likely to be covered for a while. For example, Cox Communications (www .cox.com) has promised that its customers who use analog TV can plug the cable directly into the back of their televisions for at least the next three years and still receive an analog signal from the company. If you're stuck with an analog television and don't plan to upgrade any time soon, contact your local service providers to see how each of them is handling the transition.

The second option is to purchase a standalone digital converter box, such as the Apex DT250 ($59.99; www.apex digitalinc.com). These devices receive digital signals from the antenna, convert them to analog signals your television can handle, and then transmit those signals to the television.

Digital converter boxes are simple to install and operate, and they are relatively inexpensive. In fact, the U.S. government offers coupons good for $40 off a converter box purchase, which are available at www.dtv2009.gov. Each family is eligible for two coupons, which expire 90 days after they are mailed to you and are only applicable for eligible converters (listed at https://www.ntiadtv.gov/cecb_list.cfm). Converters that have advanced features such as component or HDMI (High-Definition Multimedia Interface) video output (to display HD content) are not covered by this discount.

The Shopping List

When purchasing a converter, look for a model that supports "analog pass-through." Converters that don't have this feature can only pass converted digital broadcasts to your TV, while models with analog pass-through allow both analog and digital broadcasts to reach the TV. Only broadcasters who operate high-power transmitters are being forced to switch to digital. Broadcasters

with low-power transmitters (think local college or public access stations) are exempted from the new rule, and many will continue broadcasting in analog. Unless your converter box supports analog pass-through, these low-power stations will be blocked, meaning you'll lose some local stations.

If your television has S-Video (Separate-Video) inputs, look for a digital converter box such as the aforementioned Apex DT250 that has S-Video output. We'll discuss the various video inputs and outputs in the next section.

Finally, this article only discusses the converter boxes that are eligible for the $40 government-supplied coupon discount. If you have an HDTV that doesn't have a digital tuner and want to enjoy digital HDTV channels from over-the-air stations, you'll need a more expensive converter box that has component video or HDMI outputs that can transmit an HD signal to the television. RF (radio frequency), composite, and S-Video outputs on the less-expensive converter boxes can't handle HD signals and will convert HD channels to standard definition before passing them on to the HDTV.

Install The Box

Most converter boxes have an input port on the back where you connect the antenna cable. Once that's connected, use RF output, composite RCA output, or S-Video output (available only on some models) on the back of
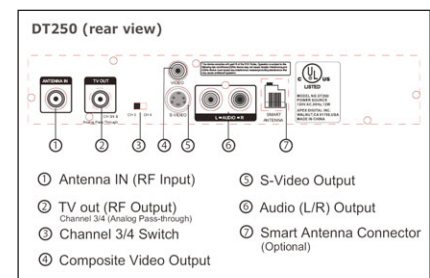
If the back of your converter has an S-Video (Separate-Video) port in addition to other ports (such as this layout found on the Apex DT250), use S-Video if possible.

Go Digital

Wondering how the switch to DTV (digital television) will affect you? It all depends on how you tune into channels right now.

IF YOU HAVE . . .	THEN YOU NEED . . .
Cable	A converter box from the cable company or nothing extra if the cable company still transmits analog signals
Satellite	A converter box from the satellite company (all satellite providers use digital signals)
An antenna	A DTV converter box from a retailer if your TV has an analog tuner and nothing extra if your TV has a digital tuner
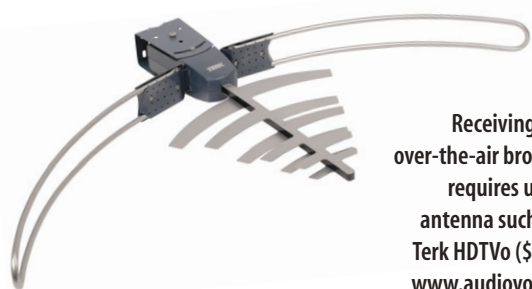
Receiving digital over-the-air broadcasts requires using an antenna such as this Terk HDTVo ($199.99; www.audiovox.com).

the converter box to connect the unit to one of the inputs on the back of the TV. The RF output carries audio and video on the same cable, which is convenient, but image and sound quality suffer because everything is mixed together on the same wire.

You can achieve a step up in audio and video quality using the yellow RCA video jack and the red and white RCA stereo audio jacks to connect to their counterparts on the back of the TV. This connection separates the video signal from the audio signal, providing a slightly sharper picture and slightly crisper audio than the RF output offers.

For best quality, if both the converter box and your TV support it, use an S-Video cable to connect the two devices. This still has separate stereo audio cables like composite connections use but further divides the video signal into color and brightness components so that image clarity is superior to output from a composite video connection.

If you have a VCR, DVD recorder, or similar device, set-up works a little bit differently. Connect everything to the converter box as described above but connect the output cables from the converter to the recording device's input ports. The recording device can stay connected to the TV just the way it already is.

Turn the TV on, select the input the converter box is attached to, and then use the converter box's menu to complete the setup. The converter may ask you to select your television's aspect ratio during this process; select 4:3 if you have an older square television or 16:9 if you have a newer widescreen model. When you're finished, enjoy the program guide, SAP (Separate Audio Program) support, video zooming, and other features the converter box supports that you never had access to with your analog signals.

One final thing to note after setup is that if you want to use the analog pass-through feature, you often must connect an RF cable to the RF output on the back of the converter and then connect the other end of the RF cable to the RF input on the back of the TV. This means the converter is connected to the television using two separate inputs, so you'll need to use the TV's menu to select the RF input when watching analog stations and then switch to the composite or S-Video input (depending on which one you used when installing the converter) to watch digital broadcasts.

The More Things Change . . .

Although the conversion deadline for all broadcasters is Feb. 17, 2009, many broadcasters are completing the switch in 2008. That means if you need a converter box, you should apply for a coupon immediately and install the converter as soon as possible so that if your local broadcasters transition early, you'll be all set to receive the broadcasts. The government is also only supplying a fixed number of $40 discount coupons, which are available on a first-come, first-served basis, so the other benefit of getting your gear ready now is that you can take advantage of the subsidy.

The More They Stay The Same

Perhaps the most important thing to note during this transition is that the switch involves only television broadcasts and has nothing to do with your equipment itself. So, all of the video equipment you've purchased in the past, such as VCRs, DVD players, video game consoles, etc., will work normally when the transition is complete. ▮

DIGITAL TELEVISION

DTV
TUNER

If you see this logo somewhere on your TV or in its documentation, it's a pretty good indicator that your TV has an integrated digital tuner, but you should still double-check with the manufacturer.

BY TRACY BAKER

Still Standing

Replace Your DVD Player With A Standalone DVR

T he VCR programming battle has been over for years. You can't really say anyone was a *winner* in that fight, though outdated technology surely lost. The DVD player did most of the work of ousting the VCR, and the DVR (digital video recorder) helped complete the job. Whether you're just now making the leap to a DVR or adopting a new model, look beyond the standard cable and satellite company offerings. Standalone DVRs, which pioneered the field, today offer a new breed of models that deserve consideration, as well.

DVR Tutorial

Standalone DVRs operate as independent A/V components rather than as additional features bundled with a cable box or satellite receiver or as software packages installed on a multimedia PC. DVRs first emerged as standalone devices in 1999 with the arrival of TiVo (www.tivo.com) and ReplayTV (www.replay.com). TiVo made an immediate impact as "the next big thing" in consumer electronics, providing the ability to pause and rewind live TV (called **timeshifting**) and a groundbreaking EPG (electronic programming guide) for browsing upcoming broadcasts.

In their various evolving forms, DVRs *did* become the next big thing. Cable and satellite providers started offering DVR units as optional add-ons to their receivers and cable boxes, mostly notably avoiding the up-front costs of a hardware purchase. According to a JupiterMedia (www.jupitermedia.com) report from 2004, DVRs integrated with cable and satellite set-top boxes and home computers were expected to make up 80% of the market by 2009. The near-universal availability of cable and satellite DVR services now puts that prediction within reach. Microsoft's continued expansion of Media Center PC features is eating even farther into the standalone DVR market. This isn't just a tale of business woe, however. The current dominance of these other modes notwithstanding, standalone DVRs have a lot to offer.

Rent Or Buy?

The biggest choice in the selection of a DVR is whether to lease from your cable or satellite provider or to purchase one independently. This is at the heart of the question surrounding standalone DVRs: Buying provides permanent ownership plus greater flexibility and control. Renting, on the other hand, offers lower up-front costs as well as less risk from malfunction or obsolescence. Service providers also promote their rental options with guaranteed compatibility, increased simplicity (one device is better than

New versions of PC-based hardware, such as the Hauppauge HD PVR ($249; www.hauppauge.com), offer a third option aside from cable boxes and standalone DVRs.

two), and extra features available only with bundled hardware. For example, only your cable provider can enable your DVR programming guide to request and record on-demand or pay-per-view offerings with a single click.

Buying your own DVR has its advantages, however. For one, you'll have more choice about features and hardware. Service provider options usually come with a few capacity options and little or no flexibility as to hardware, connectivity alternatives, or EPG. Buying a unit also means you can switch providers without losing your DVR or having to buy new hardware. Finally, standalone DVRs are much easier to upgrade when you need additional hard drive capacity or want a new EPG version. There isn't a single correct answer to this dilemma, but you should at least consider both options generally (and in their specific offerings) instead of blindly locking yourself into a lease and higher fees from the cable company.

DVR Options

One great thing about standalone DVRs is the choice they offer. Current models provide plenty of optional features and diverse choices that allow you to tailor your device precisely to your needs. We'll highlight some of the more important choices.

DVD recorder. Combining a DVD Recorder and a standalone DVR is a great way to increase recording capacity and combine digital content sources. When your hard drive fills up, or when you want to archive recordings for long-term safekeeping, just burn them to DVD. Some models with DVR and DVD recording functionality, such as the Philips DVDR3576H/37 ($329.99; www.philips.com), also provide upconverting that renders standard-definition content (from DVDs or DVR television source materials) in HD format for 720p, 1080i, or 1080p screens. On the same principle that service providers use to promote leased DVRs bundled with set top boxes, DVR-DVD combinations take care of two important

Philips' latest DVD/DVR combination, the DVDR3576H/37, combines an upconverting DVD player, a multiformat DVD recorder, and a 160GB hard drive.

functions in one box, reducing clutter and complexity. Moreover, it's a better synergy—the DVD combination increases capacity *and* flexibility over the integrated provider combo.

Dual tuner. The number of TV tuners in a DVR is an important measure of flexibility in watching and recording different things at the same time. With just one tuner, the most common configuration, you can watch and record one live show at a time or watch one saved show while recording another one live. With two tuners, on the other hand, you can watch one show live and record an entirely different show at the same time or record two different channels simultaneously while watching a previously recorded program.

EPG. Every DVR, standalone or bundled, has some sort of EPG. Convenient on-screen programming guides, with constantly updated broadcast schedules, are what really distinguish DVR recording capabilities from the bad old days of VCR programming. Because EPGs are all about convenience, however, you have to be mindful of choosing a model with a user-friendly EPG. TiVo's EPG sets the standard for intuitive and robust navigation. Make sure that any model you're considering can download television schedules customized to your provider, lets you search upcoming broadcasts using a variety of criteria, and offers the ability to record shows *en masse* from a given title, actor, or genre. Pay attention to more than just an EPG's television listings, though. How you browse, search, and navigate recordings already stored on the drive is an equally important part of EPG functionality. Assessing an EPG isn't as easy as reading a spec sheet—you'll have to do some research. Many big box retail stores have models set up that you can

explore, and lots of online reviews break down EPG screens and offerings, often complete with screen shots.

High-definition recording and playback. If you're taking part in the imminent switch to digital broadcasts and rapidly proliferating HD offerings, get a DVR with HD recording and playback. Even if you're holding out on an HDTV, a DVR that supports HD formats will future-proof your purchase while providing lots of extra capacity (you can still record at SD resolutions). Also make sure your DVR's digital capabilities encompass audio as well as video. Both DVD and HD content include support for multichannel surround sound audio, and you don't want your DVR stripping out those digital soundtracks and surround sound processing.

Web and networking options. In addition to saving and serving up television programming, many modern DVRs act as *de facto* media hubs for networked homes and Internet-connected entertainment centers. With a wired or wireless connection, many models can stream video and audio from PCs across a home network. TiVo's HD models also include online content options, including video downloads from Amazon and a nearly endless stream of music from Rhapsody.

In the end, your cable or satellite provider may make an offer you can't refuse. If you're serious about recording live television, though, consider the benefits of a standalone DVR. The convenience of integrated hardware and the economy of avoiding upfront costs may not outweigh the ability to switch between (or combine) television providers and greater control over your hardware and software. ▌

BY GREGORY ANDERSON

Readers' Tips

Compiled by Joy Martin

Many of our readers come across fast, easy ways to solve a problem or accomplish a task. Well, we'd like to hear about it! If you have a great tip you'd like to share, email us at readerstips@smart computing.com. If we print your tip, we'll send you a free *Smart Computing* T-shirt. You'll be the envy of all (well, some) of your friends.

Please include your first name, last name, and address, so that we can give you credit if we print your tip. (And so that we can send your T-shirt to you, of course.) Please limit your tip to 200 words or fewer. Not all tips received will be printed, and tips may be edited for length and clarity.

Short & Simple Tips To Make Things Easier

Test Out Your Outlook Stationery

Browsing again in the June issue of *Smart Computing*, an article ("Windows XP: Outlook Express Stationery") caught my attention. Part of the article reads as follows: "At this point, you should test your outgoing messages to see if the stationery appears correctly in another Inbox. Send your mail with the appropriate stationery to a standard email address. If you have a second email account, you can send the message to yourself or send it to a friend who also has Outlook Express, so you're able to verify what you sent."

It occurs to me that the following method is much easier: Enter your own name and email address to your address book. Having done that, you can email yourself and get the answer quickly, and you don't have to depend on others. It works well; I have used this method for many years.

Jan V., Bothell, Wash.

Resize Vista Icons

Here's a quick way to change the size of icons in Windows Vista. While on the Desktop, simply hold down the CTRL key and use the scroll wheel on your mouse to make icons smaller or larger.

Ralph F., Beverly, Mass.

Keep Your LCD Dust-Free

A number of ways to clean LCD screens are occasionally mentioned in *Smart Computing*, as well as how to avoid damaging the screen. There is a very simple, safe, and economical way to remove the dust from a screen:

Use a foam paint brush. These are soft, cost less than a dollar, and work very well.

Walter B., Prescott, Ariz.

Remove Hardware Without Worry

Safely Remove Hardware is a safety measure I tend to forget. One advantage of doing this practice, especially for USB flash drive users, is to avoid pulling out the device before saving a copy of a document you're working on. So, you're better off clicking that Safely Remove Hardware icon at the bottom right of the Systems Tray to avoid any PC disasters in the future.

Che B., Mesa, Ariz.

Keep Track Of Users Manuals

When I purchase a new item, I go online and find the users manual and save it in a file called Manuals. This way, I do not have to look for paper copies, and the manual is easy to find on my computer.

Myles D., Sun City, Ariz.

Create Multiple Home Pages In Internet Explorer 7

When IE7 opens, you can have two or more home pages displayed on separate tabs instead of manually opening your most commonly used Web sites. In IE7, click a new tab. Go to the site that you would like to have as a second home page. Left-click the Address bar to highlight the URL and then right-click and select Copy. Click Tools, Internet Options, and the General tab. Under the Home Page section, place your cursor at the end of your current home page and press ENTER. On the new line, right-click and select Paste. Click Apply and then OK. Now, when you open IE7, both sites will appear in separate tabs.

Thomas O., Taylor, Mich.

Cutting Virtual Calories

Most of us feel like we could stand to drop a little extra weight. As it turns out, our computers could, too. Applications almost all have extra code and features you don't need. A great example is that many programs are available in multiple languages. Most of us never notice because, often, the default language is English, and we don't change it during installation if given the option. It's wise for developers to include multiple languages in an application's code, as it enables them to distribute their software to many different countries and people groups. However, most of us will need one language per program; the others are just filling up our hard drives.

A program called Xslimmer (free to try, $12.95 to buy; www.xslimmer.com) targets unnecessary code in applications and gives you the ability to slim many of them down, thereby granting you more hard drive space and lightening the application. Your computer will run faster and become more efficient, just like we do when we shed excess weight.

Xslimmer

You can acquire Xslimmer from its Web site. Download a demo version to try out, and if you like it, you can purchase a license. Either way, once you download the program, double-click the .DMG file to install it, agree to the End-User License Agreement, and drag it to the Applications folder. When you're ready to put some apps on a diet, launch Xslimmer.

To use Xslimmer, just click and drag an application's icon to the Xslimmer window. Click Info to see important information about that particular program, including the size before and after "slimming," as well as how many languages it contains. If you decide to trim the program down a bit, select the bloated application in question and click Slim.
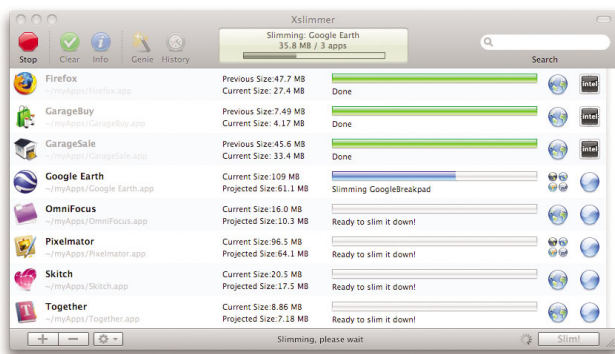
Xslimmer is very easy to use; just drag, drop, and "slim."

If you want to slim all your apps at once, click Genie in the Xslimmer window. You may have to wait awhile for the whole list to be populated. Click Slim. Note that although this is a convenient way to take care of all your bloated applications in one fell swoop, it's a bit risky; if there are errors with too many programs, you could find yourself in trouble. Use this feature at your own risk.

Set Your Preferences

Before you start hacking away at every program, set your preferences. This helps you prevent errors and customize the experience so Xslimmer does exactly what you want. To get to Preferences, click Xslimmer and then Preferences.

Among the preferences, you can click Blacklist to set how often the program checks for updated blacklists. A program on the blacklist is one that Xslimmer won't mess with because slimming it may cause problems. This list is continuously updated, and you can set how often the program checks for updates. You can also make an Excluded list, where you can drag any applications that you don't want Xslimmer to touch.

You can set your preferred languages, too (so you'll not slim out your chosen language). Click Advanced to choose if you want to slim architectures, languages, or both.

Reservations

I understand; you're worried that if some program weeds out code, your apps may have problems. Not to worry—Xslimmer's developers thought of that. In addition to being able to back up your apps before slimming, you can view your history and undo a slim. Click General in the Preferences window to set to where your applications will be backed up. Click History in the Xslimmer window to see your history.

If you do encounter a problem with slimming a particular application that wasn't on Xslimmer's blacklist, simply restore it from your History, add it to your Exclude list, and contact Xslimmer so it can put the program on the Blacklist.

If you're one of the many computer users who's always battling for better performance and more hard drive space, this is a very handy application. Besides, your computer could stand to lose a little weight anyway, right? ▌▌

Web Tips
Enhance Your Time Online

Track Your Fuel Economy

Problem: I love to figure out my car's fuel efficiency, and I'm looking for something that can show me trend analysis and ways to save on gas.

Solution: Figuring out your car's MPG is easy, but for those folks who are obsessed with fuel efficiency, Fuelly (www.fuelly.com) is a must-visit site. When you create a free account, you first enter information about your vehicle (you can enter multiple cars if you wish). Then every time you fill up, enter the essential data (odometer reading, gallons, and price per gallon). This information can also be entered on your Web-capable cell phone at m.fuelly.com. The more fuel-ups you enter, the more the site can track your car's fuel performance. Additionally you can compare your
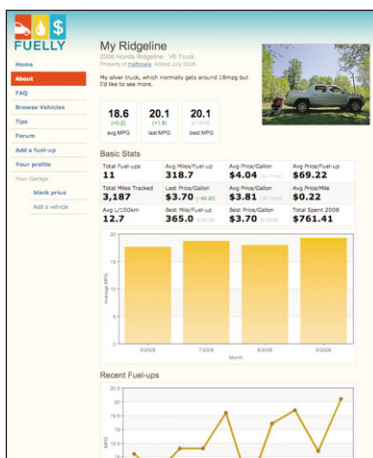
Detailed statistics of your car's fuel economy can help you notice and modify bad driving trends.

car's stats to other users on the site.

Find Quality Flights

Problem: I've always used the Internet to find the cheapest fares when I fly, but some of these cheap flights feel less than third rate.

Solution: Most of the big travel sites have gotten very good at finding the best price for a flight. And while you can usually sort your results by some other factors, such as number of connections, a new site has decided to take a different approach. InsideTrip (www.insidetrip.com) claims to offer "intelligent travel choices," which translates into its customizable quality ratings. Each flight is rated by speed (number of stops, duration, on-time stats, security wait time), comfort (legroom, aircraft type, aircraft age, historical load factor), and ease (connect time, routing quality, lost bags rank, gate location). Any of these factors can be toggled on or off to match your preferences and interests.

Web Button Maker Made Easy

Problem: I would love to make some buttons for my Web site, but

my Photoshop chops aren't what they should be.

Solution: Here's a flash-based button maker that takes all of the hard work out of the process. Go to As Button Generator (jirox.net/As ButtonGen), and follow the six steps in the tab palettes at the bottom. There is a lot you can customize, including adding a picture to the button and adding your own text. Hit the Save button to download your button as a PNG (Portable Network Graphics) file. Then it's ready for you to place in your Web design.

Create Custom Maps

Problem: I'd like to make a map of the points of interest where I live for friends from out of town who come to visit.

Solution: Web-based maps like Google maps and Microsoft Virtual Earth have changed the way we look at and use maps. However, there is more to maps than simply driving directions. Let's say you want to plot points of interest, color code certain neighborhoods, share multiple jogging routes, or show a certain mile radius around your house. The site you want is UMapper (www.umapper.com), which boasts a free

Web-based map authoring application. Users can draw shapes, lines, and points on a layer over a map provided by Google, Microsoft Virtual Earth, or OpenStreet. If you don't know where to start, you can click Explore and see the maps that other users have created—there are over 3,500 so far, everything from the 30 greatest battles of WWII to world capital cities.

For folks who value more than the cheapest flight, here is a site that tracks numerous quality factors and rates them with easy-to-read numbers and symbols.

Background Pattern Maker

Problem: I'm looking for an interesting background pattern for my mobile phone, but the patterns I've found don't suit my style.

Solution: Whether you are looking for a seamless tiling background for your phone, Desktop, or blog, browse through the collection of patterns at Pattern Cooler (www.patterncooler.com). In addition to the roughly 70 designs already set on the site, you can customize your own look by changing the colors and pattern repeat size. These modifications are saved for everyone to see, and as of this writing, there are over 19,000 designs for you to browse. ❚❚

Compiled by Kris Glaser
Illustrated by Amber Edwards

Celebrate
The Holidays
On The 'Net

My Create-A-Book Publishing

www.mycreateabook.com

If you have a child on your holiday gift list, you're no doubt wondering which gift will bring a smile to his face. Why not give a book that's all about him? On this site, you can have a book custom-made for your child, with his or her name right in the story. To place an order, browse the books and choose which story you'd like your child to be a part of. Next, provide a few details about your child, such as his name, age, and gender, and then click Order Book. Books are $12.97 and can be gift-wrapped for an additional $3.

The Cheesecake Factory

www.thecheesecakefactory.com

The holidays are a time for sweet treats. This year, give someone you love a unique treat from The Cheesecake Factory. Choose from several cheesecake flavors such as Key Lime, Oreo, Chocolate Chip Cookie Dough, Tiramisu, and Snickers. You can have your gift sent directly to your special someone, or, if they live near a Cheesecake Factory restaurant, you can send them a gift card in denominations of $10, $25, $50, or any amount up to $500.

Shopping.com

www.shopping.com

Lighten the blow of holiday bills by shopping around for the best prices. But instead of driving from store to store or visiting countless Web sites to find the best deals, point your browser to this site. When you search for a product, Shopping.com will create a list of places your product is available and compare prices. You can search by entering the name of a product or type of product into the Search field or by selecting from categories such as Home, Computers, Electronics, or Shoes.

Buzzillions.com

www.buzzillions.com

Your son and daughter-in-law would love a new digital camera for the holidays, and you'd love to give it to them so they can keep you up-to-date with all the pictures they'll take of your grandkids. But which camera should you choose? This site gives you valuable buying advice in the form of reviews that are written by people just like you. Buzzillions.com rates the product on a scale of one to five stars based on its reviews and helps you make confident, well-informed purchases. Buzzillions.com also recommends places to buy products and lists the varying prices at each location.

PersonalizationMall.com

www.personalizationmall.com

It's always a struggle to find the perfect gift. For something unique, visit this site, where you can personalize almost anything. Put your best friend's name on a T-shirt, jewelry, or a blanket or your pet's picture on a mouse pad or coffee mug. You can search for gifts by occasion, recipient, or price. Choose a gift and fill in the personalized message to create a one-of-a-kind gift that your special someone won't soon forget.

Pawprints Across Your Heart

www.giftsforpaws.com

If you like to spoil your pet more than usual around the holidays, you can visit this site to find something special. Browse the site by cats, dogs, breed, or clearance items. Products range from pet food and pet snacks to toys and grooming supplies. Pamper your puppy or kitten with a new pet bed or catnip toys. You can also purchase gifts for the pet-lover in your life, such as key chains, photo frames, and books. Or, get them a gift certificate to use on the site.

Bytes 'n Grins

www.bytesngrins.com

If you're looking for a gift for the geek, teacher, or school bus driver in your life, take some time to browse this site. You'll find dozens of gifts made just for teachers and electronics enthusiasts. You can search categories such as Stocking Stuffers or Cubicle Companions by clicking the Products link on the main page and then selecting a product category from the menu on the left. Or, use the site's Fast Search feature. Simply type a keyword in the Search field, press ENTER, and browse the list of results in the Bytes 'n Grins Yahoo! store. Products include T-shirts, jewelry, treats, Christmas ornaments, and gifts for babies and pets.

That's News To You

Finding the appropriate online group to match your interests can be a monumental task. So each month, we scour the Internet to bring you the friendliest forums and most interesting bloggers the Web has to offer. This month, we show you how you can give thoughtful, homemade gifts for the holidays.

Homemade By Jill

www.homemadebyjill
.blogspot.com

The holidays are the perfect time to create fun crafts to give as gifts. After all, there's nothing more special than receiving a gift made by someone you love. If you need a little inspiration to create your own gifts, check out Homemade By Jill, a blog about craft projects, crocheting, and other handmade items. At Homemade By Jill, December brings about several ways to make thoughtful gifts out of just about anything. Gather ideas from Jill's showcase of crafts and try them out for yourself. Some of Jill's crafts include scarves, holiday decorations, ornaments, baked goods, and more. To make creating crafts even easier, Jill provides her readers with links to other crafting sites where you will find tutorials and patterns.

Share The Wares

Some of the best apples in the online orchard are the free (or free to try) programs available for download. Each month, we feature highlights from our pickings. This month, we share some fun holiday screen savers for your computer and show you what to do with all your holiday photographs.

Christmas Screensavers

www.christmasscreensavers.net

This time of year, you decorate your home with holiday cheer. You may hang lights from the roof or a wreath on the door, so why not decorate your computer, too? This site has dozens of fun holiday-inspired screen savers that will get you in the holiday spirit. You can choose from several Christmas themes, such as Christmas Scenes, Angels, Christmas Fairies, and Christmas Kittens. The site also links you to several other screen savers that you can enjoy year-round, such as pets, movies, nature, and holidays. When you find a screen saver you like, click the link and on the following page, click the Download button. After you've downloaded and installed your screen saver, in Windows Visa, right-click the Desktop and choose Personalize. Under the Screen Saver drop-down menu, select your screen saver and click Apply and OK.

Picasa

picasa.google.com

It's not surprising that you've been snapping pictures throughout the holiday season. But what is surprising is the way you've downloaded them to your computer's hard drive, letting them get lost in the jumble of folders never to be seen again. Why not share your holiday memories with the rest of your family and friends? With Picasa, you can organize and edit your photos; create movies, slideshows, and collages; and then share them online. Editing tools include cropping, color tuning, adding text, and various effects. To download Picasa 3 (in beta at press time), point your browser to picasa.google.com. Click Download Picasa 3 on the right and then save the file to your hard drive and start the installation process. Follow any on-screen instructions, and when the installation is complete, restart your computer. ∎
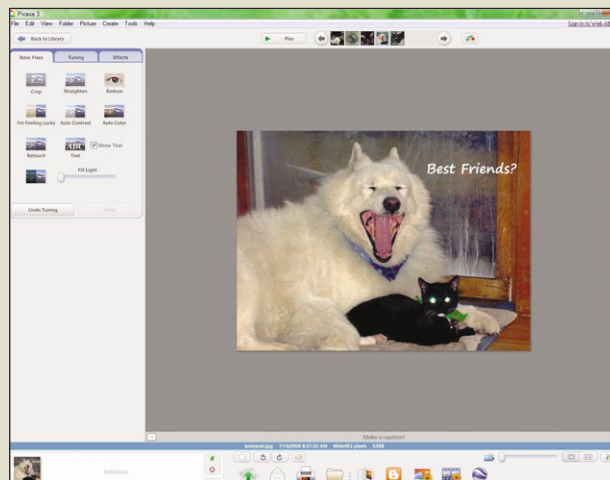
Instead of letting photos get lost on your hard drive, use Picasa to share all your holiday photos with family and friends.

Develop Wealthy Habits

Use Yahoo! Finance For Money Management

Most people have a financial plan—some plans are more ideal than others. If you've been telling yourself that you need to get your finances in order (maybe for quite some time), then you should continue reading. While you may be familiar with many of the features Yahoo! offers, the Finance section might not be saved in your Favorites folder yet.

If you're not a member of Yahoo!, be sure to open a free account. Not only will you be able to access Yahoo! Mail and My Yahoo!, but you'll also have the opportunity to take advantage of every facet of Yahoo! Finance. To register, go to the Yahoo! home page (www.yahoo.com), click Sign Up, fill out the required information fields, and select Create My Account.

Establish Investments

Each time you open Yahoo! Finance (via Yahoo!'s home page or finance.yahoo.com), you'll immediately view the Home tab. You can use this area as a quick guide to recent commerce and world finance news. The Market Summary box tracks the latest stock headlines. Hover your mouse pointer over a specific index to see its real-time fluctuation. To edit these market summary quotes, click Customize Summary. (You'll need to log in with your Yahoo! ID to make changes.) Choose up to nine U.S. market quotes for which you would like to see frequent updates. Click Finished to save your selections.

You'll find more market news when you scroll down to Market Movers on the Home tab. This is where five newsworthy stocks are posted for your convenience. For more bank-breaking statistics, click one of the following categories in the Market Movers box: Most Active, Most Price % Change, Industries On The Move, and Unusual Trading Volume. If you want to watch market news unfold as events occur throughout daily sessions, click the Investing tab at the top of the page and peruse the summaries included in the Market Update. We'll expound more on this tab later.

If you're anxiously watching the value of the U.S. dollar, be sure to check the Currencies box on the Home tab. By clicking View More Currencies, you can convert the dollar into any currency available in the drop-down menu, located in the I Want To Convert box. Additionally, the Major Currency Cross Rates chart provides information on rate changes of prominent currencies.

Back on the Home tab, check out the Expert Opinion section. It features practical articles from money gurus such as Suze Orman, Harold Maass, and Ben Stein. Below that is another news category, Special Features, where you can glean more information from pieces that touch on everything from loan rates to online banking to purchasing a home. Don't overlook the Top Stories and Videos sections for current events in the financial world.

Make The Most Of What You Have

As most know, diversifying your assets is one of the tried and true ways to maintain security as you expand your financial résumé. There are many options to consider, some of them being stocks, mutual funds, and bonds. The Investing tab organizes data into these and other categories for your convenience, making this an ideal way for a seasoned investor or even the novice shareholder to keep up on quotes, rates, reports, and filings. Specifically, this tab highlights the following subcategories: Market Overview, Market Stats, Stocks, Mutual Funds, ETFs, Bonds, Options, Industries, Currency, and Education. To reach a subcategory, hover your cursor over Investing, and then choose the subcategory from the list that appears.

Each subcategory not only offers extensive up-to-date data but also serves to educate you about both the basic and advanced facets of your investments. The ETF (Exchange-Traded Funds) Center is primarily organized by top-performing ETFs and ETF education. You can view ETFs by the largest price gain or highest volume. After clicking the ETF Education link, beginners will likely discover the answers to common questions in How ETFs Work, ETF Liquidity Myth Dispelled, or Frequently Asked Questions About ETFs.

If you're ready to gain a better understanding of Mutual Funds, click the Mutual Funds subcategory on the Investing Tab. Next, use one of the Highlighted Tools to start searching for the best-performing funds or find a

prospectus for a U.S. mutual fund. Use the new Interactive Guide to get a crash course on how to monitor your funds. If you prefer watching video tutorials, click Interactive Videos to learn about concepts and fund research approaches.

You'll also find useful informational tools in the blue left-hand menu on the main Investing page. Under Market Coverage, click Tech Stocks for a briefing on companies such as Apple, Google, and Nokia. The Short Stories section is a roundup of noteworthy activity involving upgrades, downgrades, cuts, etc. You can check critical market schedules with the sections listed in Market Events. These include the Earnings Calendar, Economic Calendar, Splits Calendar, IPO (Initial Public Offering) Calendar, and more. Use the Market Statistics section to observe international market development.

Past, Present & Future

Our individual financial obligations are undoubtedly at the top of our priorities list. Yahoo! Finance features a Personal Finance tab to help young and old alike figure out how to save, spend, and take care of monetary responsibilities.

Some of the most convenient resources in Personal Finance are the How-To Guides. Click the How-To Guide box on the main Personal Finance page (featuring multiple bullet points) to access the full directory. Here you can select from numerous topics, divided into the following categories: Banking & Budgeting, Career & Work, College & Education, Family & Home, Insurance, Loans, Real Estate, Retirement, and Taxes. If you need to create a budget, click Starting Out: Begin Funding For Your Financial Security or Managing Debt And Credit. The Family & Home section provides pointers on How To Finance Your Wedding, Buying A New Or Used Car, or Budgeting For Baby. Retirement and Taxes feature the most

How-To articles, so be sure to take advantage of advice for your golden years and tax strategies.

Yahoo! Finance classifies the Personal Finance subcategories in the same way the How-To Guides are divided. (Find

The Yahoo! Finance home tab is the hub for market figures, investing ideas, and news blurbs.

the subcategories on the left side of the Personal Finance main page or by hovering your cursor over the Personal Finance tab.) Clicking on a section, such as Career & Work, for instance, will open a new page and display subcategories including Leadership, Salary & Negotiation, Self-Employment, and Work/Life Balance.

For those who need to brush up on financial vocabulary, the Glossary,

under Tools in the blue box on the left side of the main Personal Finance page, provides a dictionary of must-know words, acronyms, and concepts. You can also search for mortgage, home equity, savings, auto, and credit card rates in your area in the Rates section (also beneath Tools).

Create A Customized Portfolio

Portfolios can be useful for monitoring specific branches of your fiscal plan. To start your own Yahoo! Finance Portfolio, move your cursor to My Portfolios and click New Portfolio from the menu that appears. If you're signed out of Yahoo!, click Sign In To Create/Edit My Portfolios on the My Portfolios tab. Next, choose from the following options: Track A Symbol Watch List, Track Your Transaction History, or Track your Current Holdings. If you need to keep an eye on market purchasing patterns, click Track Your Transaction History and follow the two steps outlined in the next window, and then click Continue. On the Create Security Transaction For [*Your Portfolio Name*] page, enter the required info so Yahoo! Finance can update you on the activity of a particular stock. Lastly, click Save or Save And Create Another. When you want to access your portfolios, simply choose the appropriate one on the My Portfolios tab.

Focus On The Here & Now

You might be opening a savings account for the first time. Maybe you've just landed your first job out of college and want to prepare for your retirement. Or, maybe you want to figure out how inflation is going to impact you. No matter where you are in your financial timeline, Yahoo! Finance is with you, providing practical resources to get your investments in line. ▌▌

BY JOANNA SAFFORD

Mr. M.'s Year-End Ruminations

As fall turns to winter and my backyard temperatures plummet into the sub-70s, it's time to don my fleece-lined Hawaiian shirt, throw a biodegradable, non-polluting, environmentally friendly "green" log in the fireplace, and settle in for the holidays.

In this, my eagerly anticipated, annual year-end column, I'm going to once again clear my mental Desktop—a cerebral reboot, if you will, and share with you a few of my impressions, depressions, and intrusive thoughts from the past year:

I appreciate Microsoft for the many contributions it has made to personal computing through the years, but when I use Vista, I feel as if I'm trying to force a square peg into a round hole. I've tried to warm up to it, but deep inside, my little inner nerd keeps whispering to me, "Admit it: You like XP better!" I'm hoping a change in meds will make the voices stop.

I have a feeling that when nobody is looking, Bill Gates breaks into a happy dance because he's so tickled not to be in CEO Stephen Ballmer's shoes. I wonder if, when they cross paths, Bill says, "Stevie, you're doing a heck of a job."

Apple computers are works of art, but why so expensive? Software, too. Maybe if the Apple stores weren't so fancy-shmancy, prices would be lower. Do you think Steve Jobs has ever been to Costco?

If I want to move a file somewhere for safekeeping, I send it to myself at one of my Gmail addresses. It's fast, free, and a perfect off-site storage solution for smaller files.

I really like Linux, the Ubuntu distribution, in particular. It's easy to use and a viable alternative to Windows and Macs. All software is free, and it feels kind of dangerous and decadent, in a bad-boy, "born-to-be-mild" kind of way, not to need antivirus or antispyware software.

Call me a glutton for punishment, but I'm looking forward to Windows 7. When it's released, however, I will not be standing in line at midnight at my local Best Buy to get it.

It annoys me greatly that computer manufacturers load up new computers with software without consulting the purchaser. Why do most purchasers accept that without squawking? I believe when you buy a new computer, you should get what you want, not what somebody else wants you to have.

What is confusing about not forwarding email that contains a request to forward it to everybody you know? If everyone grasped this simple concept, blammo: No more hoaxes, scams, and other e-nonsense cluttering up our inboxes.

Burning CDs and DVDs needs to be easier. It shouldn't require any more fuss than copying a file.

When it comes to little-known but highly effective antivirus software, the free Moon Secure, beta version (tinyurl.com/6yaqcv), is one of the best yet-to-be-discovered applications.

Windows Defender was created to protect us against Windows' vulnerabilities. That being the case, isn't the message we're receiving, "Buy our product—oh, and here's another product you'll need to protect yourself against what we know is wrong with the first product?"

I can't decide if I'm more chagrined by the price of printer ink or gasoline. I recently purchased 1.42 ounces of black ink for $29.97. That works out to more than $2,700 per gallon or about $110,000 per barrel. Maybe we need to drill for ink.

Social networking Web sites do nothing for me. MySpace, Facebook, Plaxo, who cares? All things considered, I'd rather have a root canal.

I'm continually amazed at the number of people who believe that using a credit card online is unsafe. These are often the same people who don't think twice about purchasing merchandise by telephone from the Bangalore Boutique.

When personal computers arrived on the scene in the early 1980s, we were sold on the concept that a PC would allow us to either earn more money through greater productivity, or—the choice was ours—we could opt for more leisure time. Perhaps that's just taking a little longer than anticipated.

If I were marooned on a desert island, I'd want my iPod, the Amazon Kindle, and a rescue ship on the horizon. If I were maroon on a desert island, I'd want my sunblock.

Coming up next month, we'll be starting off 2009 with my critically acclaimed, annual "Best Of The Web" column, so I'll meet you back here in January, and we'll start the year off right. Wishing you Happy Holidays from the McModem clan! ❚❚

BY Mr. Modem

Mr. Modem (Richard Sherman) *is an author, syndicated columnist, radio host, and publisher. "Mr. Modem's Weekly Newsletter" provides personal responses to subscribers' computer and Internet questions, plus weekly computing tips, Web site recommendations, virus alerts, hoax warnings, and more. For additional information, visit* **www.MrModem.com**.

Manufacturer Index

Technology can be a wonderful thing. But what happens when your computer, router, or software program goes on the fritz? How are you going to fix it? Better yet, *who* can you contact to fix it? When you need to contact a manufacturer for tech support but can't find its information, look no further. SmartComputing.com's Tech Support Center provides a list of manufacturers from D-Link and Netgear to Dell and Xerox.

1. Go to www.smartcomputing.com and click the Tech Support Center link.

2. Scroll down to the bottom of the page and click the Manufacturer Tech Support Index link under the Other Helpful Tech Support Tools section.

3. Manufacturers are listed alphabetically, so you can find contact information quickly and easily. We provide each manufacturer's Web site address to make finding answers simple. Customer service phone numbers and company addresses are also listed.
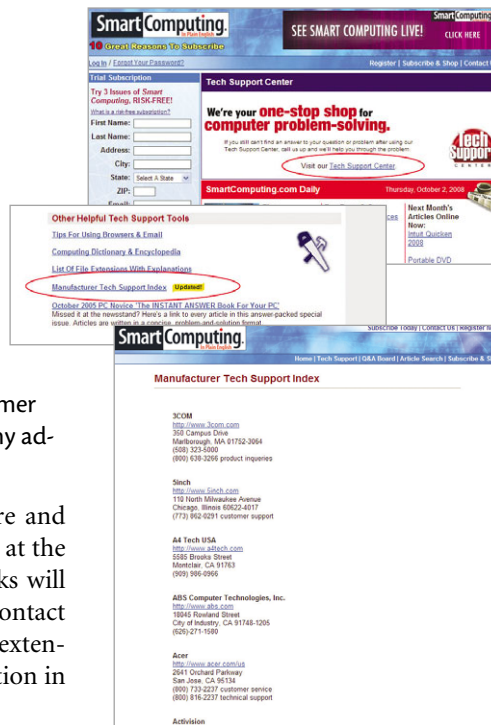
Be sure to check out the hardware and software vendor contact information at the bottom of the page, as well. The links will connect you to Microsoft's vendor contact information lists. The lists are quite extensive and contain a wealth of information in one easy-to-navigate location.

The next time your router goes haywire or your software isn't working properly, check out the Manufacturer Tech Support Index, contact the manufacturer directly, and get the answers you're looking for today.

Decipher That Error

Few things are more frustrating than an error message that does little to tell you what the actual problem is. Visit the Error Messages section of our Tech Support Center to find a link to our list of error messages and articles that provide tips for sorting through your latest message.
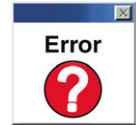
Install Away

Adding hardware and software to your computer enhances your computing experience, but it can also bring problems. Check out the Articles On How To Install . . . Just About Everything section of our Tech Support Center for helpful guides.

Safe & Secure

Security should be a priority for all computer users. Check out the Security & Privacy section of our Tech Support Center for tips on staying safe.

Smart Computing's Fun Site Of The Day (Oct. 9, 2008)

Reverse Dictionary

Unless you have the wordsmith skills of Charles Dickens or Lewis Carroll, you know how difficult it can sometimes be to think of the right word to express exactly what you want to communicate. We can turn to the dictionary or thesaurus for help, but sometimes the answers aren't easy to find. This site gives you an option you might not find anywhere else. At the Reverse Dictionary, describe a concept and then you'll see a list of words and phrases related to that concept. Your description can be a few words, a sentence, a question, or even a single word. Once you type in the word or phrase, click the Find Words button, and your answers come up.

www.onelook.com/reverse-dictionary.shtml

Recording Family History
Record, Capture, Edit, Distribute, Repeat

You know the drill: The baby's trying to say his first words, or your niece is demonstrating her newly acquired juggling skills, or your grandkids are opening their holiday gifts, and you want to capture the moment. You need a digital camcorder.

But you also want to transfer the video to your PC, edit the video (and maybe add some cool transitions and effects of your own, such as a star wipe or a black-and-white effect), and send it out to the whole family, as well as your friends. You need a lot more than just a camcorder.

There are many options available for capturing every moment of the holidays on video, from digital camcorders to video-capture devices to DVD burners.

Digital Camcorders

When you want to catch all the family quirks and precious moments of your family get-togethers, a digital camcorder is the best place to start. Digital camcorders come in a variety of flavors, the primary difference between devices being the type of recording media a particular camcorder employs.

Some features you may want to look for include 16:9 shooting modes, which will let you display your video in what amounts to widescreen mode, and a microphone jack. Using an external microphone both cuts down on incidental camera noise and generally offers better audio quality because you can play with microphone placement. A long optical zoom with image stabilization is handy for catching memories at a safe distance, such as when the kids are careening down a hill on a sled.

Many digital camcorders feature the ability to store still images on an SD (Secure Digital) card; although being able to snap photos in the middle of filming your movie is useful, the still images will generally not be as good as those of a digital camera.

Digital camcorders come in many shapes and sizes; think carefully before making your next purchase.

But the big decision is what type of digital camera you should buy. Unlike the old days of VHS cameras, there are several options from which to choose. Digital camcorders are classified according to the type of recording media they use. Try a few before you buy—hold them in your hand, pretend you're shooting video, play with the buttons, and so on. Find the one that suits you best.

MiniDVD vs. MiniDV

Lots of folks confuse miniDVD and miniDV. However similar their names

may be, the two types of media are completely different. MiniDVDs are small plastic discs, while miniDVs are actually tapes.

Contrary to some misguided Web rumors, there is no such camcorder that records video straight to full-sized DVDs; rather, some camcorders use mini-DVDs, which are only about 3 inches in diameter. However, a mini-DVD camcorder does indeed record straight to the discs, which can be viewed on most DVD players. (Have you ever noticed that smaller slot in a DVD tray? That's where those miniDVDs go.)

The fact that you can record video directly onto a miniDVD and immediately play it from a DVD player is the best feature of miniDVD camcorders.

MiniDVDs will record only about half an hour of video before you have to stop and swap in a new disc; a double-sided disc holds twice that.

Even if you're quick on the draw and don't miss any of the action, you're left with a large pile of discs at the end of the day. But if you only record video in small chunks, this isn't an issue, and besides, the discs are inexpensive. However, not all video-editing software packages support miniDVD.

MiniDV camcorders are quite popular, and with good reason. For one thing, they produce very high-quality video—generally better than the MPEG-2 format of other camcorders. The camcorders themselves are very inexpensive, with some models priced at under $200, and the tapes they use range from $5 to $10 apiece. Each tape will hold about an hour of video. Further, the miniDV format is widely supported by video-editing software.

One drawback to miniDV vs. miniDVD may give you pause before you invest in one, however. Though

miniDV is high quality and inexpensive, you may have to convert the miniDV tapes to another format before you distribute it. (MiniDVDs, on the other hand, record directly onto media that plays back in a standard DVD player.) On the upside, you can transfer video directly to a PC from some MiniDV camcorders through a FireWire port, so you don't necessarily need a video capture device. A further complication is that not every PC has FireWire ports, so unless you have a Mac, you might need to add FireWire ports to your PC with a card (see the "USB 2.0" sidebar for more information).

Onboard Storage

Hard drive-based digital camcorders (HDDs) tend to be very small and light. There are no discs or tapes to worry about; video is recorded directly onto an internal hard drive. These camcorders are best for recording lots of footage at a stretch; you can fit anywhere from five to 10 hours of video on a 30GB hard drive. Because HDDs don't use removable media to record on, you have to dump saved video to a PC in order to free up space if you run out; still, you can easily record the little ones' entire first T-ball game and still have more storage space than you know what to do with.

Some HDDs can connect directly to a burn station without the need for a PC, but you can always use the PC connection anyway if you like. The interface is generally USB 2.0, and the encoding is usually MPEG-2 (Moving Picture Experts Group-2).

The image quality isn't quite as high as miniDV or miniDVD, but it's still quite good. A plus is that some HDDs have in-camera editing options, and most have memory card slots so you can store still images with ease. One
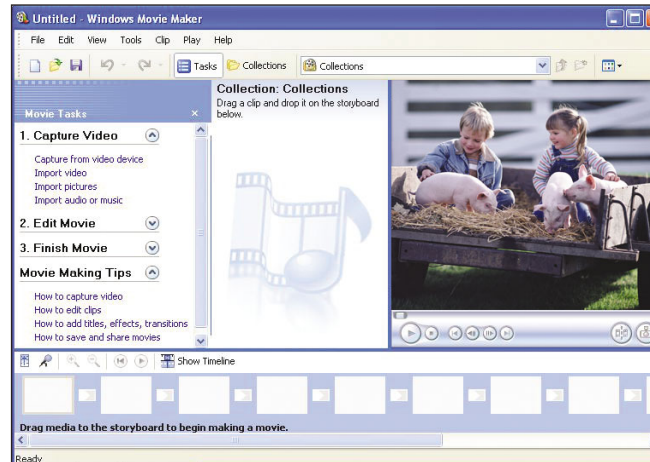
Some editing software, such as Windows Movie Maker, is free.
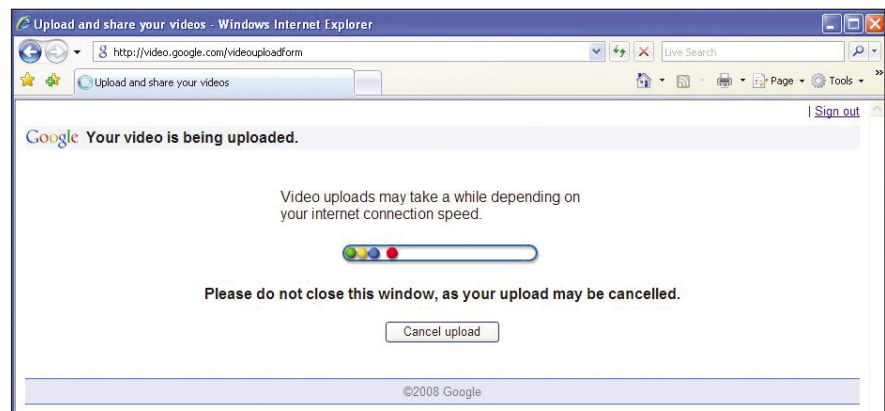
You can upload your video to a sharing site, such as Google Video.

major drawback of HDD camcorders is the price; they're definitely on the high end of the camcorder price range at several hundred to well over one thousand dollars.

Like hard drive-based digital camcorders, camcorders that use flash storage are exceptionally small. Contrary to hard drives, flash storage has no moving parts and uses SD cards as storage. The drawback is that you can only get so much video even on a large SD card, which may be 4GB or 8GB in size as opposed to an HDD with 30GB or 40GB. However, if your PC has a media card reader, transferring the video is a snap.

The stable nature of flash media lends itself to surviving more dings and donks than most others, which is a huge plus if your camcorder may get knocked around the floor of a minivan by a pack of rambunctious young ballerinas fresh from their first recital. The camcorder might get hurt, but the odds of the recorded video surviving are high.

The Twists

Those aren't the only things to consider. Any of the aforementioned camcorder types are available in HD; obviously, this means that the image quality of each type will be enhanced if

Like hard drive-based digital camcorders, camcorders that use flash storage are exceptionally small.

you spring for one with HD capabilities. Be aware that HD camcorders connect to PCs through HDMI—not a standard interface on all graphics and video cards—or FireWire.

Another factor to consider is that some camcorders are hybrids; that is, they have multiple options for recording formats and other features. Check with a salesperson at your retail store of choice to get the skinny on what types of hybrids they have available.

Capture & Transfer

There are three categories of devices that capture video and transfer it from a digital camcorder to a PC: external FireWire devices, external USB 2.0 devices, and internal cards that can go in one of a computer's expansion slots.

External devices let you capture video from your digital camcorder, DVD player, and other video devices and import it to your PC. They use either FireWire or USB 2.0 interfaces, so if you don't have one of those ports, you'll probably need to add it with a card (see the "USB 2.0" sidebar for more information).

You can also buy a capture card that you install in your computer. In addition to accepting video directly from digital camcorders, many of these cards double as PVRs (personal video recorders), capturing content from TV and the Internet. Many of these devices come bundled with software so you can edit your movies.

Editing

Once you've transferred your video to your PC, you'll want to edit it before you share. In some cases, you may want to actually create little scenes complete with transitions, add various visual effects, and perhaps even include titles and credits. (You can also add background music if you're feeling especially creative.) In other cases, you may simply want to trim down the video you shot or perhaps just feature one short scene that you want everyone to see.

Whatever your cinematic goals, video-editing software is a must. Many capture devices will include editing software, but you can also use such editing applications as Windows Movie Maker or, if you have a Mac, iMovie. And of course, you can always just purchase standalone editing software.

Share The Love

Once you make a video, you'll of course want to share it with family and friends. There are many ways to distribute your movies; consider how you want to share your masterpiece.

If you have a DVD burner, you can always make DVDs to pass out. For family members who are a bit behind the technological times, you can convert your digital video to analog and make VHS tapes, as well.

To show everyone video as soon as it's shot, you can connect your camcorder directly to virtually any modern TV and simply control playback from the camera itself. You can also use software to convert the video into a more compressed format and upload it to a video-sharing account online where your friends and family can access it or even download it themselves.

From a digital camcorder to a DVD burner, today's technologies offer many ways for you to create, capture, edit, and share your video memories. You're only limited by your imagination. ▐▌

<div align="right">BY SETH COLANER</div>

External video capture devices let you port your video onto a PC for editing and distribution.

USB 2.0

The USB 2.0 standard is widely used at this point and has almost completely replaced USB 1.1 on new products. However, many computers lack USB 2.0 ports if they're of a certain age. Usually, a USB 2.0 device will work just fine in a USB 1.1 port, but some video capture devices do not.

Not to worry; all you need to do is add a PCI or PCI-E card or, in the case of a laptop, a PCMCIA card, ExpressCard, or other type of card your laptop supports, equipped with a USB 2.0 port or two. These cards are generally inexpensive—easily under $50—and are simple to install. This method also works if you need to add FireWire ports. ▌

Video To Go

A Camcorder For Every Need & Budget

With video technologies evolving faster than the proverbial speeding bullet, you may be considering purchasing a replacement (or your first) camcorder. No matter what your pocketbook—and your dreams—dictate, this year you'll acquire more power and features for your money than ever before. Note that the prices we list are retail; a little shopping may net you one of these models for far less.

Pure Digital Technologies Flip Mino

$179.99 | www.theflip.com

The Flip Mino provides point-and-shoot video for those who want to capture life's unexpected memorable moments. Let's face it, you can't always carry around a standard camcorder, and some of them are awkward to set up and use quickly, even if you could. At 3.94 x 1.97 x 0.63 inches (HxWxD) and 3.3 ounces, this pocket camcorder is smaller and lighter than most smartphones. With a fixed-focus lens fast enough for low-light conditions and just a couple of basic buttons (record, pause, rewind, etc.), the Flip Mino is simple enough for users of any skill level.

The device comes with 2GB of built-in flash memory, enabling you to capture up to 60 minutes of video within a four-hour period—the life of the rechargeable battery. There is no memory card slot, so you can't expand your recording options. (Don't forget to upload or delete fairly often, or you'll lose the joy of spontaneity.) Onboard software and a built-in USB plug make it easy to upload video to YouTube, MySpace, or AOL. Optionally, use the included NTSC cable for television playback.

The Flip Mino offers a maximum resolution of 640 x 480 pixels and a bit rate of 4Mbps (megabits per second). You won't capture top-quality video with the Flip Mino (we didn't in our tests), but it's perfect for Internet sharing. The LCD is

The Flip Mino brings point-and-shoot video to a new level of convenience.

small (1.5 inches), and the microphone is wide-range and omnidirectional. (This is both a blessing and a curse: You can pick up all the pertinent conversation in the room or too much background noise.) The 2X digital zoom, tripod mount, and basic video editing are bonuses.

Canon FS100

$399 | www.usa.canon.com

This moderately priced SD (standard-definition) camcorder has been available since January 2008. However, Canon confirms it will continue to carry it, and we think it's a safe bet. It's the budget contender in its series (which consists of the FS10, FS11, and FS100), but for some, it may not provide enough oomph. Nevertheless, we found audio and video to be on par with the budget range, and it has some features we really like. It doesn't have internal storage, which keeps it light (10.7 ounces) and compact. Instead, you provide the SDHC (Secure Digital High Capacity) memory cards it uses for storage. It offers an amazing 48X zoom, and only the extreme range of that is digitally tweaked, so image quality is generally good.

The FS100 saves video in the versatile and widely supported MPEG-2 (Moving Picture Experts Group-2) format—the same format used for DVD. It offers three bit rates (3Mbps, 6Mbps, and 9Mbps) and several shooting modes (including shutter-priority, which is unusual for a camcorder at this price point). It also includes perks such as an image stabilizer; a video light to facilitate shooting in low-light conditions; an electronic lens cover; and widescreen, high-resolution recording. Canon optimized the FS100 for families on the go, incorporating an Easy button that enables quick, point-and-shoot operation and a battery-saving Quick Start

feature that powers the device into standby mode. It offers a minimal assortment of inputs and outputs, but the basics are there.

Canon VIXIA HG21

$1,299 | www.usa.canon.com

Debuting for the holiday season is Canon's new line of VIXIA HD (high

For $399, the standard-definition Canon FS100 offers a wealth of features in a compact package.

The Canon VIXIA HG21 can record at up to 24Mbps (megabits per second), the highest bit rate currently achievable in AVCHD (Advanced Video Codec High Definition) format.

Those looking for a pocket camcorder with more features than the Flip Mino may love the JVC Everio GZ-MG330.

definition) camcorders, the HF11, HG20, and HG21. All can capture full HD (1,920 x 1,080) resolution at 24Mbps—the first consumer-grade cameras to offer this bit rate in AVCHD (Advanced Video Codec High Definition) format. At that bit rate, recordings will be cleaner (fewer

artifacts) and will capture as much data as is currently possible with this format. According to Canon, the use of a 3.3MP (megapixel) CMOS (complementary metal-oxide semiconductor) image sensor and DIGIC DV II image processor will result in "superior color and clarity." Based on the image quality obtained by the group's predecessor (the HG10) and the increase in bit rate, we're betting Canon is right.

Hoping to attract the amateur video geek, the HG21 offers a viewfinder, a multiangle LCD preview screen, and five recording bit rates (5Mbps, 7Mbps, 12Mbps, 17Mbps, and 24Mbps). It has filter threads so you can add a wide-angle converter filter, and it features 12X optical zoom. It also sports a mammoth 120GB internal hard drive yet weighs only 1.1 pounds. An SDHC memory card slot lets you optionally record directly to a memory card or transfer recorded footage to it from the hard drive. Added perks include an instant autofocus mode, optical image stabilization, an HDMI (High-Definition Multimedia Interface) output for connection to an HDTV (high-definition television), and a microphone output with manual audio controls.

JVC Everio GZ-MG330

$449.99 | www.jvc.com

This nifty little midpriced model does not offer the resolution you'll find in some comparably priced competitors (max resolution is 720 x 480). However, if you're shooting primarily for Web or DVD sharing and are not concerned about playback on a big screen, this camcorder may delight you. It has a wealth of features and options, including a 35X optical zoom, digital image stabilization (not as good as optical), and a video light. It also offers full automatic shooting mode, plus six other preset modes and a number of manual alternatives. It lacks a microphone jack, but its onboard stereo mic is decent, especially at close range.

Like the Canon FS100, the GZ-MG330 records in hassle-free MPEG-2 format. It offers 30GB of hard drive storage, plus a microSD memory card slot. The LCD is large (2.7 inches) given the camcorder's compact footprint. We found image quality to be good for a camcorder at this price point, but the MG330 could be a little more user-friendly (and the automatic focus could be faster). However, the zoom (which can go to an outlandish 800X digitally) and a macro option for extreme close-ups are nice. Furthermore, the MG330's compact size and weight make it pocket-perfect.

JVC Everio GZ-HD10

$799.99 | www.jvc.com

JVC's Everio line spreads across a wide gamut, from the midpriced GZ-HD10 covered here to the GZ-HD40, the world's first dual-format (AVCHD and MPEG-2) camcorder, which captures full HD resolution footage to a 120GB hard drive. We evaluated the HD10 because we were attracted to the price point. However, if you're looking at full HD camcorders, such as the Canon and Sony we detail in this article, you should give the HD40 (or the HD30, which has a smaller hard drive) a peek, as well.

The GZ-HD10, on the other hand, captures 1,440 x 1,080 resolution footage and interpolates (enhances digitally) it for playback at full HD via the HDMI output. It incorporates both a 40GB hard drive and an SDHC card slot. It also includes most of the features of its more robust cousins with the exception of full HD and the ability to save in two formats. Shared features include a maximum bit rate of 17Mbps (plus 12Mbps and 5Mbps); a 10X optical zoom; and an array of inputs and outputs, including a microphone jack, a newly developed CMOS image sensor, and a proprietary signal-processing engine with advanced noise reduction. In our tests, we noticed that low-light performance was not the best, but with

good lighting, image capture quality and color accuracy were quite good. At this price point, the GZ-HD10 is definitely worth exploring.

Sony HDR-SR12

$1,299.99 | www.sonystyle.com

Sony was an early promoter of the AVCHD format that's quickly becoming a standard for HD. Consequently, with this third-generation model, we expected to be impressed—and we were. Users report this camcorder is "built like a tank," and we have to agree. There is nothing flimsy about it, making it a good choice for those users who regularly use (and occasionally abuse) their

Although not quite up to full HD, the JVC GZ-HD10 still packs a lot of punch.

The Sony HDR-SR12 is possibly Sony's most impressive camcorder yet.

camcorders. Performance is rock-solid, too, with 1,920 x 1,080 full HD resolution; quality low-light operation; capable noise reduction; face detection technology; and sharp, properly saturated image rendering.

Bonus perks for enthusiasts are a protected 12X optical zoom lens; a flip-out, rotating, 3.2-inch LCD; a viewfinder; and plenty of inputs, outputs, and manual control options. The automated mode is fairly nimble, making this a great choice for novices, as well. One feature we love about the HDR-SR12 is the manner in

which it handles playback. Rather than having to mosey through the footage sequentially, you can browse by date. Optionally, use the Film Roll Index feature to break long clips down into smaller intervals and then move from one to another based on the timeline.

The SR12 records to a capacious 120GB hard drive, but you can transfer footage to Memory Stick via the available slot. As a final bonus, the SR12 offers 10.2MP still image capture. Most camcorders feature still image capture, but none we found could capture such large amounts of data in still format. At about 1.25 pounds, it's the heaviest of the camcorders we evaluated, but that's still a far cry from models of old. It's also small enough to fit in a standard camera bag.

Parting Shots

For this article, we've stayed pretty much in the price range of the average consumer, but there are a few other options out there you might want to consider.

For the person who has everything (and an unlimited budget), Sony has just released an amazing prosumer camcorder. The HDR-FX1000 has a list price of $3,199.99, but its 20X optical zoom, wide-angle lens, triple CMOS sensor setup, progressive scan recording, and other high-end features lift it into the realm of many professional camcorders.

On the other end, if you want more from your camcorder than the Flip Mino but have less than $300 to spend, there are other low-cost options. One that has received some good (and some not-so-good; we didn't test it) user reviews is the ultra-compact, flash-based Aiptek GO-HD ($299.99; www.aiptek.com). Realize that at this price point, you're not going to get great audio and video quality, solid construction, and ease of use—something must go. ‖

BY Jennifer Farwell

Capturing Memories
Transfer Video To Your PC

Thanks to digital cameras and camcorders, this is a world of shutterbugs and amateur film-makers. However, there's often a bottleneck of sorts when the time comes for you to take your digital masterpieces and actually do something with them. Photos have to be transferred to a computer and printed or sent away to be printed; home movies need to be transferred to a PC, edited, burned to DVD, and so on. Often VHS tape sits around waiting to be converted to digital. It's not that these final steps are so difficult. Rather, you often just get bogged down in deciding exactly what you want to do with your digital stuff.

Analog To Digital

Camcorders generally transfer video directly to your PC via a USB or FireWire cable, but not all devices can transfer video to the computer so easily.

Other video sources you may want to capture video from include VCRs, which let you convert your old family movies from VHS tape to a digital format, and even TV broadcasts. For this, you'll definitely need a video capture device.

There are several reasons why you would want to convert your decades of VHS footage to digital. First and foremost, VHS tape simply wears out over time. Every time you play it, the physical action of producing sound from the tape will degrade it a bit. Even if your tapes are just in storage and never played, they will eventually decay. Digital content requires no physical media (even CDs and DVDs are read with a laser), so they don't degrade over time.

Furthermore, it's much easier to edit digital video than analog tape. With just a few clicks, you can add or remove myriad effects without destroying the original footage. Clipping and arranging scenes is also much easier, as is adding or manipulating audio tracks.

Video Capture Devices

Each type of digital camcorder has its pros and cons, and each is unique in how you must transfer the video from the camcorder to a PC or other device used to edit video.

Video capture devices come in a variety of different configurations, styles, and prices. One thing that remains constant, however, is that a video capture device will be either an internal card that you add to your PC or an external USB or FireWire device.

If you have an internal card, it's likely that it will do more than just capture video from a VHS player or other video source; it's probably also designed to snag video from your TV. What's nice about internal cards is that they take up no space on your desk. External devices generally have video inputs and outputs to connect to your VHS player and use USB or FireWire to connect to your PC. Others don't even need a PC to burn DVDs of your video.

You need to be a little careful when choosing a capture device; if your computer is on the older side, you may not have the right type of PCI slot on your computer or FireWire ports. Further, your USB ports might be version 1.1, but many capture devices that use a USB interface require the newer but commonplace USB 2.0 standard.

We rounded up a handful of different video capture devices and took a closer look.

Pinnacle Dazzle DVD Recorder
$49.99 | www.pinnaclesys.com

The Pinnacle Dazzle DVD Recorder is a compact, easy-to-use device that lets you record video directly to DVDs without needing to first dump it onto

The Pinnacle Dazzle DVD Recorder is a simple, easy-to-use video capture device.
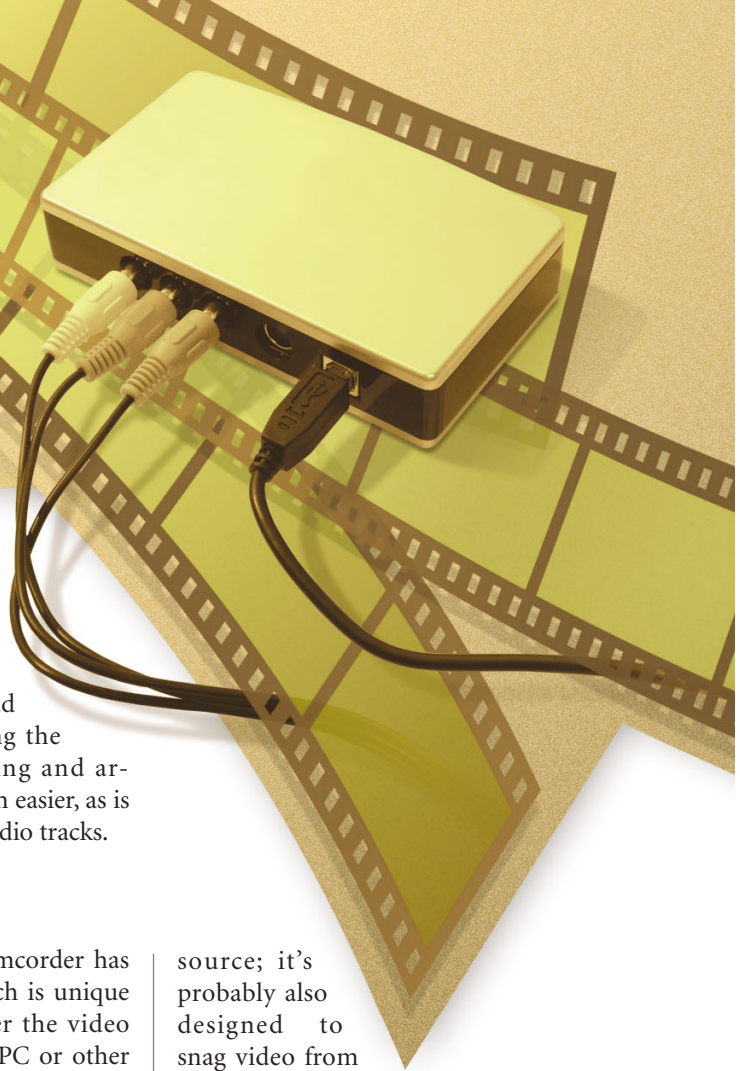
your hard drive. The device, which connects to your PC via USB, has stereo audio inputs as well as Composite video and S-Video inputs. You can connect any video source that has these outputs.

You just pop in the CD and install the software (Instant DVD Recorder). It'll just take a couple of minutes. Then connect your video device (such as a VHS player) to the Dazzle DVD Recorder, launch Instant DVD Recorder, and let the wizard guide you through the various options.

During setup, you can make a number of tweaks to your movie. First of all, if you're feeling adventurous, you can go straight to Advanced Mode instead of letting the wizard guide you through setup. During the setup wizard, you can elect to save your movie onto a DVD or the hard drive.

You can make a DVD without a menu, or you can configure it to create chapters at specified intervals, such as three minutes or 15 minutes. Menus, backgrounds, the types of frame in which each menu item appears, and the fonts are all customizable. There are even several options for preloaded music. Conversely, you can import your own music tracks if you like.

Canopus ADVC 110
$279 | desktop.thomsongrassvalley.com

Canopus packed a lot of features into the diminutive ADVC 110. Using various settings, you can import or export analog or digital video to or from devices including camcorders, VCRs, and computers. Yes, that's a mouthful, but you can bet when it comes time for you to move some video, you'll be able to accomplish what you would like to do.

To simplify, take note of the front side inputs: The ADVC 110 has stereo audio in, composite video, S-Video (Separate-Video), and DV (Digital Video) in and out. On the back side, it has outputs for stereo audio, composite video, S-Video, and DV in and

out. You can move video among just about any devices that can connect to these ports. Also note that because both DV ports have in and out capabilities, you can output two DV signals at once.

Though it may seem a bit complicated at first blush, the Canopus ADVC 110 is a tiny machine with a lot of options.

The new Pinnacle Studio movieBox Plus is a compact video capture device that comes bundled with powerful but easy-to-use software.

The ADS Tech DVDXpress DX2 offers very few frills but plenty of thrills, as well as a ton of included software.

When you want to alternate between working with analog and digital video, just press the silver button on the front of the ADVC 110. It's as simple as that.

If you want to get complicated, you can alter settings with the tiny

switches at the bottom of the device. It's a good thing that these aren't big, shiny buttons—you should only manipulate them if you know what you're doing. They control a variety of complex settings, including what type of video format the ADVC 110 recognizes and which mode (analog or digital) it defaults to when powered on.

The ADVC 110 is deceptively option-heavy, with a variety of configurations you can set up on the device itself. This is nice because you don't need to change those settings with any software.

Pinnacle Studio movieBox Plus
$119.99 | www.pinnaclesys.com

The bigger brother to the Dazzle DVD Recorder, the Pinnacle Studio movieBox Plus is just as simple to use but sports many more features. For one thing, you can connect more types of devices; in addition to stereo audio and composite and S-Video ports, the Studio movieBox Plus has a FireWire input. It also comes with Studio Plus software, which lets you import, edit, and burn movies without any trouble.

It's just as compact, if not more so, than the Dazzle DVD Recorder, which makes it exceedingly easy to transport. You can fit the Dazzle DVD Recorder in your camera bag or even in a large pocket in your laptop case.

The Studio movieBox Plus is designed to let you import analog or digital video to your PC. You can snag whatever you've just shot with your digital camcorder, but it's also a great way to convert your VHS tapes to digital. Once the video is captured and converted to a digital format, you can edit it however you like. You can crop scenes, add plenty of text, create transitions, and more.

When you're done making your masterpiece, you can use your PC to burn a DVD (if the PC has a DVD burner), create a file you can store or share, upload it to the Web, or even create a VHS tape (if you have a VHS

recorder) to send to someone who doesn't yet have a DVD player.

ADS Tech DVDXpress DX2

$49.99 I www.adstech.com

The pint-sized ADS Tech DVDXpress DX2 is bundled with three pieces of software, each of which serves a different purpose. Capture Wizard is what the device uses to get video to your PC; ShowBiz DVD 2 is video-editing software; and DivX Player is a program you can use to play back your movies. You can conveniently install all three programs from the same disc. Other bonus software for making slideshows, CD labels, and mixing audio is also included.

The DVDXpress DX2 has stereo audio inputs, as well as composite video and S-Video, and it connects to your PC via USB. Once you connect your chosen video device and launch the Capture Wizard, you can choose to make a video file to store on your hard drive or record directly onto a DVD or CD. You can then choose what format you want to convert your video to. There are several options, including MPEG-1 (Moving Picture Experts Group-1), MPEG-2, and MPEG-4, but you also get to specify what type of format the video will be for, such as DVD, iPod, DivX, Sony PSP, and more. There's also a handy chart telling you how many hours of video per gigabyte each format will give you.

Once you've captured your video and converted it to the format of your choice, launch ShowBiz DVD 2 to edit your movie, splice clips together, and add transitions and effects.

AMD ATI All-In-Wonder HD

$199 I ati.amd.com

Although installing a card on your PC may seem a bit more daunting than plugging in an external device, it's really not difficult at all. You can just install the ATI All-In-Wonder as you would any graphics card: Power off the computer, turn off the power supply, and pop off the side of the case. Insert the card into an available

PCI-E (PCI-Express) slot, replace the side of the case, and reboot your computer. Install the software, and you'll be ready to go.

The most noteworthy feature of the ATI All-In-Wonder is that it serves as both a video capture device and a

An internal video capture card, the AMD ATI All-In-Wonder HD serves multiple roles as a PVR and graphics card for your computer.

There's no need for a PC to burn DVDs with the Sony DVDirect VRD-MC5.

graphics card. So not only can you import video to your computer from a digital camcorder, you can also use the card as a PVR (personal video recorder), watch Blu-ray movies, and play DX10 games.

Connections include an RF connector for your TV, as well as HDMI and DVI outputs on the card itself. On the separate baseplate (which isn't included with every version of the ATI All-In-Wonder HD, so you'll need to

make sure your version has it), you have an audio input, S-Video input and output, and component video output ports.

Sony DVDirect VRD-MC5

$229.99 I www.sony.com

The Sony DVDirect VRD-MC5 differs greatly from many other video capture devices because it doesn't require a PC to make DVDs. This makes it bigger and heavier than the other flyweight devices here. Then again, the others need a PC.

The DVDirect VRD-MC5 can transfer standard or HD video, and the burned discs are playable in most Blu-ray players, PC drives, and Sony PS3 systems. Burned SD video can be played in any standard DVD player.

The DVDirect VRD-MC5 has a bright LCD so you can sort through the various menu options. To use it, you just turn it on and pop in a blank DVD. Then connect a digital camcorder or other video device, or insert a memory card that has images or video on it.

You can make a video DVD, photo DVD, preview a previously burned DVD, or dub AVCHD. After you make your selection, choose DV, composite, S-Video, USB, or memory card as the input device. Other customizable features include the ability to create menus with templates or your own images from a memory card, adding your own music tracks, select the recording quality, and more.

Options

Whatever route you decide to go, there's a video capture device out there for you. We've gathered a sampling for you to consider. Among them are simple, inexpensive devices, full-featured devices, internal capture cards, and even standalone burners. Even if your video devices haven't reached the digital age, these video capture machines are for you. ▌▌

BY SETH COLANER

It's A Wrap
Tips For Shooting & Editing Video

Perhaps it took YouTube to really kick off the home video craze in such a major way, but there's no doubting the fact that people are sharing movie clips like never before.

From snippets of friends whooping it up at a tailgate party to an hour's worth of the grandkids opening their gifts over the holidays, home movies are all the rage—again. Not since the days of the handheld 8mm film camera has amateur footage been such a hit. Instead of inviting everyone over to crowd around a hot projector, however, now we're handing out DVDs and posting short clips to YouTube (www.youtube.com).

Of course, the end result of your directorial efforts will directly depend on two things you must do well: shooting video and editing it. If you flub either one of these, your project won't be as impressive as you had hoped.

Action!

The cinematography is the most important part of the project. We often use the phrase "garbage in, garbage out" in these pages, and it certainly holds true in this case. It simply means that if you shoot jerky, out-of-focus video, no amount of video enhancement or editing later on will make it look good.

Before you do anything else, clean the lens of your video camera with an approved lenspen, wipe, or spray and cloth. If there are fingerprints, smudges, or dust on the lens, your video won't be as sharp and clear as it should be.

Good lighting of your subject is essential, especially when you're shooting video as opposed to film. Among other benefits, adequate light lets your camera operate with a deeper depth of field, meaning that people and objects will be in focus throughout a greater range of distance from the lens. To avoid creating harsh shadows, light your subject indirectly by reflecting a lamp's light off of ceilings, walls, or large sheets of white cardboard. Keep subjects away from walls, too, so they don't throw shadows of their own.

Shooting noir-like dark scenes is an art, but it's extremely difficult to do with a consumer video camera without ending up with visual noise (stray dots and blocks) in the electronically generated picture. It's much better to shoot under at least some light, and then darken the footage with a special effect as you edit it later. Also, turn off your camera's autofocus feature if you need to shoot in low light, as it won't work very well and will try to overcompensate much of the time. Focus the camera manually instead.

Finally, shoot from a steady rest, such as a tripod. The main criticism of movies such as "The Blair Witch Project" and "Cloverfield" was that the handheld camera cinematography made many viewers feel motion sick. A steady rest could be a railing, a desk, a wall, or even a tree. Even a coffee table can work for low shots: Put the front edge of the camera on a ballpoint pen, and then roll it back and forth to raise or lower the angle.

Clean video starts with a clean lens. Memorex's Camcorder Cleaning Kit ($19.99; www.memorex.com) comes with all you need.

And ... Cut

When you **capture** your video, or move it to your PC for editing, use the best

cable your camera supports, such as FireWire or USB. Don't use a composite video cable (an RCA cable with a yellow connector) if you can help it. If your camera records to mini DVD or a flash memory card, use your PC's DVD drive or card reader, if it's so equipped.

Set your editing or capturing software to import your video in the best format possible, which may be described as having a higher **bitrate** (the more data bits captured per second of video, the better the picture) than the rest. You may need tens of GBs of free hard drive space and plenty of RAM for this operation, especially if you're editing in high definition. Even if you plan to downscale your video to DVD or a resolution suitable for an online video site, it's best to keep your editing project high-quality until it's finished.

As for the editing process itself, go easy on the transitions and effects. It's tempting to overdo it with wipe transitions from one scene to the next, not to mention the scratchy "film" effect that makes video look like an old movie. To keep your project from looking gimmicky, limit your palette to occasional fades, dissolves, and the like. Fade in from black at the beginning and fade out to black at the end—that's the simplest "pro" trick there is, and it's invariably effective.

That said, if you have a crucial piece of video that is jerky or blurry, and you can't reshoot it, you might be able to minimize its defects with a well-chosen effect. Try turning the clip black and white, running it in slow motion, and so on.

For a still photo or slideshow, bring out your inner Ken Burns. Various editing applications feature "pan and zoom" effects that put some motion into static photos. For example, Windows Movie Maker 6 includes the Ease In and Ease Out effects, which basically zoom in or out of a picture or scene.

If you add a song or narration to your project, it's usually best to leave the natural sound of the underlying video undisturbed; you can turn it down a little, but don't mute it unless the audio is bad. Depending on your software, you might be able to turn down the volume of the music or natural sound during segments of narration. If you can, record your voice-over track in a quiet place, preferably away from your PC, any heating vents, and any other sources of fan noise.

If you need to cover a moment of camera shake, an awkward zoom, or some other mishap during a long scene, try inserting a few seconds of related video over the offending patch. For instance, if someone jostled your arm during your taping of a basketball game, you can cover that part with "B-roll" of fans in the bleachers (assuming you shot some). Be sure to mute the sound of the B-roll clip and keep the existing scene's audio undisturbed, and your viewers won't even notice the repair you made.

Joby's GorillaPod ($21.95 and up; www.joby.com) family of tripods wraps around railings, rocks, and fence posts to give your camcorder a steady platform anywhere.

Roll Credits

With a bit of practice, and a *lot* of patience, you can turn your home movies into solid entertainment for your family and friends. ▌▌

BY MARTY SEMS

Hand 'Em Out

Your home movie project is complete. Take a bow.

Now it's time to distribute your work. Most users burn DVDs of their home movies. If you want to get fancy, shop for blank media with interesting labels or packaging, such as Verbatim's DigitalMovie DVD media (www.verbatim.com). You also can buy LightScribe media to burn custom monochrome labels with a compatible drive or inkjet-printable discs to produce full-color labels in certain printers.

If you shot your project with a high-definition camcorder, and you edited the footage with high-def compatible software, you might want to make a BD (Blu-ray Disc). A cheaper alternative is to burn a short amount of high-def video to inexpensive DVD media using a format such as AVCHD (Advanced Video Codec High Definition) if your BD player supports it.

Speaking of short clips, you can post brief videos on YouTube or other video sharing sites. Invite your family and friends to view your magnum opus by emailing them a hyperlink to the page. Don't be tempted to email your clip as an attachment, as video files can be too big for a recipient's inbox or Internet download speed.

Because most handheld camcorders are capable of higher video quality than DVD supports, some users don't wish to permanently downgrade their home movies to the ubiquitous disc. You can archive your original video project file to BD, DVD, or a hard drive if you have enough storage space. Also, if your camcorder and editing software let you, you can record your edited project back to a tape in the camera (this isn't a long-term solution for camcorders that record to hard drives or flash memory cards). When you want to watch a video, connect your camera to your TV with suitable video and audio cables. ▌

Desktops & Notebooks

You've finally had enough. No more waiting for Web pages to load or exercising patience while editing photos or working with multiple applications. It's time for a new PC. Now comes the fun part: choosing between a laptop and a desktop and finding one that suits your needs. To help make your choice a little easier, we've found some options that offer both performance and value.

Alienware Aurora | Starts at $1,099 | www.alienware.com

Designed for gamers on a budget, students, and computer enthusiasts, the Aurora is a desktop computer that blends quality components with Alienware's unique aesthetic appeal. For instance, it features Alienware's AlienFX system lighting that illuminates both interior and exterior sections of the case. You can use the AlienFX software to change the color of each lighted section. The base model includes an AMD Athlon X2 2.7GHz dual-core processor, a graphics processor with 512MB of video memory, and 2GB of system memory. In our tests, the Aurora performed video-editing tasks with ease and let us run the newest video games at high settings and resolutions.

Alienware also packed the Aurora with a 250GB hard drive, a dual-layer DVD burner, and support for 7.1-channel audio. Still, there's plenty of room for upgrades, so you can add components, such as a BD (Blu-ray Disc) player. There are three free PCI-E (Peripheral Component Interconnect Express) x16 slots to provide support for additional video cards, three open bays for hard drives, two open RAM slots, and two free optical drive bays. For ease of use, the Aurora features a tool-less design for tool-free access to the case, hard drives, and optical drives.

CyberPower Gamer Xtreme XE | $1,699 | www.cyberpowerpc.com

With liquid cooling, which circulates cooled liquid over the processor's heatsink (rather than using a fan to draw heat away), CyberPower overclocked the processor on the Gamer Xtreme XE from 2.83GHz to an impressive 3.6GHz while still keeping the CPU's core temperature within manufacturers' specifications. For additional cooling, this system also includes five internal fans—two inside the front of the case to pull air over the hard drives, as well as two on top and one at the rear that vent hot air out of the case. We also like that the Gamer Xtreme XE features ATI's Radeon 4870 X2, which, at press time, was the top graphics processor on the market.

The Gamer Xtreme XE offers plenty of multimedia tools, including a 12-in-1 memory card reader, a BD player, and a 20X DVD burner. A 500GB hard drive gave us plenty of storage space for music, videos, and photos. We tested this system by running a couple of system-taxing DirectX 10 games at a video resolution of 2,560 x 1,600. The Gamer Xtreme XE handled the games at the high resolution without skipping a beat.

Lenovo IdeaPad Y530 | Starts at $999 | www.lenovo.com

The Lenovo IdeaPad Y530 features a glossy 15.4-inch screen (which you can configure with a frameless or framed design), a 2GHz dual-core processor, and 2GB of memory. The 15.4-inch widescreen is great for watching movies or working with multiple windows. For connectivity, the IdeaPad Y530 supports Bluetooth 2.0, 802.11a/b/g/Draft N wireless networks, and wired Ethernet. There's a switch at the front of the notebook to let you turn on Wi-Fi, which is handy if you want to ensure others don't hack into your PC.

We also like that Lenovo built in a panel above the keyboard with touch-sensitive media controls. Play, forward, reverse, and stop controls are integrated for Windows Media Player, and you can switch sound modes—such as pop, jazz, and rock—within seconds. A media card reader and 24X DVD burner come standard. All in all, the Lenovo IdeaPad Y530 offers a wide variety of features making it ideal for someone who needs to watch movies, play games, and access the Web.

Velocity Micro NoteMagix M15 Ultra | Starts at $1,399 | www.velocitymicro.com

Featuring an attractive brushed aluminum design, Velocity Micro's NoteMagix M15 Ultra has a slick appearance. The magnesium alloy case, which is around 20 times stronger than the ABS plastic commonly used for laptop cases, helps protect the internal hardware from damage. Our test notebook featured Velocity Mirco's base configuration, which includes an Intel Core 2 Duo 2GHz processor, an Nvidia GeForce 9600 GT graphics processor, and 2MB of RAM. The 15.4-inch screen features a glossy finish that is great for playing games and watching movies. Velocity Micro lets you customize all the components on the laptop, so you can adjust the hardware to fit your needs.

Velocity Micro also integrated all the connectivity options needed to transfer files and access the Internet. A built-in memory card reader let us copy photos from multiple types of memory cards, and USB and FireWire ports are plentiful. We also like that the M15 Ultra features a HDMI (High-Definition Multimedia Interface) output port, so you can easily connect your PC to an HDTV for music and video playback. To access the Web, the notebook provides a Gigabit Ethernet port, a modem, and support for 802.11b/g/Draft N Wi-Fi.
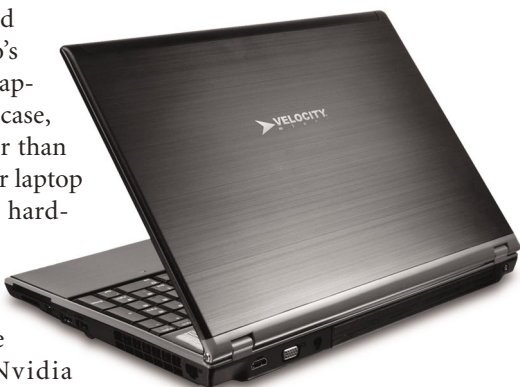
Stocking Stuffers

Epson Stylus NX400
$99.99 | www.epson.com

If you're looking for a printer that lets you do a little bit of everything at a high quality, look no further than the Stylus NX400 from Epson. In our tests, photo prints were as detailed as documents, and with a 1,200dpi (dots per inch), 48-bit scanner, the NX400 precisely scanned and copied photos. To use the Stylus NX400 without a PC, Epson includes a 2.5-inch LCD, slots for all the popular types of media cards, and a PictBridge port to let you print images directly from your digital camera.

Canon Selphy ES3
$199.99 | www.usa.canon.com

There are a variety of portable printers available, but not many offer the integrated photo-editing tools and rugged design of the Canon Selphy ES3. Besides the typical crop, light enhance, and red-eye removal photo fixes, you can press the Creative button on the Selphy ES3 to add frames, clip art, speech bubbles, and other fun effects to your images. Photo quality is good for a portable photo printer, and we like that it offers a sturdy handle on top, rather than a flimsy fold-in handle or carrying strap.

compiled by Nathan Lake

Holiday Gift Guide

Keyboards & Mice

If you have someone on your holiday gift list who is long overdue for a new keyboard or mouse, we found a few peripherals that will look great sitting under the tree and—most importantly—work great sitting on the desktop.
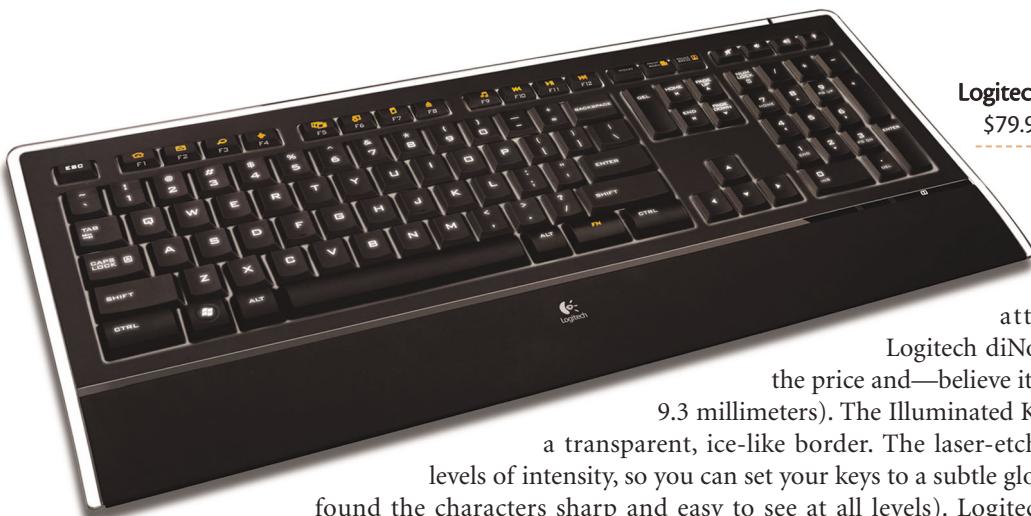
Logitech Illuminated Keyboard
$79.99 | www.logitech.com

Your home is likely all lit for the holidays, and now your desktop can continue to glow all year long. At first glance, the Illuminated Keyboard's attractive design reminded us of the Logitech diNovo Edge keyboard but at less than half the price and—believe it or not—a tad thinner (its profile is just 9.3 millimeters). The Illuminated Keyboard sports a sleek, black finish and a transparent, ice-like border. The laser-etched backlit keys are adjustable to four levels of intensity, so you can set your keys to a subtle glow or make them shine bright white (we found the characters sharp and easy to see at all levels). Logitech's PerfectStroke key system provides smooth, silent, comfortable keystrokes. Also included are a soft, rubbery palm rest and one-touch multimedia controls for easy access to applications. Plus, with the Illuminated Keyboard, next year your recipient can type those letters to Santa—even in the dark.

Kensington Ci70 Keyboard With USB Ports
$49.99 | www.kensington.com

Kensington calls it the "keyboard with connections," and that's a pretty good description.

The wired Ci70 includes five hot keys and five media keys for instantly accessing applications and controlling media. The Ci70 optimizes desk space by boasting a 35% smaller footprint than standard keyboards. To accommodate its small size, the arrow keys and a few other keys are a bit scrunched on the right side; it took some getting used to, but overall, typing was comfortable. The standout features of this keyboard are the two USB ports (one on the top; one on the back), which let you easily connect flash drives, MP3 players, and more. Hidden behind a sliding panel is a built-in mini-USB cable for syncing and charging cameras, MP3 players, or mobile phones. We loved that the Ci70 freed up our PC's USB ports and let us connect devices without having to hassle with several cords. The Ci70 is perfect for the person who has tons of peripherals and gadgets—because you can never have too many USB ports.

Logitech Cordless Desktop Wave Pro
$129.99 | www.logitech.com

The Wave Pro desktop combo features an updated version of Logitech's Wave Keyboard, which we featured in last year's holiday roundup. This year, Logitech added the rechargeable MX 1100 Cordless Laser Mouse to the comfy equation. Overall, the main improvement of the Wave Pro is the newer, better mouse. We noticed little difference from the previous keyboard—but once a favorite, always a favorite. The keyboard's breakthrough wave-shaped design cradles your fingers and fits the natural position of your hands as you type. The cushioned palm rest is also a nice feature. The MX 1100's contoured shape and rubber grips felt natural, and its promised six-week battery life held true in our tests. It features a MicroGear Precision scroll wheel with hyper-fast mode and eight programmable buttons for complete control. Apparently, throwing a new mouse into the mix qualifies a product for "Pro" status. Nonetheless, Logitech has delivered a great product for any computer user on your gift list.

Microsoft Explorer Mouse
$99.95 | www.microsoft.com

Debuting right before the holidays, the Explorer Mouse features Microsoft's proprietary BlueTrak technology, which the company says is "the world's most advanced tracking technology." And, with its chrome accents, rubberized palm rest, and neon blue lighting, we think the Explorer looks downright cool. We found that the Explorer handled smoothly on nearly any surface (with the exception of glass and mirrored surfaces). Combining optical technology with the precision of laser tracking, the Explorer Mouse let us click away on a granite countertop, a wooden desk, and, yes, it even explored on the living room carpet. The Explorer uses 2.4GHz wireless technology with a range up to 30 feet. It is powered by one rechargeable AA battery and comes with a small charging base. A transceiver snaps in snugly underneath the mouse for easy storage and portability, making the Explorer Mouse the perfect gift for people who need to take their work with them wherever they go—literally.

Stocking Stuffers

Logitech V550 Nano Cordless Laser Mouse For Notebooks
$59.99
www.logitech.com

For notebook users who always seem to have their hands full and one foot out the door, Logitech's V550 Nano mouse is the perfect companion. The V550 features a clip-and-go dock that adheres to any notebook: Simply attach the dock to your notebook, clip the mouse to the little nub, and off you go. The V550 would be particularly handy if, for example, you're heading to a staff meeting just down the hall or for students who are walking a block or two across campus or changing classrooms several times a day. The 2.4GHz nano-receiver is tiny enough that you can leave it plugged in at all times, or you can store it in the mouse's battery compartment. Logitech claims that the V550 offers up to 18 months of battery life, and the mouse automatically powers down when docked.

Microsoft Arc Mouse
$59.95 | www.microsoft.com

The aptly named Arc Mouse from Microsoft sports an innovative design and a few nifty features. In our tests, the Arc Mouse was convenient to use, and, truthfully, it was just plain fun to play with. The full-sized Arc (available in red or black) fit comfortably in the curve of our palm. Using laser tracking, it performed well as a desktop mouse and was just as easy to pack up and take along for notebook use. The Arc uses 2.4GHz wireless technology and has a range up to 30 feet. The micro-transceiver snaps into a little magnetic slot underneath the mouse, and then the "tail" folds shut, making it extremely compact for easy portability. Furthermore, we love that the Arc powers down when flipped shut, so we didn't have to second guess whether we remembered to shut it off. It may have been the unique, curve-shaped design that caught our attention, but it was the sensible features that made us big fans.

compiled by Linné Ourada

Monitors & TVs

With a mix of high-definition and widescreen TVs and monitors on the market, there are plenty of displays for every budget this holiday season. We've highlighted a few displays you'll want to add to your holiday wish list this year.

Gateway XHD3000 | $1,599.99 | www.gateway.com

Few computer monitors on the market can compete with the XHD3000's list of features. This HD (high-definition) 30-inch widescreen LCD features antiglare, along with a 2,560 x 1,600 native resolution to ensure an excellent view. The 1600p video display combined with the HQV video processor technology produces smooth HD playback for games and action movies, while it also portrays detailed images. Additionally, the XHD3000 offers a 178-degree viewing angle, which should provide consistent color and clarity from almost any perspective. Aside from the impressive visual features, the XHD3000 includes high-fidelity 3D sound on its DXP speaker system for audio clarity. The full-length speaker bar attaches to the bottom of the monitor.

The XHD3000 also has six video inputs that can be used simultaneously and support for external devices, such as a cable box or gaming console. In addition to the six inputs, the XHD3000 has six USB ports for connecting peripherals, such as a Web cam or external drives.

Hitachi UltraVision UT32V502 | $1,499.95 | www.hitachi.us

The Hitachi UltraVision UT32V502 is out to show that thin really is in. At 1.5 inches thick, the UltraVision UT32V502 has a 32-inch screen and a white-metallic coating designed to replicate the look of an Anthracite Pearl, which is designed to help the UltraVision UT32V502 add a touch of style to any room in your home.

Proving that its beauty goes beyond skin deep, the UltraVision UT32V502 includes a PictureMaster HD video processor, which is Hitachi's own chip designed to enhance image quality. Additionally, the UT32V502 includes 120Hz Motion Interpolation video technology that boosts signals to 120 frames per second to increase picture clarity. The antireflective screen has a 1,366 x 768 resolution and automatic 2:3 film processing to bring out the best in content originated on film.

LG W2452T | $499.95 | us.lge.com

The LG W2452T widescreen LCD computer monitor is an affordable, high-quality 24-inch display that includes features generally found only on more expensive models. It has a chic glossy black finish that will blend with almost any home décor.

The LG W2452T includes LG's Flatron F-Engine technology, which was incorporated into LG displays just a few years ago. According to LG, Flatron F-Engine technology is designed to improve color, contrast, and image quality with an LCD picture-enhancing chip. The W2452T features 1,920 x 1,200 native resolution, which is hard to find at this price point, and its 5ms (millisecond) response time and 170-degree viewing angle make it ideal for watching movies and playing games alone or with a friend.

Mitsubishi Diamond LT-46246 | $3,599 | www.mitsubishi-tv.com

The Mitsubishi Diamond LT-46246 LCD offers 1080p, the maximum resolution for televisions, which produces a better picture than both 1080i and 720p. This 46-inch HDTV features Mitsubishi technologies, including PerfectTint, Perfect-Color, and Full Spectrum Color, which are all designed to provide users with access to the most natural, vivid colors available in high definition. It also includes x.v.Color support, which also helps the color tones appear rich and bright. The DeepField Imager technology is incorporated to adjust the brightness and contrast levels to portray a balanced image, while the SharpEdge technology's intent is to prevent distortion at the edges of the TV's frame. Additionally, the Diamond LT-46246 features 4D video noise reduction technology to reduce the grainy, snowy effects of distorted video signals.

The classic design and glossy black finish make this HDTV a double threat in regards to style and functionality. A USB input is located on the side so you can view photos and videos from cameras and camcorders on the Diamond LT-46246. Additionally, there are four HDMI (High-Definition Multimedia Interface) inputs, a side and two rear component inputs, along with a swivel base.

ViewSonic VA2026w | $295 | www.viewsonic.com
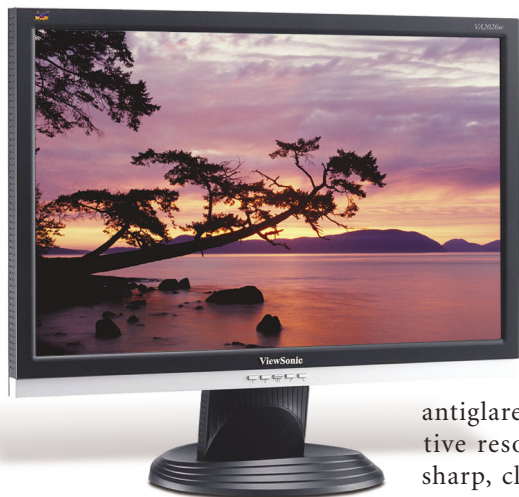
The high-definition ViewSonic VA2026w is a budget-friendly 20-inch widescreen LCD monitor that isn't short on features. Its slim, unobtrusive design will blend nicely into any office setting, and the VA2026w is VESA wallmount-compliant if you would prefer it hang on your wall rather than sit on your desk.

The VA2026w features an antiglare surface and 1,680 x 1,050 native resolution, so your image will be sharp, clear, and detailed. The OnView menu is an easy-to-use feature that lets you adjust the contrast, brightness, input selection, sharpness, and more. The ViewSonic is compatible with PCs and Macs.

Stocking Stuffers

Philips Presitgo SRU8008 Universal Remote Control
$99.99 | www.usa.philips.com

The Presitgo SRU8008 Universal Remote Control is a great device that will benefit the whole family. You can control up to 10 devices, including a TV, DVD player, stereo, and more using just this one remote control. The Presitgo has a 1.4-inch color display and uses IR (infrared) codes to perform several functions by selecting just one option. For example, if you select "Watch A Movie," the Prestigo will control all of the appropriate devices for you, regardless of the brand or model.

Falcon Dust-Off LCD, Plasma And Digital Screen Cleaner
$9.99 | www.falconsafety.com

Some cleaning chemicals can damage your flat-panel display. To ensure you're cleaning with the right tools, get the Falcon Dust-Off LCD, Plasma, and Digital Screen Cleaner. The kit comes with a suede microfiber cloth and a 50mL bottle of cleaning spray, which does not include any harsh chemicals. You can use it on your computer monitor, TV, or any other digital screen.

compiled by Tessa Breneman

Home Theaters

Last year, you got your loved one a big HDTV (high-definition television). This year, you can complete the picture with an immersive sound system that includes a set of speakers and an A/V (audio/video) receiver. Although you could select audio components separately, matching the speakers with a receiver requires an investment in both research and time. With an HTB (home theater in a box), you can guarantee compatibility and give one big gift that includes all the audio components. To help you out, we found a variety of HTBs that are up to the task.

Samsung HT-Z310 | $259.99 | www.samsung.com

This reasonably priced HTB provides you with true 5.1 surround sound, so you get a center speaker, two front speakers, two rear speakers, and a subwoofer. Samsung also includes a receiver/DVD player that upconverts DVDs to HD quality. We were impressed by the unit's ability to upscale content on our 1080p HDTV. We also like that the receiver features a USB input, which allowed us to connect a USB flash drive to watch movies, listen to music, or view photos stored on the thumb drive.

A Bluetooth receiver is integrated, so it was easy to stream music from our mobile phone over the Bluetooth connection. We preferred using the Bluetooth connection because we didn't need to access the settings on the receiver or locate files on our USB flash drive to play music. For greater control, Samsung includes its Anynet+ technology that let us control the HTB from other connected Samsung A/V devices, such as a digital camcorder. In terms of sound quality, the HT-Z310 produced good directional effects and pleasant bass. Those concerned about room aesthetics will also appreciate that the speakers and A/V unit are more compact than many other HTB components we've seen.

Klipsch CS-700 | $1,299.95 | www.klipsch.com

You don't need to be surrounded by speakers to experience movie theater-quality sound. The CS-700 from Klipsch is a 2.1 home-theater system that produces virtual surround-sound fields to make the audio from the two front speakers seem to come from multiple directions. This unit includes an A/V center (with an integrated DVD player) and subwoofer that features KlipschCast wireless technology, which allows the CS-700 to wirelessly deliver audio to the subwoofer. (Note that the wireless subwoofer still requires an AC outlet for power.)

The 2.1 surround-system design is ideal for those who don't want or have space for five-speaker surround-sound systems. Besides an upscaling DVD player, the A/V center can also function as a CD player and an AM/FM tuner. The 200-watt, 8-inch subwoofer delivered bass that sounded powerful without being boomy. And during our testing, the virtual surround sound from the CS-700 produced realistic sound effects. We thought that the audio was particularly engaging for musical scores and CD music.

Polk Audio SurroundBAR 360 DVD Theater
$1,199.95 | www.polkaudio.com

Sound bars provide virtual surround sound by manipulating the sound from a group of speakers within a single, slim enclosure that's designed to match the design of a flat-panel HDTV. The SurroundBAR 360 DVD Theater from Polk Audio features Polk Audio's SDA (Stereo Dimensional Array) Surround Digital Technology, which uses a mix of audio processing and sound redirection to make rear speaker sounds seem to come from behind you. One of the primary advantages of the SurroundBAR 360 DVD Theater is that the HTB only consists of two pieces of equipment—the sound bar and a DVD console. Thus, it's perfect for a room where placing multiple speakers and running speaker cable is not practical.

The DVD console delivers surround-sound processing, as well as power to the SurroundBAR, and it includes support for CD/DVD playback and AM/FM audio. The SurroundBAR 360 DVD Theater can reproduce some bass elements of a soundtrack, and Polk Audio includes a subwoofer output, so you can add a dedicated subwoofer if you prefer more bass in movies and music. You can mount the SurroundBAR on the wall with the included wall mounts or place it on a flat surface above or below your TV.

LG LHT888 | $649.95 | www.lge.com

If you're looking for an HTB that will spice up your home-theater room, the LHT888 from LG is right up your alley. Each of the four LHT888 speakers stands atop a tapered pedestal—effectively imitating the visual effect of a champagne flute. LG includes a wireless speaker kit to eliminate the need to run speaker cable to the rear speakers, and the elegant, glossy black design allows you to incorporate the LHT888 into most any home-theater environment. The LHT888 also comes with a 200-watt subwoofer and a 5.1-channel receiver/DVD player that can upscale video to 1080p.

The receiver unit features a USB port that let us play media from a variety of USB-based devices, such as our portable media player and portable hard drive. In our tests, video quality from the receiver was excellent, and we like that LG included support for MPEG-4 (Moving Picture Experts Group-4) video to let us play back home video files that we recorded on DVD. The 5.1 surround-sound system produced clear, crisp dialogue and bass we could feel. The integrated stands and wireless rear speakers also allowed us greater freedom for speaker placement around the room.

Stocking Stuffers

MSI HDMI Cable | $14.99
www.msicomputer.com

MSI's HDMI (High-Definition Multimedia Interface) cable provides the all-digital, uncompressed signal that's ideal for use on HDTVs. The cable features gold-plated connectors and triple-shielding to prevent electronic interference with signal.

Monster Cable Monster Power Blackout PowerCenter HDP 650 | $99.95
www.monstercable.com

Designed to protect your HDTV and other home-theater components, the Monster Power HDP 650 from Monster Cable features six color-coded backlit outlets that are labeled to make it easy to locate and unplug a specific power cable. The HDP 650 also offers a circuitry filter to reduce electronic noise that can affect video and audio signals.

Bush Furniture Midnight Mist Audio Tower
$199.99 | www.bushfurniture.com

This 3.5-foot audio tower features a nice blend of metal and glass accents, including tempered glass shelves with vibration-dampening pads. A back panel offers convenient rear wire access and helps conceal the cables. It has four shelves, so it can hold several components, including an A/V receiver, DVD player, gaming system, and cable box.

compiled by Nathan Lake

Digital Cameras

The snapshot of the perfect holiday is a smile on the face of someone you love. You can capture that smile and many more to come by giving a digital camera this holiday season. We've highlighted some of the most impressive and user-friendly cameras available.

Kodak V1073 | $199.95 | www.kodak.com

One of the V1073's most appealing features is its 3-inch LCD touch-screen, which not only looks great and makes you feel tech-savvy but also eliminates the number of confusing buttons that often make camera control a pain. Although we found the LCD difficult to view in bright sunlight, the touchscreen was easy to get used to and made camera use downright fun. The V1073 sports a 3X optical zoom, letting you snap detailed close-ups, and it boasts 10MP (megapixels), enabling you to create prints up to 30 x 40 inches. Kodak also equipped the V1073 with HD (high-definition) video capabilities, giving you detailed videos in 16:9 format that you can enjoy on your HDTV (high-definition television). One feature we found useful in our tests was the Smart Capture mode, which automatically changed the camera settings for the best picture under the current conditions. The V1073 is an impressive camera with an affordable price tag, perfect for beginners and advanced users alike.

Olympus Stylus 1050 SW
$299.99 | www.olympus.com

The Stylus 1050 SW has several worthy features, such as 10.1MP and a 3X optical zoom, but none stands out quite like its affable relationship with water, freezing temperatures, and accidental drops. You can take the 1050 SW up to 10 feet underwater, into freezing temperatures as low as 14 degrees Fahrenheit, and you don't have to worry if you have an accidental drop from up to 5 feet. At first, it felt a little strange submerging this camera in the pool, but our worries quickly dissolved when the camera performed perfectly in our tests. The 1050 SW also features Tap Control, which lets you navigate the camera by simply tapping the top and sides of the camera—a great feature for when you're out sledding and can't press the camera's buttons through your fleece gloves. The 1050 SW also includes great image stabilization, which kept our pictures sharp and clear. This camera is great for those who want to take unique pictures in places that other cameras can't go.
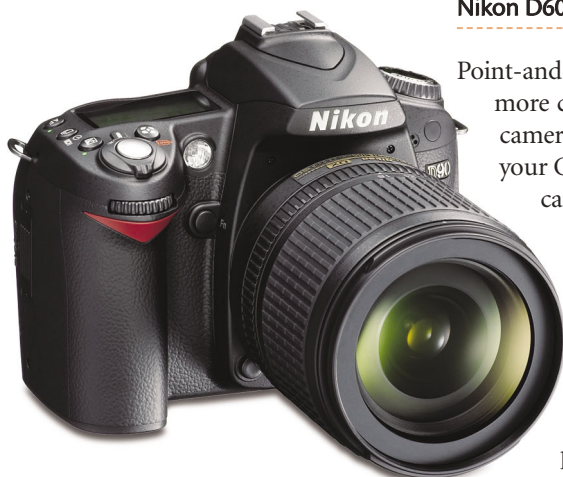
Nikon D60 | $699.95 | www.nikon.com

Point-and-shoot cameras are great for on-the-go photography, but sometimes you want more control over the way your photos turn out. If you are looking for an advanced camera to practice your photography skills or learn new ones, add the Nikon D60 to your Christmas wish list. We loved the way the D60 handled. Although it was significantly larger than the other cameras we tested, at about 16 ounces, it is Nikon's smallest D-SLR (digital single-lens reflex), and it fit comfortably in our hands as we shot our test pictures. There were several features we liked, including the quick startup time and the variety of both preset and manual shooting modes. The D60 comes with an AF-S Nikkor lens, creating a complete photography outfit right out of the box. Another useful feature is the 2.5-inch LCD, which turned menus horizontally or diagonally depending on how you hold the camera. The D60 is a great gift idea for advanced photographers or beginners who need a camera they can grow into.

Samsung L210
$149.99 | www.samsung.com

This camera caught our eye with its small size and affordable price. If someone on your gift list (who has been good, of course) is asking for a beginner digital camera, the L210 is a great choice. With 10.2MP and a 3X optical zoom, you'll get quality pictures without spending a bundle. Its ultra-portable size makes this a great camera for daily on-the-go photos because you can have it with you in a shirt or jeans pocket at all times. One feature we really like about the L210 is the Photo Help Guide, which provides on-screen directions and suggestions for using your camera in various situations, such as low lighting or when there is accidental camera shake. This camera has the standard features you'd expect, such as digital image stabilization and face detection, as well as auto red-eye fix and movie recording. The L210 is user-friendly and, above all else, budget-friendly.

Sony DSC-H10 | $279.99 | www.sonystyle.com

If you or someone on your gift list is looking for a camera that pairs advanced photo quality with handheld friendliness, consider Sony's Cyber-shot DSC-H10. The H10 has all the features we like to see in a camera at this price point, such as face detection, antiblur, and preset photo shooting modes. It also features a programmable mode that lets you manually alter your camera's settings, such as the shutter speed and aperture, so you can have more control over the outcome of your photos. One feature we love is the 10X optical zoom, which allowed us to capture all the detail of our subjects. This opened the door for uncountable photo opportunities. Our favorite feature is the way the H10 fit easily in our hands and wasn't a hassle to carry along. We snapped some great photos without fumbling around with extra photography gear. The H10 is easy to use and also comes with a few extras that will make you feel like a professional photographer, such as a lens hood to ward off imposing sunlight and sun flares in your pictures. The H10 is perfect for intermediate photographers who want better control over their pictures without the hassle of a sometimes cumbersome D-SLR.

Stocking Stuffers

HP Photosmart A536
$99.99 | www.hp.com

Get even more enjoyment from your digital camera with the HP Photosmart A536 Compact Photo Printer, which lets you print out your favorite pictures at home or when you travel. The A536 can retrieve your pictures from a memory card, USB device, or via PictBridge, and it can print snapshots in 4 x 6, 4 x 12 panorama, and 5 x 7 inches.

SanDisk Ultra II SD 2GB
$19.99 | www.sandisk.com

Don't limit your photo-shooting opportunities because you run out of internal camera storage. Confirm your camera's memory compatibility and invest in a memory card, such as SanDisk's Ultra II 2GB SD (Secure Digital) card. This high-speed card can read and write data at up to 15MBps (megabytes per second), and it comes with a lifetime limited warranty.

compiled by Kris Glaser

Goodies & Gadgets

As the family gadget guru, you're probably fielding questions about potential stocking stuffers. To keep you abreast of the latest trends, we've been diligently playing with, er, testing iPod docks, hard drives, and other technology treats. Here is what we're recommending this year.

Chestnut Hill Sound GEORGE | $499 | www.chillsound.com

We can't get enough of this iPod dock's remote. GEORGE's detachable remote control boasts a feature that most don't have: a crisp, easy-to-read built-in screen. The remote's screen lets you navigate your iPod's tunes without looking at the iPod. GEORGE also has a built-in AM/FM radio, complete with presets. Use the remote's dial and buttons to find a great tune and then kick back and let GEORGE's quality speakers fill the room.

Digital Signature MINT 220
$159.99 | www.mintds.com

With its rich room-filling sound and truly useful features, the MINT 220 is a winner. The built-in iPod dock lets you connect new and older iPod models, and a remote control lets you adjust the volume or change songs from across the room. A universal jack supports digital music players other than the iPod. The icing on the MINT cake? A small USB transmitter that lets you stream music wirelessly from your PC to the speaker, regardless of the media player software you use.

Stocking Stuffers

Encore Hoyle Card Games 2009
$19.99
www.hoylegaming.com

If you've been playing Solitaire since the days of Windows 3.0, it's time to branch out—and the latest version of Hoyle Card Games is just the way to do it. The software boasts more than 150 games, including Bridge, Crazy Eights, Hearts, and Texas Hold 'Em. Not your ordinary card game program, Hoyle Card Games 2009 has rich, bright graphics. It lets players create custom in-game characters and play against human opponents online. Of course, you can always challenge the computer, which has several skill levels to match your abilities. Hoyle Card Games 2009 supports WinXP/Vista and Mac OS X. And yes, it has Solitaire.

Iogear 12-in-1 Pocket Card Reader/Writer GFR209
$11.95 | www.iogear.com

Transferring photos to your (or your friend's) computer is a snap these days. Rather than struggle with the camera's transfer cord and drivers, many photographers remove the camera's memory card and then plug it into the PC's memory card reader. Of course, that only works when the PC has a memory card reader. To instantly upgrade your friend's aging, card reader-less PC, simply pull Iogear's handy reader from your pocket and plug it into the computer's USB port. The reader handles common card types, including Memory Stick and Micro/Mini/Standard SD (Secure Digital), among others.

Iomega eGo 250GB Portable Hard Drive | $122.95 | store.iomega.com

Thanks to portable external hard drives, notebook users don't have to wait until they get home to back up their digital valuables. We're particularly fond of Iomega's classy flask-shaped eGo, which transfers data (and draws power) via a short USB cable. Once you buy the leather-bound 250GB drive, you can download EMC's easy-to-use Retrospect Express HD software, which lets you back up individual files or your entire note-book—Windows and all.

Kensington ShareCentral 5 | $79.99 | us.kensington.com

If you find yourself running two computers at once, Kensington's ShareCentral 5 is worth a look. The device lets you share up to five USB devices, such as a mouse and a keyboard, a scanner, an external hard drive, and a printer, between two computers. Use the USB peripherals with one computer and then press the ShareCentral's buttons and the devices will switch to the other computer. The Kensington ShareCentral 5 supports Windows XP/Vista.

R.E.S. Innovations d_skin Protective Disc Skins (5-Pack)
$12.99 | www.d-skin.com

Protect your CDs and DVDs from liquids, scratches, and kids with these great covers. Unlike cases, which protect your disc only until you remove it, the d_skin attaches firmly to the CD and provides nonstop protection for the disc's fragile underside—even inside CD and DVD players. Thanks to the d_skin's tiny clips, it separates from the disc as easily as it attaches, which means you can transfer a d_skin from one disc to another without damaging the d_skin or disc. d_skins are also available in 20- and 50-packs ($38.99 and $72.99, respectively).
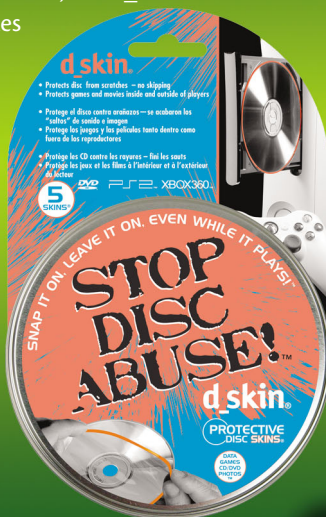
Creative GigaWorks T40 | $149.99 | us.creative.com

This sturdy two-piece speaker set is one of the best we've had the pleasure of listening to. The GigaWorks T40 plays classical and rock music with the same full sound you'd expect from a larger system. It also provides strong bass for a set that doesn't have a separate bass unit. It provides crisp, clear audio when playing human voices. The GigaWorks T40 also earns high marks on the design side, thanks to slim speakers; the easy-to-spot Bass, Treble, and Volume knobs; and the headset jack (an important feature that doesn't appear on many PC speaker sets). To top it off, Creative packs the GigaWorks with a small adapter that lets you plug a video game console or TV into the speakers.

compiled by Joshua Gulick

How To Get Rid Of . . .

Y ou didn't intend to, but somehow you managed to download malware onto your system. It can happen to anyone, but how do you get rid of it? If your computer has been infected with a pesky worm, virus, or other malicious intruder that you don't know what to do about, check out our How To Get Rid Of articles in the SmartComputing.com Tech Support Center. You'll find numerous articles on how to remove worms, viruses, spyware, adware, and other nuisances from your system.

1. Log in to Smart-Computing.com and click the Tech Support Center link on the home page.

2. Once in the Tech Support Center, scroll down to the Security & Privacy section. Click the How To Get Rid Of . . . link.

3. Click the link for the item you are trying to remove. You will then be taken to a full article that provides a description of the item and tells you how to determine if it's on your PC and how to eliminate it. Some articles provide helpful links to outside sources (Symantec, Microsoft, etc.) that can provide additional information to help solve your problem. Check out these helpful articles today.

Subscribers—make sure to add these helpful How To Get Rid Of . . . articles to your Personal Library by clicking the Add To My Personal Library link in the upper right of the article. Simply log in and when you find an article you would like to keep, click the Add To My Personal Library link at the top of the page. Create as many folders as you would like to keep your information organized and accessible.

Online Spending

According to comScore, the heaviest online shopping day in 2007 was Monday, Dec. 10. Online sales totaled $881 million.

Give The Gift Of *Smart Computing*

Give your friends and family a gift you know they'll appreciate this holiday season. Go to www.smartcomputing.com and click the Gift Subscription—Buy Or Renew link to start shipping *Smart Computing* to someone on your list. It's more useful than fruitcake.

Technology Defined
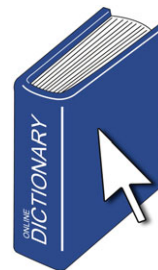
New computing terms don't have to be confusing. Visit our online Dictionary at www.smartcomputing.com to search for a specific term that you've encountered or simply browse the list of terms to brush up on your computing vocab.

From *Smart Computing*'s Dictionary

word spamming

Repeating a word on a Web page in an attempt to increase its relevancy when people perform a Web search. This attempt is usually in vain, as search engines typically locate information using methods other than a simple word search.

AN IDENTITY IS STOLEN
EVERY THREE SECONDS.

ARE YOU PROTECTED?

I'm Todd Davis, CEO of LifeLock and 457-55-5462 is my real Social Security number.*

I give it out just to prove how safe your identity is with LifeLock.

LifeLock, the industry leader in identity theft protection, takes proactive steps to help reduce the risk of identity thieves destroying your credit and ruining your good name – even if they get your information. And remember, what we don't stop, we'll fix at our expense, up to $1,000,000. I'm so confident in LifeLock's ability to protect my identity I publish my Social Security number. To give you that same level of confidence and peace of mind, I'd like to give you LifeLock for 30 days, absolutely free.

Here's what you're getting with LifeLock:

+ Proactive Identity Theft Protection
+ Reduced Junk Mail and Credit Card Offers
+ Request Free Annual Credit Reports
+ WalletLock™ – Help replacing the contents of a lost wallet**
+ $1 Million Total Service Guarantee

30 DAYS FREE
CALL 877-564-5125

LifeLock®
#1 In Identity Theft Protection

* Never share your Social Security number unnecessarily. ** WalletLock excludes pictures, cash and other monies. No payment, no obligation for 30 days. After 30 days your credit card will automatically be billed. You can cancel at any time without penalty.

Browsers

Browse The Web The Google Way

Could the days of the browser duopoly be numbered? Google recently launched its own browser that offers potentially substantial stability, usability, and security enhancements over Internet Explorer and Firefox.

While Chrome is not the browser to end all browsers, it could easily win converts. You can download a copy free at www.google.com/chrome.

Chrome's most striking feature as you view it initially is the crisp, sparse interface. The basic layout is at least a small departure from browsers as we've known them, with no menu bar at all and no real noticeable toolbar, either. Instead, the top of the window features tabs for flicking among different Web pages.

Each tab is virtually its own browser, with its own Address bar and tiny collection of command buttons. Under the hood, the different tabs operate independently enough that if one crashes, the rest of them keep on plugging away. That feature alone makes Chrome worth a look.
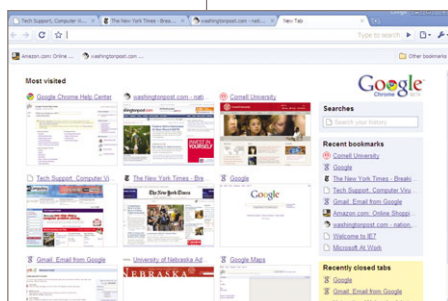
Everything Bar

The main user interface of Chrome is the Address bar. The Address bar in Chrome serves several purposes. You can enter a URL, of course, to point the browser toward a particular page you have in mind. By default, the Address bar is also a direct Google Search box. Just enter a query or keyword as you would in the Google search engine, press ENTER, and results appear in the main window. As you type, you'll also see Google's suggested search terms appear in a drop-down menu.

The Address bar is also where you'll find the Star icon, which denotes bookmarked pages. When you find a page you want to be able to find again, just click the star. It changes to solid yellow to signify a bookmarked page. A tiny window pops up asking whether the bookmark should be saved in a particular folder or in the Bookmarks bar.

So where do those bookmarks go? To find your favorite Web sites Chrome-style, just open a new tab. Instead of a mere blank page, Chrome offers a few ways to navigate to the sites you know and love. At the top of the New Tab screen is the Bookmarks bar. It makes some sense to put bookmarks here rather than cluttering up every browser screen as does a more traditional toolbar. However, you can switch on a standard bookmarks toolbar if you like by clicking the Settings button (it looks like a wrench) and selecting Always Show Bookmarks Bar.

Below the Bookmarks toolbar in the main section of the New Tab screen are thumbnail pictures of your most-visited Web pages. Click one of them to load that page in the browser. If your Web-browsing habits change, the thumbnails change along with you, offering you the most up-to-date selection of sites you really do view most often.

Off to the side is a history search box, for those times when you remember viewing a site but neglected to bookmark it. Below that is a list of recently viewed bookmarks. Finally, up in the right corner of the Bookmarks bar is a folder that holds the full bookmarks list. Click it to see a set of submenus representing the different bookmarks folders. Chrome has no shortage of ways to find your favorite sites.

Incognito Browsing

Another new feature you might notice during your first session with Chrome is something called the "incognito window," which you can find in the current page menu (click the button that looks like a piece of paper and select New Incognito Window). An incognito window is a special browser window that does not record anything in browser history. What happens in the incognito window stays in the incognito window, and when you close that window, it's gone for good. Incognito mode is a great way to maintain privacy when you want it without turning off all of the advantages of keeping browser history for most day-to-day use.

Overall, Chrome is a solid, streamlined browser that does away with some of the inertia of existing choices and adds a few nice features. So far, Chrome has nothing to match the customization potential of fan-favorite Firefox. At press time, it was still in beta and light on more-advanced features. But it never hurts to have new ideas thrown into the browser mix. ▋

BY ALAN PHELPS

Google's new Web browser, Chrome, takes a fresh approach with tabs on the top of the window and few commands cluttering the screen.

Online

Neighborhood News Aggregators Keep Tabs On Your Block

outside.in

EveryBlock

Beginner

The Internet can bring the world to your desktop, but sometimes the most interesting news comes from just around the corner. Neighborhood news aggregating sites search out posts, stories, conversations, and other content related to your specific spot in the universe.

A couple of our favorites of the genre are outside.in (www.outside.in) and a relative newcomer, EveryBlock (www.everyblock.com). Both bring together scattered bits of information that can give you a sense of what's up in your immediate area.

From The Outside In

Visit the outside.in Web site, and the service already seems to know what you're looking for. Using your IP (Internet Protocol) address, the site makes a guess about where you are located and displays content related to that area. If you want to switch to another city, you'll find the Change City link on the left side of the page.

The main column in the middle of the screen displays news items related to your city, typically pulled from different blogs. The left column has a directory of different businesses and other places nearby, but the lists behind the directory headings are basically just a grab bag of links without a lot of explanation.

The most localized content at outside.in appears in the Radar section. To find it, look for the Radar link on the upper-right side of the page. Enter your address and click Go.

The main column of the Radar page is divided into sections devoted to happenings in and around your area and around the city (or nearby city). The neighborhood part of the page offers a good selection of local blogs and other content. If you've poked around the Internet already for news about your neighborhood, you've probably come across most of these sources. If you haven't done your own search for neighborhood news, the outside.in Radar is a good place to start.

EveryBlock pulls together information such as crime reports, blog entries, business reviews, and other content about specific neighborhoods in some large cities.

Block Party

EveryBlock is more ambitious than outside.in and more interesting, as a result. As EveryBlock explains in its site FAQ, it is not a city directory where you might go to look up the nearest pizza place. Instead, EveryBlock looks for news content such as a recent online review about nearby pizza places. You won't see a comprehensive list of everything in the community but rather an attempt to show what people are talking about in your community.

To get started, choose a city from the main page and then enter a ZIP code or address to narrow down the search. The next page shows content from in or near the area you chose. What you'll find varies by city, but you will probably see blog posts that mention the area, real estate listings, reviews for local businesses, the police blotter, and Flickr photos with tags or descriptions that mention the area. Some cities also provide local government information, such as calls for city services.

You can view entries by category or sort by date. Each item includes a headline, excerpt, and an address. Another way of viewing the content EveryBlock gathers is with your favorite RSS (Really Simple Syndication) feed reader. Click the Custom RSS Feeds button toward the right side of the page. You can then choose from a couple of options: a complete feed with everything that EveryBlock finds related to your part of town or a custom feed containing only particular categories.

When you've selected what you'd like to read, click the appropriate button. A Web page or newsreader box should appear to add the new feed to your stable of RSS destinations. From there, you can sit back and let EveryBlock come to you. You'll get one post per day, per category where EveryBlock found something matching your area.

At press time, EveryBlock was available only for a handful of big cities, including Boston, New York, Chicago, Los Angeles, and Washington, D.C. The site is funded by a grant designed to encourage experimentation in news media, and there was no advertising when we visited the site. The future of the site is a little up in the air, however, once the grant runs dry in June 2009. But it's an interesting experiment, and one well worth exploring if your city is among those covered. ▐▐

BY ALAN PHELPS
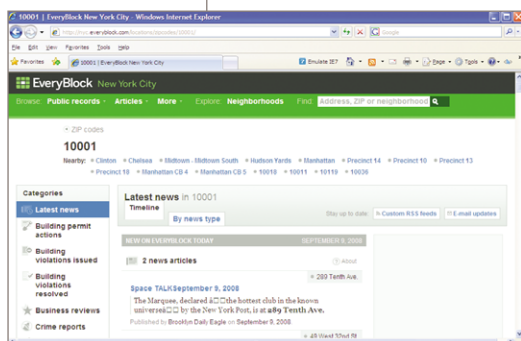
Microsoft Excel 2007

Using SmartArt

Most of us know good graphics when we see them, thanks to all the movie title sequences, billboards, cereal box graphics, and other designs that surround us. Unfortunately, recognizing good graphics doesn't mean we can *create* them.

Plenty of software packages offer help with enormous collections of clip art and graphics. Among Excel's offerings are slick-looking, easy-to-use SmartArt graphics that give spreadsheets visual punch that passes the pop-culture quality test. Remember that SmartArt graphics aren't charts. You can generate charts directly from Excel data, presenting information visually without re-entering it. SmartArt is often even more compelling and comes in a wide variety of preformatted styles, but you'll have to enter information yourself.

Choosing SmartArt

Open the SmartArt gallery by clicking the Insert tab's SmartArt button. This produces enough graphics to make you look like a know-it-all consultant, even if you're just sharing stats from the company softball league. The graphics are organized by type: List, Process, Cycle, Hierarchy, Relationship, Matrix, and Pyramid.

Images range from color-coded blocks to curved arrows that wrap around interlocking gears. Some (like Target List and Nested Target) might be confusing at first glance. To learn how to use a certain diagram, click it and read the summary on the right side of the dialog box. Even then, you may remain confused by all the talk about Level 1 and Level 2 text, unused text, and switching layouts. The best approach when learning how to use SmartArt is to find a graphic that looks about right and start experimenting with it.

Excel's collection of SmartArt gives you ready-made graphics that let you make a point with the style of a professional designer.

Customize Graphics

After you click a type of graphic, click OK to insert it into your worksheet. Once the graphic appears, the typical first step is dragging it to a new location and resizing it with the handles around the frame's edges.

Then it's time to put the graphic to work your way, which often starts with adding text. You can type text directly into the placeholders on each object, but you may find it easier working in the Text Pane. Turn the pane on with the Text Pane button on the Design tab's left side. The pane presents a cleaner format and lets you easily move text around various bullet-point levels. Anything typed here appears in the proper spot on the graphic.

All of a diagram's parts are customizable. If you see an arrow, for example, you can usually click it to move, resize, rotate, or recolor it. Once you click a text box and put your information into it, you can change the text's size, color, font, etc.

If you haven't worked with Excel 2007 much, you'll probably be pleasantly surprised at the program's ability to make customizing even such things as colors an off-the-rack decision. You can recolor each piece of a graphic yourself, but you also can use a wide variety of color combos created by professional designers. Just click the graphic on your worksheet and look at the options that appear on the Design tab. Click Change Colors to scroll through a big collection of thumbnails showing your graphic in a variety of color schemes. Roll the mouse over any thumbnail to preview your graphic in that palette. To anyone who used to spend hours experimenting with colors, this is exciting stuff.

You also can add elements to graphics, such as a new layer in a pyramid. Click the element you want to duplicate and click Add Shape on the left side of the Design tab. Choose whether to add the new shape before or after the currently selected one.

Switch Graphics

Finally, here's something even cooler than rapidly trying on color schemes: trying out entirely different *types* of graphics after you've added data to one. Look for the Design tab's Layouts section and roll the pointer over different graphic types. You'll see your graphic morph into each new look. Some graphics probably can't handle your text, sticking it in strange new places. If that happens, just move on to the preview of the next style. **‖**
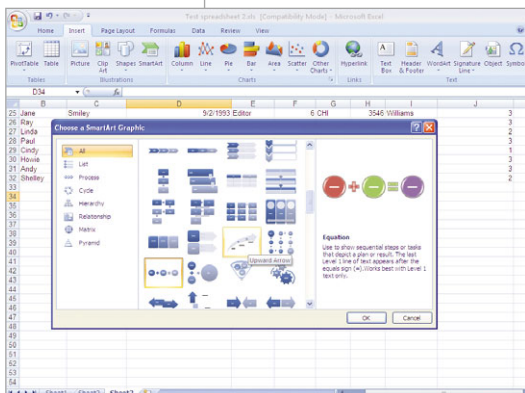
BY TREVOR MEERS

Adobe Photoshop Elements 6

Merge Photos To A Panorama

Experienced and neophyte digital photographers alike can appreciate one of Photoshop Elements' notable improvements: Photomerge. This editing command allows users to combine two or more imperfect photographs to create a single better image.

Photomerge offers three ways to blend photographs: Group Shot, Faces, and Panorama.

This month we focus on the third method of photo-blending: Photomerge Panorama. This tool helps you stitch together a series of photos into one large wide shot. This is most frequently used for scenic shots, but could have other uses, such as large family reunion group photos.

The Interactive Layout gives some manual control to the user.
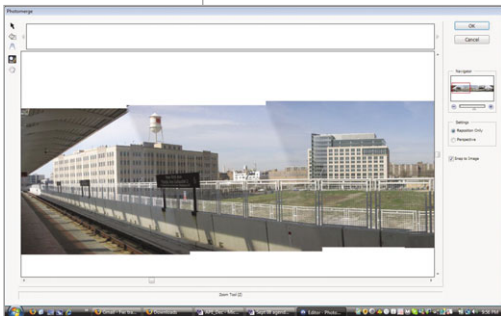
Automatic Blends

To begin, open Elements to the Editor workspace. Open the series of photos you want to stitch together or simply drag them from their folder to the workspace. From File, choose New and then Photomerge Panorama. The Photomerge window opens to reveal two areas: Layout and Source Files.

In the Source Files section, click Add Open Files. (If you didn't already open your files, click Browse to locate them.) You'll see the names of the images you already opened in Editor appear in the Use box. Next, choose one of the Layout options. The first four—Auto, Perspective, Cylindrical, and Reposition Only—let Elements do the work for you. For most panoramas, the Auto layout will work well. Elements will analyze images and make the best style choice.

With Perspective, Elements adjusts the outlying images to match the middle image. Cylindrical keeps an eye on perspective but results in a cylindrical image. Finally, Reposition Only simply scans the images and plops them down in the best position without any changes to perspective.

Choose one and click OK. Elements will align and blend the images into one panorama—it even attempts to compensate for differences in exposure.

Interactive Stitching

If the automatic options don't deliver a product you're happy with, or if you simply want to try your hand at digital sewing, choose the last option: Interactive Layout. Click OK, and Elements will do a basic match and stitch, leaving the overlap visible in the Photomerge workspace along with some tools.

The Lightbox along the top of the workspace holds photos Elements didn't use in its initial match-up. You can send all of the images back to the Lightbox and start over by pressing ALT and clicking the Reset (previously Cancel) button. With Snap To Image checked, Elements will match up the photos as you drag them over each other. Turn it off and you gain complete control over the matching, but this requires a steady hand and a good eye.

On the right side is a Settings box. Select the Perspective radio button to tell Elements to use the first image placed as the base for the perspective, or choose Reposition Only to align the images without distorting them. Use the Navigator (above Settings) to zoom in or out and the slider bar on the bottom of the workspace to move left or right.

Use the tools on the left side of the workspace to move or rotate individual pieces. The Select (arrow) tool can be used to move individual photos in or out of the composite just by dragging to or from the Lightbox. Press SHIFT as you use the Select tool, and movements will be limited to horizontal or vertical adjustments. The Move View (hand) tool can be used to move the picture on your workspace.

When you've finished aligning the images, click OK to stitch them together.

Photo Tips

The Auto layout typically does an excellent job, but it can be fun to experiment with other options from time to time. Either way, you'll likely find yourself delighted with the panoramas you can create with relatively few steps.

Although Elements does most of the work for you already, you can make the process even simpler by thinking about how you're shooting would-be panoramic pictures. For example, shoot the photos in rapid succession—this helps with lighting. Hold the camera in the same orientation throughout (for example, vertically) and keep it level. Try for a decent amount of overlap in each photo to give yourself (and Elements) more to work with when blending. Careful shooting can result in fewer manual edits. ▌▌

BY ANNE STEYER PHELPS

Microsoft Word 2007
Work With Bulleted & Numbered Lists: Part II

Last month, we introduced bulleted and numbered list functions in Word 2007. We showed you how to set options to determine whether Word would automatically create lists and how to start a bulleted or numbered list. This month, we'll talk about more advanced ways to use lists.

Restart Numbering

Word has no problems dealing with consecutive items; it adds another bulleted item or increases the number by one for the new numbered item. When you create a list in which items are interrupted by intervening text, however, Word has to guess at what you are trying to do. Let's see how this works.

Create a new document and click the Numbering button in the Paragraph area of the Ribbon's Home tab. An indented number 1 appears. Type some text and press ENTER. Type some text for this second numbered item and press ENTER twice to get out of list mode. Type or copy some text into this nonlist paragraph and press ENTER. Now let's continue the list with item number 3.

Click the Numbering button in the paragraph area. Because you put in regular text after the last numbered item, Word starts a new list at 1. Notice the icon to the left of the number. Hover the cursor over it and you will see it's the AutoCorrect Options button. Click it to bring up the option Continue Numbering. Choose the option by clicking it, and the number becomes a 3.

The process works the same way with bulleted lists, except there is no number sequence for Word to "keep track of" in that case.

Formatting Options

Now let's look at different formatting options. In a new document, create a numbered list with two items and leave the cursor after the item 2 text. Click the arrow on the right of the Numbering button. A pane drops down containing Recently Used Number Formats, a Numbering Library, Document Number Formats, and a bottom section with the options Change List Level, Define New Number Format, and Set Numbering Value.

Place the cursor over Change List Level to see the nine levels available to reformat the list. Click the Level 2 option to increase the indent and renumber list item 2 with the lower-case alphabetic character a. Press ENTER to start the next item in the list. Click the Numbering arrow again but this time choose Change List Level and then Level 1. The item is renumbered as 2 to continue the sequence of the first item.

An easier way to create levels on the fly is to use the Decrease Indent and Increase Indent buttons in the Paragraph section on the Home tab. Place the cursor in the list item you want to change and click the button to change its indent. The character will be changed automatically, such as to a lower-case alphabetic character for Level 2.

Again, the bulleting function works similarly. Position the cursor in a list item and click the arrow on the Bullets button. A pane opens that has the same layout as the numbering pane, except here you can choose from different bullet shapes.

Required Formats

Different jobs may require different types of lists. In legal or medical professions, for example, a list may need to be formatted to exact specifications. Word 2007 provides a library of list formats.

Let's take the example of a list in a medical transcription document, which requires that the list uses Arabic numbers (1, 2, 3, etc.) that are not indented, but instead line up with the body text against the left page margin. Following the number is a period, a tab, and then the item text.

Create a new document and place some text in it. Click the Numbering drop-down list and look at the Numbering Library. There is a list format that uses numbers followed by a period, but it also indents the number, which is not what we want. Choose that format anyway and then click the Decrease Indent button mentioned above. Now we have what we need. Press ENTER, and the next list item will be formatted in the same way.

Numbered and bulleted lists will help you organize your documents in countless ways. With practice, you'll be able to easily fine-tune your lists. ▐▌

BY TOM HANCOCK
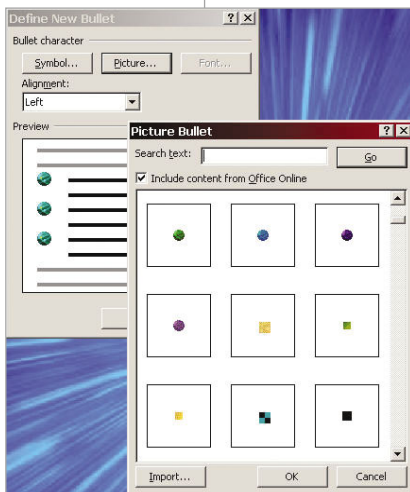
You can use a bullet from Word 2007 and Office Online, or Import an image of your own to use as a bullet.

QUICK TIPS

Secrets For Succeeding In Common Tasks — *by Stephen Bigelow*

Hard Drives

Question: How do I check how much hard drive space is free, and what happens when I run low on space?

Answer: It's easy to check drive space using Windows Vista. Click Start and select Computer. A list of drives will appear, and the remaining space for your Local Disk will appear next to its icon under the Free Space heading (you might need to select Views from the toolbar and then choose Details to see this information). The challenge with drive space is that you either have enough space or you don't—Windows really doesn't tell you when space runs low because the definition of "low" can vary depending on the user. The first time that you may become aware of a space problem is when an application crashes or fails to save new files because of insufficient drive space.
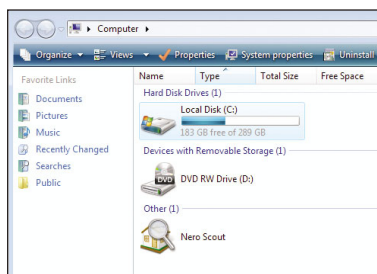
We recommend having no less than 10% of the hard drive free. For example, if your PC has a 500GB hard drive, there should not be less than 50GB left. When that occurs, you should free additional space by either deleting unused applications or moving older data off the main hard drive to another form of storage, such as a CD, DVD, or an external hard drive.

Windows Vista reports the drive space so you can readily tell how much space remains on each hard drive.

Storage

Question: I need more storage space for my PC. Is it better to use a thumb drive or an external USB drive? Or, should I opt for a second internal hard drive?

Answer: USB thumb drives (also referred to as flash drives or memory sticks) are a great way to back up your current work files and offer a lot of portability among PCs. You can easily carry documents, spreadsheets, or other files from a work PC to a home PC and back again. Just remember that a flash drive's capacity is fairly limited—only up to about 16GB.

External USB hard drives are very effective as storage mediums, allowing you to create complete backups of your PC's operating system, applications, and data. They are also very effective for archival data storage, so you can keep hundreds of gigabytes of data files handy without tying up the PC's internal drive space. You can also carry the USB hard drive between systems (just like a thumb drive but with less convenience). A second hard drive installed within the PC itself will give you the best performance, so it's best when you simply need more space for important applications that will stay with the PC.

VoIP

Question: Do I need to buy more bandwidth from my ISP (Internet service provider) before I install a VoIP (Voice over IP) module on my LAN (local-area network)?

Answer: The QoS (Quality of Service) also matters with voice data. When a network treats every data packet the same way, other network activity can easily disrupt the flow of voice data packets, and this can cause awkward pauses or gaps that make conversations almost unintelligible.

If you have a SOHO (small office/home office) network with limited traffic, go ahead and install the VoIP adapter and use the telephone normally. In most cases, this should work just fine with few (if any) disruptions. Consider the voice quality at different times of day and as various users perform their regular tasks. For example, a VoIP conversation may be fine until your son starts downloading YouTube videos.

If you experience voice disruptions, try employing QoS rules, if your router supports them. This allows you to set up traffic handling priorities between your VoIP adapter and the service provider, ensuring that traffic is handled before other tasks, such as file downloads or streaming media. The setup for QoS features can vary among routers, so refer to your router's manual for specific instructions.

If you still experience voice disruptions, consider upgrading your network service level with the ISP. Additional service will cost a bit more each month, and you can generally downgrade the service later if you find that it doesn't help.

Laptops

Question: I've noticed that the left corner of my laptop (where my left wrist rests) is getting very hot. Is this a problem? If so, what can I do about it?

Answer: This is probably a battery or processor ventilation problem, depending on exactly what is sitting under your left wrist. If a battery is there, you may have a defective battery or charging circuit. Contact the laptop manufacturer and check for any battery recalls that might be in force. Fortunately, you can still operate the laptop normally by removing the battery and running the laptop from an AC adapter.

If there is no battery, you may have an overheating processor. This is often caused by inadequate ventilation, usually because the air intakes below the laptop are blocked by coats, blankets, or other objects that are simply preventing proper airflow through the unit. Use the laptop on a desk or other flat surface where the air intakes are unobstructed. If the problem persists, the processor's cooling unit may have failed or become detached. Have the unit serviced by a repair professional familiar with your laptop's make and model.

Browser Data

Question: Do I need to buy a program to delete my browsing habits?

Answer: Internet Explorer provides tools to let you delete temporary files, cookies, and your browsing history (among other things). Using Internet Explorer 7, click Tools, select Internet Options, and then click the Delete button in the Browsing History area (found on the General tab). You can select the individual type(s) of data to be deleted or simply click Delete All.

Remember that browser data is deleted like any other data—only the used space is marked as "free"—and the actual data remains on your hard drive. So it is possible to undelete data or locate fragments of files (for example, images, video clips, Google searches, and so on) using relatively simple data recovery tools.

Internet Explorer 7 allows you to delete browsing history, cache files, temporary files, and other specific data types.

Security Software

Question: How do I know that my antivirus and antispyware protection is up-to-date? How long can I wait before updating the security software?

Answer: Every major security software product can update automatically as long as you have a working Internet connection. Checking protection is usually just a matter of opening the software's control panel and reviewing its status pane. Any lapses in protection will typically appear here, so you can see anything that's lacking. You can also manually run a check for security updates.

Security software should still operate in the absence of regular updates, so missing an occasional update isn't the end of the world; the software will probably just update itself later, or you can update it manually. But the longer you go without an update, the more potential viruses or spyware your PC might be vulnerable to. This can really become an issue when the software's subscription expires, and you procrastinate renewing or replacing it.

Security software will report its protection status and inform you if new updates are available.

Search The
Tech Support Center

Computers, printers, and other devices are wonderfully helpful tools—when they're working. But it's frustrating when a computer won't boot up or a printer won't, well, print. The only thing more frustrating is not knowing where to find answers.

Now it's easier than ever to find the information you need by searching SmartComputing.com's Tech Support Center. Simply type a word in the search box and you'll find information on that topic from different areas of the Tech Support Center including Solutions Knowledgebase, Security & Privacy Web Log, Basic Troubleshooting Articles, How To Install, and many more. Topics ranging from hard drives and printers to the Blue Screen of Death and that pesky red X are all covered extensively in an easy-to-understand problem/solution format. Accessing this information is simple. Here's how:

1. Go to SmartComputing.com and click the Tech Support Center link.

2. Enter a subject in the Search box and click Search. Avoid using words such as "problems" or "malfunction" and use the Top Subjects links when-ever possible.

3. Read through each section to find numerous articles on your search topic.

Subscribers, keep in mind that you can save all of the articles in your Personal Library to use for future reference. Simply log in and when you find an article you would like to keep, click the Add To My Personal Library link at the top of the page. Create as many folders as you would like to keep your information organized and accessible.
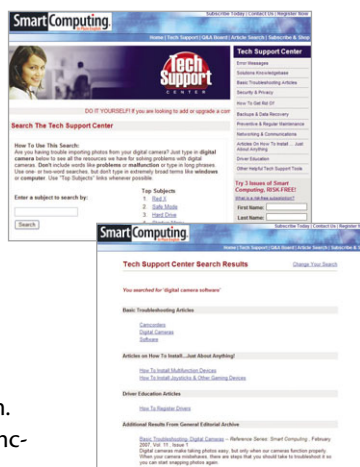
Yesterday's News

Tracking down an interesting item you saw posted on the SmartComputing.com Web log is as easy as clicking the Web Log Archive link on the left side of the *Smart Computing* home page.

Article Archives

Smart Computing subscribers have access to many helpful resources. In addition to the Tech Support Center, subscribers can browse past issues of all our publications. Click Search All Articles on the left side of our home page to get started.

Daily Tips

If you missed any of our helpful Daily Tips, click the Daily Tip Archive link on the left side of our home page. The archive dates all the way back to 2001.

Smart Computing's Tip Of The Day (Sept. 30, 2008)

Image Blur

Images blur when you're unable to hold the camera completely still while the shutter is open. A fast shutter speed means there will be less time for movement to affect pictures. You have two options to reduce camera movement. First, you can buy a tripod that holds your camera steady. Second, you can buy a camera that has integrated IS (image-stabilization) technology. IS technology uses integrated components to detect movement and positions the image-capturing sensor in the opposite direction to offset the movement. If reducing the number of blurry images you take is important, look for a camera with IS technology. Many (but not all) models with IS technology include IS in the name of the camera. You should also see "IS technology" or "image stabilization" in the camera's specs.

Compiled by Nathan Lake
Graphics & Design by Lori Garris

Home-Theater
Systems

Remember when the movie-theater experience was irreplaceable? Now you can purchase a big-screen HDTV (high-definition television), home-theater audio system, movie theater-style seating, and buttery popcorn to essentially re-create the cinema experience in your living room. While it's easy to see how the big-screen TV improves your home cinema, the functions of the other components in a home-theater system are less obvious. This month, we'll show you how the different components work together to create immersive, movie theater-style audio and video.

Front Speakers

Located to the left and right of the TV, the front speakers deliver most of the film's sound effects and musical soundtrack. If you listen carefully to a movie encoded in 5.1 surround sound (a recording that features six independent audio tracks), you can pick up how the sound engineer synchronizes the sound effects between the left- and right-front speakers to engross you in the film's environment. Because the front speakers typically have greater audio range than the center speaker or rear speakers, you'll hear the majority of the musical score—ranging from high-pitched flutes to rumbling trombones—from the front speakers.

A/V Console

The A/V (audio/video) receiver is where you'll connect the cables running from the speakers and home-theater equipment. With many HTBs (home theater in a box), you'll get an A/V receiver that features an integrated DVD player. Most standalone receivers don't integrate the DVD player. Either way, the receiver or A/V console routes the audio and video signals among your speakers, HDTV, and other components, such as a gaming console or DVD player. Using the A/V console's included remote, you can select the component you want to hear and see.

Rear Speakers

Also called the surround speakers, the rear speakers are typically located to the side or behind your listening position. Correspondingly, sound engineers typically route the audio that occurs behind or beside the characters on-screen to the rear speakers. You'll often hear environmental sounds, such as leaves being blown by the wind or a car's tires running over pavement. The rear speakers often need to meld with a room's décor, and many people choose to use bookshelf-style or wall-mounted speakers that are less conspicuous than floor-standing speakers.
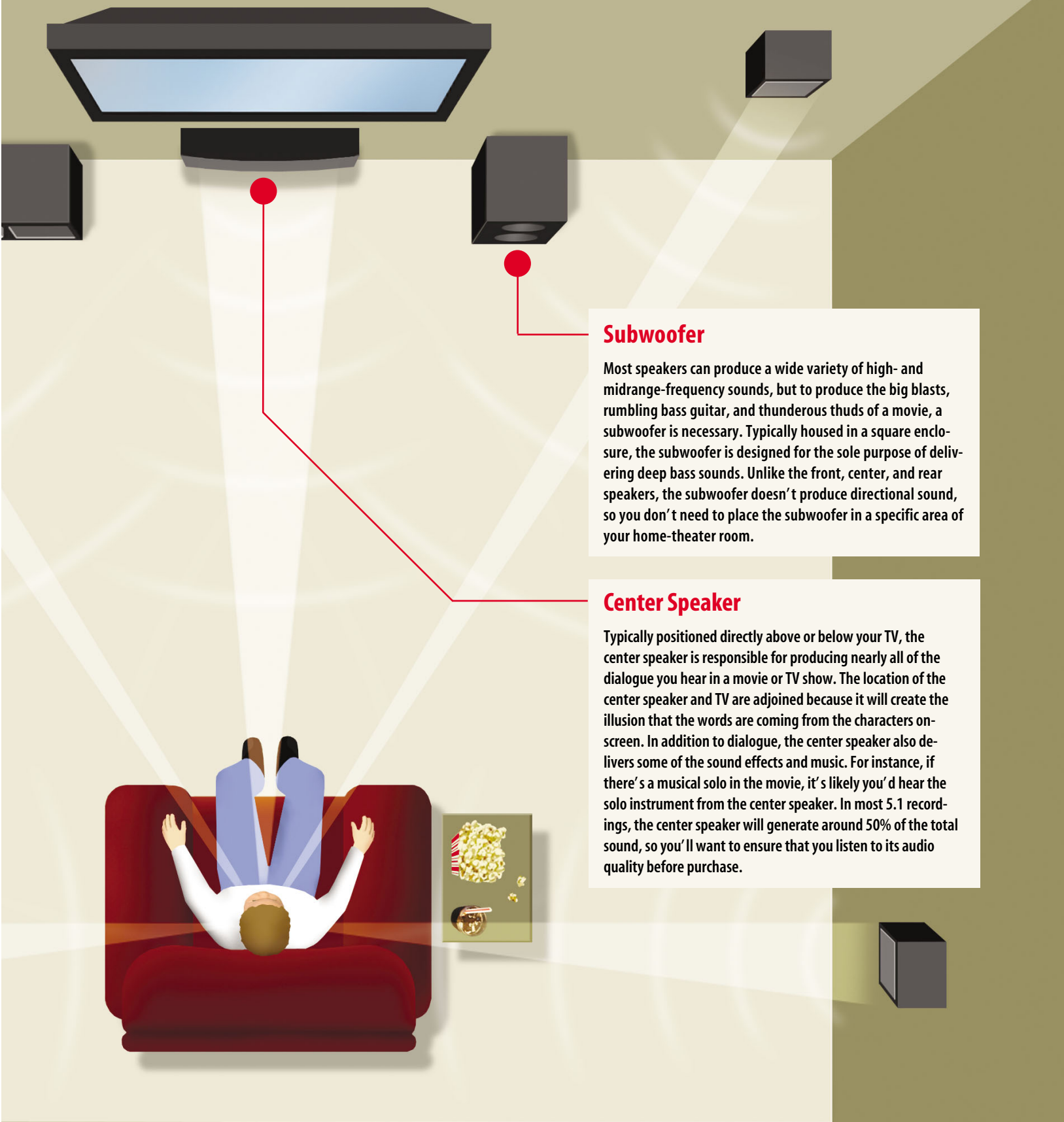
Subwoofer

Most speakers can produce a wide variety of high- and midrange-frequency sounds, but to produce the big blasts, rumbling bass guitar, and thunderous thuds of a movie, a subwoofer is necessary. Typically housed in a square enclosure, the subwoofer is designed for the sole purpose of delivering deep bass sounds. Unlike the front, center, and rear speakers, the subwoofer doesn't produce directional sound, so you don't need to place the subwoofer in a specific area of your home-theater room.

Center Speaker

Typically positioned directly above or below your TV, the center speaker is responsible for producing nearly all of the dialogue you hear in a movie or TV show. The location of the center speaker and TV are adjoined because it will create the illusion that the words are coming from the characters on-screen. In addition to dialogue, the center speaker also delivers some of the sound effects and music. For instance, if there's a musical solo in the movie, it's likely you'd hear the solo instrument from the center speaker. In most 5.1 recordings, the center speaker will generate around 50% of the total sound, so you'll want to ensure that you listen to its audio quality before purchase.
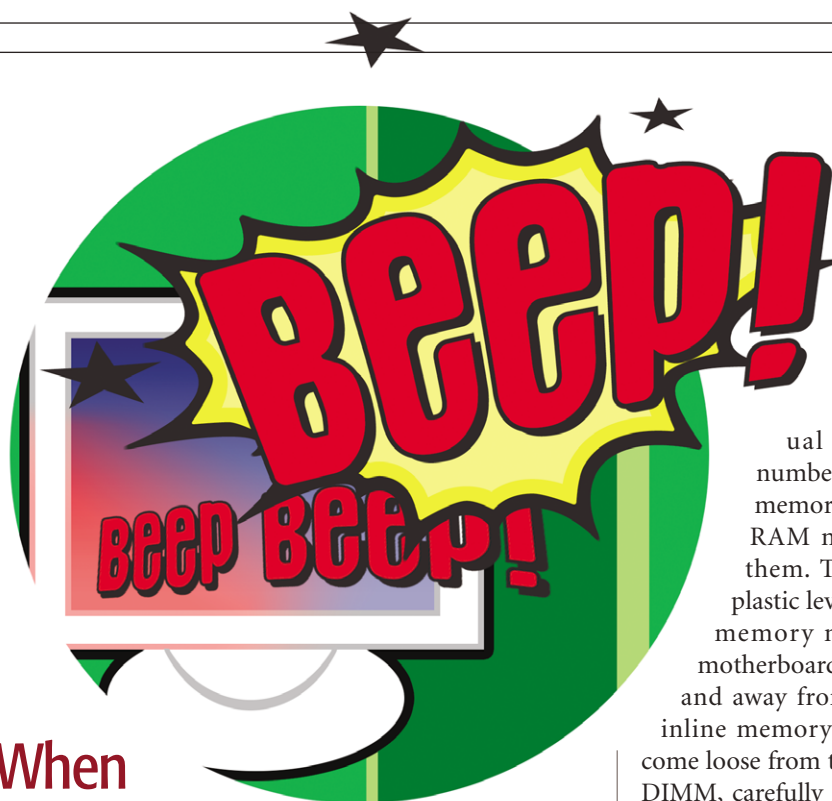
What To Do When
Your PC Beeps

Beep beep beep.

That's odd. Instead of booting to your Windows Desktop, your PC is beeping at you. Press its Reset button (the smaller button on the front panel near the Power button) and try again.

Beep beep beep.

Oh, man. Now what? More beeps. Maybe a cold restart will help. Shut down the computer by pressing and holding in the Power button until the fans turn off. Next, unplug your PC from the wall for half a minute or so. This should allow the capacitors in the motherboard, expansion cards, and other components to drain off any residual electrical charges. Plug the computer back in and press the Power button to start it up.

Beep beep beep.

Next, shut down your PC. If it's a desktop model, open its side panel and touch a bare metal portion of the case to discharge any static electricity. Look for disconnected cables, and try to determine where they should hook up, if anywhere. Make sure that the connected cables are snugly attached to the drives, expansion cards, and the motherboard. Try to reboot.

If the beeps continue, you have a problem somewhere in your computer's hardware. The beeps emanate from a tiny speaker on the motherboard. The number of beeps you hear indicates an error code, which can help you narrow down the cause of the problem. Some motherboards have LEDs (light-emitting diodes) that indicate error codes or an all-clear code when the power is on. If you see a display like this, which may look like a two-digit clock, write down the numbers or letters on the readout.

In order to decipher the error code, you'll need to check the users manual or other documentation from the motherboard or PC manufacturer. The manual may be a printed booklet or in the form of a PDF file on a CD. If you don't have either, see the Finding Online Manuals sidebar in this article.

Error Code Triage

Some problems that trigger error codes have simple fixes. Others require a replacement of the processor, the motherboard, a stick of RAM, a cooling fan, or some other device.

If the users manual tells you that the number of beeps indicates a memory error, pop out the RAM modules and reseat them. To do this, push the plastic levers at either end of a memory module toward the motherboard. They'll pivot down and away from the DIMM (dual inline memory module), letting it come loose from the slot. To reseat the DIMM, carefully line it up in the slot (it will only fit one way) and then press firmly along the top edge. The plastic end levers will return to the upright positions when the RAM is properly installed. If the beep code persists, try the PC with only one DIMM installed at a time, then with the RAM installed in different slots. The users manual may specify brands of RAM and particular slots that may work best.

Intel recommends that you look through the computer case for loose screws or other objects that may be causing a short circuit. A common scenario is a machine screw accidentally left under the motherboard during assembly. Remove any expansion cards and then loosen the motherboard's mounting screws. Tip out the offending part, tighten the motherboard back down, and replace the cards.

A similar boo-boo custom PC builders make is to install an extra metal standoff (threaded spacer) in the computer case under a part of the motherboard that doesn't have a corresponding hole for a mounting screw. If the superfluous standoff touches a solder point on the underside of the board, it probably will cause problems. Remove the motherboard, unscrew

the unneeded standoff, and replace the board.

Just Kidding

Occasionally, the motherboard is mistaken, and it's beeping about a hardware problem that doesn't exist. You sometimes can clear the code by resetting the BIOS (Basic Input/Output System) to its default settings. You can learn how to do this—as well as how to enter the BIOS Setup—in the PC's or motherboard's users manual.

First, enter Setup and write down the settings therein, using the indicated keys to navigate around. Exit without saving any changes.

Next, reset the BIOS according to the instructions in the users manual. Typically, you'll need to remove the motherboard's coin-shaped battery for a minute before replacing it, move a **jumper** (small plastic tab with a wire inside) to another pair of pins for a length of time, or do a combination of both. Afterward, re-enter Setup and return the BIOS settings to normal. Save your changes and exit.

Finally, the beeps may not even be coming from your motherboard. A graphics card can beep if there is no auxiliary power cable connected to it from the computer's PSU (power supply unit). Usually when this happens, you'll see a clear message to that effect on the PC's monitor. Shut down the PC, connect a suitable power lead to the card (you may need to use an inexpensive PCI Express power adapter for a recent card), and reboot.

With a little tinkering under the hood, your PC can return to its normal, nonbeeping state. In other words, its peace and quiet means peace of mind for you. ‖

BY MARTY SEMS

You can crack the error code by looking up the number of beeps in the users manual of the PC or motherboard.
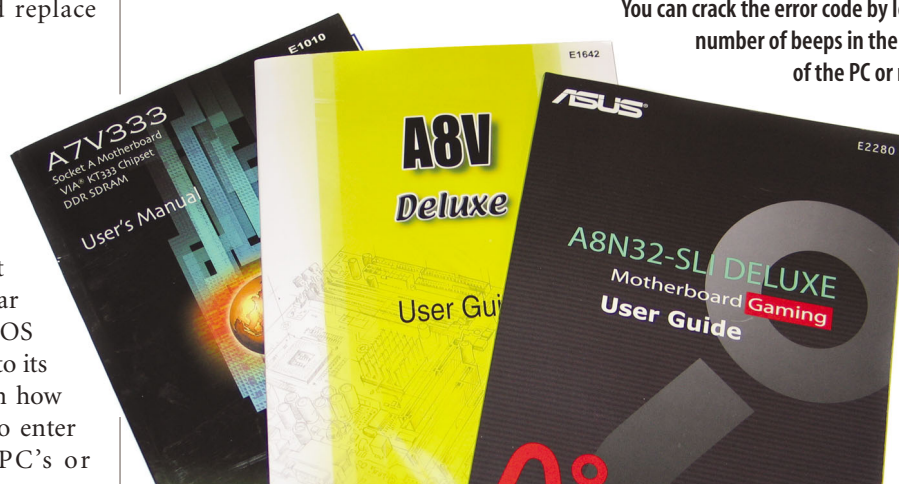
Find Online Manuals

If you need to look up an error code online, first write down the exact model number of the PC (if you bought it preassembled) or its motherboard (if your system was custom built; you'll need to open the side panel first). Look up the manufacturer, such as Dell or Asus, in a search engine and then browse to the company's Web site. If necessary, click the link to your preferred language or geographical location and then the Support link.

Next, you'll probably need to search through menus to find the type (such as laptop) and specific model number (such as Intel DX48BT2) of your PC or motherboard. This is usually a more foolproof way to find the correct product than to type the model number in a search field.

Finally, open the latest version of the users manual in your language. Browse its contents for error or beep codes and what they mean. There also might be an Error Codes link elsewhere on the support page, such as in the FAQs (frequently asked questions) or behind a Troubleshooting Boot Issues link. For instance, Intel says on its BIOS Beep Codes page that three beeps means a problem with the RAM (tinyurl.com/jd9nn). ‖
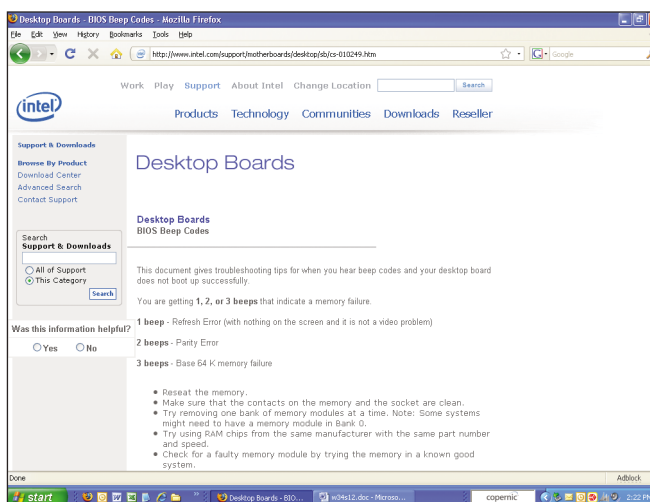
If you don't have a printed or electronic users manual, check the support section of the PC or motherboard manufacturer's site online.

How To Fix Common Problems With
Microsoft Excel

Excel 2007 offers some intuitive new features that facilitate improved management of the information you modify within Excel. Easy formula writing, enhanced data sorting, and updated PivotTables allow you to manage Excel with increased efficiency. However, Excel isn't a perfect program, which means troubleshooting is inevitable.

We'll walk you through some errors and problems that can arise when you're working with Excel 2007 in Windows Vista.

Update To The Latest Version

If you choose to upgrade to Office 2007, direct your browser to office.microsoft.com, and download your preferred version of Microsoft Office. Office Standard ($239.95 upgrade; $399.95 full), Home And Student ($149.95), or Professional ($329.95 upgrade; $499.95 full) are common choices for home users. All versions of Office 2007 include Excel 2007. Save at least 500MB on your hard drive to allow for adequate storage. Additionally, you'll need 1GB to enable grammar and contextual spelling in Microsoft Word.

Maybe you're already running Office 2007 and you know you need to install the most recent updates from Microsoft. The 2007 Microsoft Office Suite SP1 (Service Pack 1) will provide the necessary performance and security enhancements to bring your suite up to speed. SP1 supports Vista and Windows XP Service Pack 2.

Updates For Excel 2007 that address vulnerabilities, revisions, and assistance content are available in the Downloads tab at Microsoft Office Online. Under By Version in the left-hand column, click 2007 Office System. Next, select Excel 2007 from the list of downloads; then click Updates. You'll find multiple updates ready for installation. Select these individually to access each download page.

Startup Setbacks

When you're trying to open a workbook full of important and timely data, you don't want to run into any complications. It will help you to know which steps you should take if Excel just won't start.

Problem: Excel cannot open due to a corrupted shortcut.
Solution: You can determine if the Excel program shortcut has been corrupted by performing the following steps. Go to Start and type **Excel.exe** in the Start Search box. When Excel.exe appears, click the file to open Excel 2007. If Excel loads normally, then you can attribute the cause of startup error to the corrupted shortcut. The resolution is simple: Create a new shortcut. Right-click the old shortcut and click Delete. Now click Start, All Programs, and Microsoft Office. Right-click Microsoft Office Excel 2007, choose Send To, and click Desktop (Create

Shortcut). A new shortcut should be visible now.

Problem: A workbook takes an extended amount of time to open when you launch Excel 2007 for the first time. You may see an additional error message when you close the Excel file: "Do you want to save the changes you made to [*filename*]? Microsoft Excel recalculates formulas when opening files last saved by an earlier version of Excel."
Solution: If you attempt to open a file that was originally saved in an earlier version of Excel, the program recalculates the entire file for the latest version. However, when you resave the file in Excel 2007, it shouldn't open as slowly.

Problem: Excel will not load properly after a first and second attempt to open the program.
Solution: When Excel fails to open normally, this may indicate a problem involving programs other than Excel. You'll need to start Excel in Safe Mode in order to find out where the conflict might lie.

Go to the Start Menu, type **run** in the Start Search box, and click Run. The Run window will appear; now, click Browse and find the Excel folder. Excel's
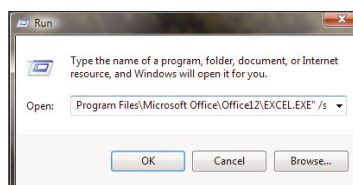
To start Excel in Safe Mode, add /s to the file path in the Open box.

default location (the Excel.exe file) is C:\PROGRAM FILES\MICROSOFT OFFICE\OFFICE12. When you locate Excel in its installation folder, click the file and click Open. In Run, click the file path next to Open and move your cursor to the end. Type one space and then /s (this should appear as "C:\PRO-GRAM FILES\MICROSOFT OF-FICE\OFFICE12\EXCEL.EXE" /s). Next, click OK to open the program.

If it doesn't open, try the process again. If it still does not load with the /s attached to the file path, click Start, Control Panel, Programs, and Programs And Features. From here, you will need to remove either Microsoft Office 2007 or Excel 2007, because Excel may have used a corrupted Office file during startup. Locate your installation discs and follow the Office Setup Assistant to complete the steps for rein-stallation. By reinstalling ei-ther the Microsoft Office Suite or Excel, you should be able to use Excel in "Real" mode.

File Complications

When you can't open a file or you receive an error message notifying you of a problem within Excel, don't assume that you've lost the file. The cause of file errors can stem from any number of reasons—you just have to narrow down which one is giving you trouble. We'll point out a few symptoms and remedies related to finicky files.

Problem: Every time you try to open a file, Excel generates the same error message: "The document [*filename*] caused a serious error the last time it was opened. Would you like to con-tinue opening it?"
Solution: This error message indicates that the Excel file was placed on the disabled files list. The Microsoft

Office program adds files to this list if a file crashes repeatedly. Microsoft informs you of issues that might arise through warning messages such as this one.

You need to move the Excel file out of the disabled files list. In Excel 2007, select the Office button. Click the Excel Options button and then click Add-Ins. In the drop-down menu next to Manage, choose Disabled Items and click Go. Click the Excel file

The Excel Options window will help you manage and modify your content settings in Excel.

you wish to remove from the list and then click Enable.

Problem: You receive the following message every time you open or save an Excel file: "[*Filename*].[*extension*] could not be found. Check the spelling of the file name, and verify that the file location is correct. If you are trying to open the file from your list of most re-cently used files on the File menu, make sure that the file has not been re-named, moved, or deleted."
Solution: According to Microsoft, when you save or open a file to or from a path more than 218 characters, you will be notified by this message in Excel 2007. File paths are limited to 31 sheet name characters, apostrophes, brackets, exclamation points, and a cell reference.

To minimize the number of charac-ters in the file path, you can start by giving the file a shorter name, or you can rename the file folders. Lastly, try transferring the file to a folder that al-ready has a short path name.
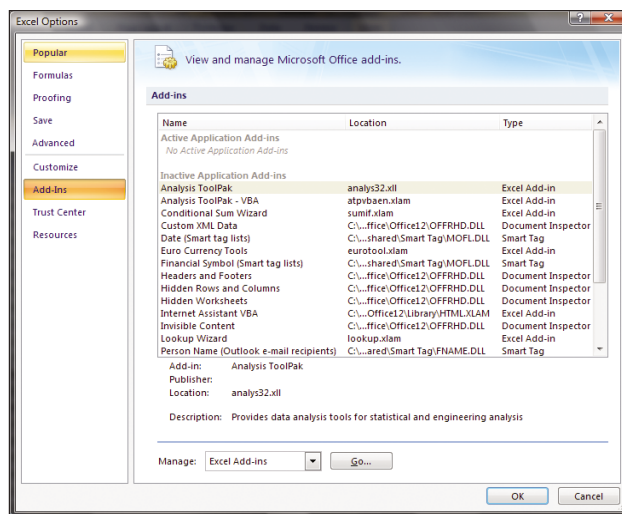
Problem: You're having trouble saving files in Excel even after you reboot Windows in Safe Mode and attempt to resave the file.
Solution: There are potentially several causes preventing you from saving your file. Based on Microsoft's list, these causes can include a third-party add-in, an antivirus soft-ware conflict, and more. We'll inform you of a few of these possibilities below.

Third-party add-in. Nor-mally a third-party add-in from a startup location doesn't affect the perform-ance of Excel. To check whether it is affecting Excel, though, start by exiting Excel if the program is open. Go to Start, Pro-grams, Microsoft Office, and Microsoft Office Excel 2007. Press and hold the CTRL key while you click Excel. A message will pop up that reads, "Excel has detected that you are holding down the CTRL key. Do you want to start Excel in safe mode?"

Click Yes. Now try to save and re-save the same Excel file. A third-party add-in is the culprit if your file saves normally in safe mode. To determine which add-ins are currently active, click the Microsoft Office Button and Excel Options. Click Add-Ins. The Add-Ins box will display your Active Application Add-Ins, Inactive Ap-plication Add-Ins, Document Related Add-Ins, and Disabled Application Add-Ins. You can deselect available add-ins by choosing Excel Add-Ins from the Manage drop-down list and clicking Go. By clearing any checked add-ins, you are unloading add-ins from the Office Ribbon. If you need

to remove an add-in to save your file, contact the vendor or manufacturer to discover the details of this add-in. The vendor can provide troubleshooting information or possibly an update to the add-in that will eliminate the issue. You may need to uninstall add-ins entirely. To do this in Vista, click Start, Control Panel, Programs, and Programs And Features. Click Microsoft Office or Excel (depending on how you installed the program) and select the Change button. Continue by following instructions given by the on-screen wizard.

Full drive. Obviously, you need free space on whichever device you're saving a file, whether it's a hard drive, flash drive, or network drive. You might receive a Disk Is Full message when you've reached the capacity of a particular drive. If you see this message while trying to save a file, transfer the file to a hard drive or disk with an adequate amount of space.
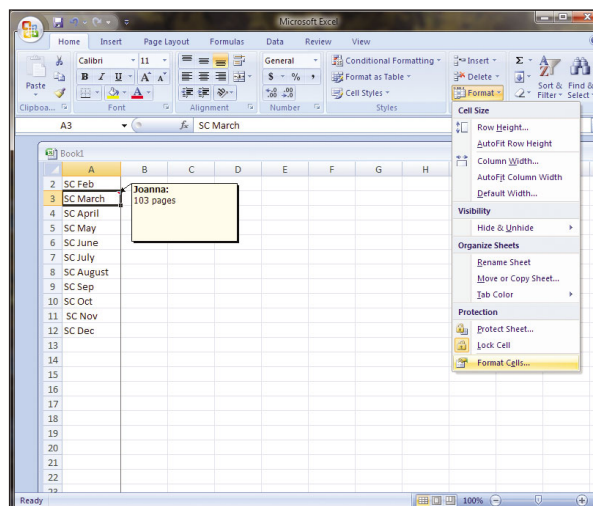
Antivirus block. Many antivirus programs scan your computer and look for unfamiliar (new) files. If you're attempting to save an existing file during an antiviral scan, your file might not save properly. You should wait for the antivirus software to finish its system scan before you save your Excel file.

Other errors. Microsoft provides information regarding several more errors and problems you may see while saving. Go to the following troubleshooting article to read about additional problems: tinyurl.com/4qcuhc.

Miscellaneous Problems

In this section, we'll take you through other possible errors and issues you may encounter. You can't always predict what type of error could appear, so take note of these problems so you can be prepared for unexpected inconveniences.

Problem: You attempt to insert rows or hide columns in Excel, and an error

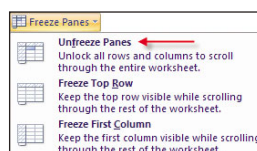message appears that reads, "Cannot shift objects off sheet."

Solution: Excel can be a little touchy when it comes to properly shifting objects in a worksheet. Cell comments, graphs, drawing shapes, and pictures can be troublesome if they're not visible on the worksheet.

Changing the properties of objects such as cell comments is one resolution you can try. To do this, right-click a cell in Excel that has a hidden comment. Choose Show/Hide Comments. Position your pointer over one corner of the cell comment box until you see a four-pointed arrow and then click to select the comment box. Now, select Format, which is located in the Cells group on the Home tab. Choose Format Comment, click Properties, and then click Move And Size With Cells. Click OK. This solution also applies to other objects mentioned above.

Problem: You want to scroll to different areas of your spreadsheet, but some sections in the spreadsheet aren't scrollable.

Solution: You can assume that the Excel worksheet panes are frozen. Fortunately, there is a simple solution.

If you need to expose hidden comments to stop an error message, be sure to follow each step in the first Problem listed in Miscellaneous Problems.

Click the View tab. In Window, choose Freeze Panes. Now, click Unfreeze Panes. If you would like to refreeze worksheet panes, perform the same steps, but instead of clicking Unfreeze Panes, click Freeze Panes.

Problem: Excel is preventing you from using outside content in your workbook.

Solution: Office 2007 is designed to block external data that could make your PC vulnerable to intrusions (such as tracking objects that detect

A frozen Excel pane may prevent you from scrolling to some areas in your workbook. Click Unfreeze Panes in the Freeze Panes menu in the Window group to access your data.

which users have accessed a Web page or read an email).

To allow external content in your workbook, you'll need to enable your data connections to permit external content. (You can always deactivate this setting in the Security Setting For Data Connections section we'll direct you to below.) Click the Microsoft Office button, Excel Options, and Trust Center. Next, click Trust Center Setting and choose External Content in the left pane. Lastly, under Security Settings For Data Connections, click the circle on the left of Enable All Data Connections; then click OK. ∎

BY JOANNA SAFFORD

How To Install
Video Cards

I f you're among the majority of PC users who think video cards are only useful for people who play a lot of games, think again. Improving computer performance is all about taking as much stress as possible off of the CPU (central processing unit) and RAM (random-access memory), and a good video card does both. It processes video information that otherwise requires CPU resources to crunch, and its dedicated video memory banks free up system memory for programs and files, letting you run more programs at the same time without bogging down the system. Oh, and did we mention that a good video card also lets you play cool computer games that would otherwise slow the computer?

Choosing A Video Card

Any video card you choose must be compatible with both your computer's motherboard and its monitor. The motherboard is the large slab of silicon inside the PC's case where all of the interconnects for the memory, drives, CPU, and other components are located, and it includes at least one slot where the video card will be installed. The first thing to check is whether the motherboard has a dedicated video card slot, such as

a PCI-E (Peripheral Component Interconnect Express) x16 or AGP (Accelerated Graphics Port) slot. If so, buy a card that matches the specifications of that slot. If the motherboard only has a generic PCI, make sure you don't buy a PCI-E card.

As for the monitor, make sure the card you purchase has video outputs that match at least one of the monitor's video inputs. Also check the monitor's documentation to find out what its maximum resolution is and only buy a card that can output video at or above that resolution.

Installation: Step-By-Step

Once you have the hardware, the process of getting rid of your old video card and installing the new one is relatively easy. You just need to know what pitfalls to watch for and keep the documentation that came with your computer, monitor, and video card handy.

One thing to keep in mind during the installation is static electricity. Video cards are a complex collection of delicate components. They come packed in an antistatic bag because even a small

jolt of static electricity in the wrong spot is enough to fry a vital component and render the card useless. Consider buying a wrist strap from a computer shop that keeps you grounded as you work with the card (and the rest of your computer), and if that's not an option, at least be sure to touch a grounded metal object to discharge static electricity before working in the computer's case or handling your new video card.

Step 1: Uninstall The Current Video Card Driver

Drivers are software that let hardware and Windows communicate with one another. Hardware manufacturers update video card drivers regularly, adding new features, improving performance, and fixing bugs, so using the latest driver can save you from a lot of troubleshooting due to incompatibilities.

Before installing the new card and drivers, however, you should get rid of any video drivers already installed on the computer. In Windows XP click Start, click Control Panel, click Add Or Remove Programs, click Add Or Remove Programs again, and click the entry for your Nvidia or ATI driver. Click Change/Remove, click Yes, and
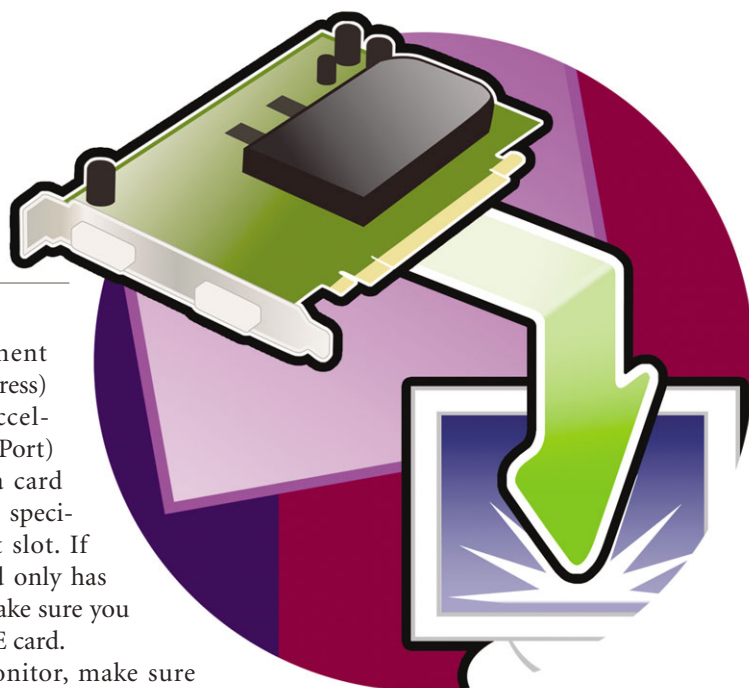
This card has a DVI output (middle) and a VGA output (right). The small black output (left) is for S-Video output to televisions.

follow the prompts to remove the driver from the computer.

If you have Vista, click Start, click Control Panel, click Uninstall A Program, and click the Nvidia or ATI driver entry in the Uninstall Or Change A Program list. Click Uninstall and follow the prompts to complete the uninstallation.

Step 2: Check For New Video Drivers

Drivers are specific to both the computer's operating system and the video card, so be very careful when downloading them so that you don't accidentally end up with something that won't work on your system. Before checking the manufacturer's site for updates, click Start, right-click My Computer (or Computer in Vista), and click Properties. Write down the exact name of the operating system that appears in the System section in WinXP or the Windows Edition section in Vista.

Because you are installing a new video card, you can get its exact model number from the packaging. Armed with that information, visit the Web site for your video card and download the latest drivers for your particular operating system and video card. You can also get drivers from www.nvidia.com if you have an Nvidia-based card or at tinyurl.com/3vrxsw if you have an ATI-based card. If you are prompted to reboot the computer, don't. Shut it down instead.

Step 3: Remove The Old Video Card

With the computer turned off, discharge any static electricity from your body, unplug the computer, and open the computer's case. You may need to disconnect some wires from the back to accomplish this, so use a digital camera to take some pictures of the current cable arrangement, so you can easily reconnect everything later.
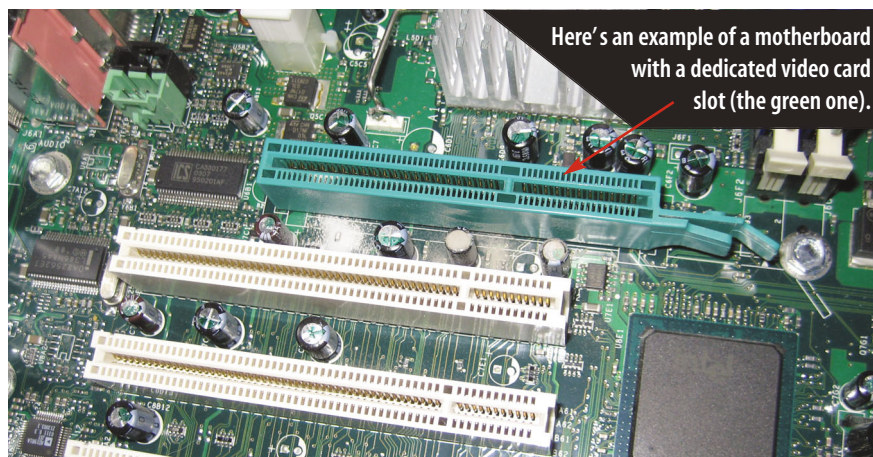
Many computers have integrated video cards, meaning the video hardware is baked directly into the motherboard and there is no standalone card

to remove. If the video cable from the monitor does not connect to a standalone card, remove the monitor cable from the computer's video output port and move on to the next step. If there is a standalone card, remove the monitor cable from the card and release whatever restraining mechanism secures the video card to the motherboard. In some cases, this is a screw, but newer PCs often use a restraining bar or other device that can be opened without using tools.

Look near the bottom of the card to see if there is a plastic clip also holding the card in place. If there isn't, grasp the card at the top with both hands (being careful to touch only the silicon portion of the card) and lift it straight up until the card releases from the slot. If there is a clip, you'll often need to hold it open with one hand while you

Here's an example of a motherboard with a dedicated video card slot (the green one).

pull straight up on the card with the other hand.

Step 4: Install The New Video Card

Once again, discharge any static electricity that may have built up during the previous step and then check the video card slot for dust or other debris and use compressed air to blast it out. Never use paper towels, cloth, or solvents as they can leave fibers or residue behind that cause even more problems than the dust.

Remove the card from its antistatic bag, grabbing only the metal plate on

the front of the card where all of the video output ports are located. Line the card up in the slot, place both thumbs on the top of the card, and press straight down until the card is fully seated. You can check by looking at the metal contacts on the bottom of the card and making sure they all stick out a uniform distance from the slot instead of some sticking out more than others (which indicates the card is sitting at an angle in the slot). It doesn't take a lot of pressure to fully seat the card, and pressing too hard can crack the motherboard or cause you to put sideways pressure on the card, which can damage the slot or snap off the contacts at the bottom of the card.

Once the card is fully seated, secure it using the same locking mechanism you opened earlier and then connect any power cables the card may require.

If you are using SLI (Scalable Link Interface) or CrossFire equipment (see sidebar) connect any other cables they may have come with so the two cards can communicate with one another. If you had to move any cables out of the way during installation to accommodate the new card, make sure they are still seated securely in their respective ports and then close the computer's case.

Step 5: Connect The Card To Your Monitor

Most new video cards have more than one output port on the back,

using some combination of VGA (Video Graphics Array) and/or DVI (Digital Visual Interconnect). If your monitor supports DVI, use that connection as it is all-digital and provides far crisper output than the analog VGA output can muster. You may need to purchase a DVI cable if your old video card didn't support DVI output, but the expense is well worth it.

Step 6: Check The BIOS

If you had to remove a standalone card before installing the new card, you can turn on the monitor, turn on the computer, and skip this step. If your computer relied on integrated video before you installed the new card, you may need to tell the computer's BIOS (Basic Input/Output System) to disable the integrated hardware so that the new card can do its job. To do this, check the computer's manual to see how to access the BIOS before Windows loads. Generally, you must press a key such as F2 or F8 immediately after turning on the computer.

Be very careful when modifying BIOS settings, as changing the wrong one can prevent your computer from booting or even damage certain hardware. If you are ever in doubt, exit the BIOS without saving your changes and start again from scratch. You need to navigate to the setting that disables integrated video, turn it off, save the changes, and restart the computer. The procedure for doing this varies based on the type of BIOS installed on the computer, so if you don't have the manual, you may need to call technical support and have them walk you through it.

If you use CrossFire or SLI, you may also need to enable it using the BIOS, so check the documentation that came with your computer.

Step 7: Install The New Video Card Driver

When Windows boots, it detects the new hardware and in most cases will install a generic driver so the new hardware works with minimal functionality. In some cases Windows will ask you to locate a driver, and you can point it to the driver software you downloaded earlier, but often you must let Windows load, cancel any driver requests, manually double-click the driver software you downloaded earlier, and follow the Wizard instructions to set it up. This process requires a reboot, after which your new hardware is fully installed and functional.

Step 8: Check The Settings

When Windows is running, right-click an empty area of the Desktop and click Properties in WinXP or Personalize in Vista. In WinXP, click the Settings tab and use the Screen Resolution slider to select a value that is ideal for your monitor. In Vista, click Display Settings and adjust the Resolution slider. If you use an older CRT (cathode-ray tube) display, the ideal value is a matter of personal preference, but LCD users should select a value that matches the native resolution of the display (which is listed in the manual). Make sure Color Quality is set to Highest (32-bit), click Apply, and enjoy the speed improvements provided by your new video hardware.

Final Tweaking

Depending on the type of video card you installed, there are likely a number of additional settings you can adjust to improve performance or video quality in games or other 3D applications. Check the video card's manual to see how to access these settings and what they do. Check for new video card drivers every month or two to keep your card running smoothly. ▌▌

BY TRACY BAKER

Double-Barrel Graphics: SLI & CrossFire

If you crave maximum video performance, why install just one video processor when you can install two, three, or even four? Most cards that support Nvidia's SLI (Scalable Link Interface) or ATI's CrossFire technology are designed to work in matched pairs, with each card handling half of the video output you see on your display. Some configurations even work with up to four graphics processors (commonly two cards with two processors each), boosting performance to insane levels. Synchronization and other issues conspire to prevent these technologies from truly doubling, tripling, or quadrupling video performance, but for certain applications like 3D gaming, the results are impressive.

SLI and CrossFire are ideal for those who use large monitors that support a very high resolution (1,920 x 1,200 or higher) and want to play 3D games or work with other 3D software at those high resolutions.

Aside from their obvious performance advantages, SLI and CrossFire aren't worth it for most users. Even if the hardware is within your budget, most people don't run the types of applications SLI and CrossFire accelerate, especially at resolutions requiring that much video horsepower. The technology only works with certain motherboards, so there's little chance your existing PC supports it, and adding multiple video cards can cause heat issues and overtax the PC's power supply if you don't know what you're doing. SLI and CrossFire definitely represent the pinnacle of current consumer video technology, but know what you're getting into before adding these technologies to your system. ▌

EXAMINING ERRORS

COMPILED BY THE SMART COMPUTING STAFF

Error: The document name or path is not valid. Try these suggestions. Check the file permissions for the document or drive. Use the File Open dialog box to locate the document.

Translation: You may see this error message when you enter an incorrect password when you try to open a password-protected Word document. Typically, Word would generate a The Password Is Incorrect error message, but the application generally produces a The Path Is Not Valid message when Word has been configured to use an incompatible type of file encryption.

Solution: Open Microsoft Word, select the Tools menu, choose Options, and click Security. Type the password you want to use and click Advanced. At the Encryption Type dialog box, choose either Office 97/2000 Compatible or Weak Encryption (XOR) and click OK twice. Re-enter your password and click OK. Save the file to use an encryption type that will allow you to open your password-protected documents. For more information, see support.microsoft.com/kb/286890. ▌

Error: Runtime Error!! Program:c:\program files\Internet Explorer\iexplore.exe. This application has required the runtime to terminate in an unusual way. Please contact the applications team for more information.

Translation: You may receive this error message when you first start Internet Explorer or while using IE. You'll see this message because IE has a conflict with one or more of the installed add-ons, which causes IE to behave erratically or even close completely.

Solution: Most often, this error is caused by the Google Toolbar Add-on. First, you should try removing Google Toolbar. In Internet Explorer, go to Tools, Manage Add-ons, and choose Enable Or Disable Add-ons. From the list of Enabled add-ons, choose Google Toolbar Helper. Under the list, choose the Disable radio button in the Settings box, and then press OK. If the error persists, try disabling other add-ons, one at a time, to locate the conflicting application. ▌

Error: The User Profile Service failed the logon. User profile cannot be loaded.

Translation: If you are attempting to log on to a PC that runs Windows Vista with a temporary user profile, you will receive this message when the Do Not Logon Users With Temporary Files Group Policy setting is configured. You may receive this error message after manually deleting a user profile. If you manually delete a profile via Windows Explorer or a command prompt, the security identifier remains in the registry. This ID causes conflicts when attempting to log on.

Solution: First, open your Start menu, and then right-click Computer. Select Properties, and then click Change Settings, which is found under the Computer Name, Domain, And Workgroup Settings heading. Choose the Advanced tab when the System Properties box pops up. In the User Profiles section, click Settings. Find the profiles you want to remove, select them, and then click Delete. To finalize these changes, click OK.

Next you will need to make a few tweaks to the registry. Be sure to follow these directions closely, because serious problems can occur if you incorrectly edit your system registry. To back up your registry, in Vista, click Start, type **regedit** in the Start Search box, and press ENTER. Next click File and Export, select All in the Export Range section, name your file, choose a location for the file, and click Save. Now you're ready to edit the registry.

Double-click the HKEY_LOCAL_MACHINE folder in the registry and then click the arrow next to the Software folder to make it expand. Find and expand the Microsoft folder and then do the same to the Windows NT folder. Expand the CurrentVersion folder, and then find ProfileList. Go to the profile you want to remove. (You can tell which profile the string of numbers represents by clicking it and looking at the ProfileImagePath entry.) Right-click it, and then choose Delete. Exit the registry, log off your computer, and then create a new profile. ▌

User Account

Error: The specified path is invalid.

Translation: You may see this error message in Windows Media Player when you attempt to play a file that no longer exists at the location referenced by Windows Media Player. It's possible that the file has been deleted or moved to another folder on your hard drive.

Solution: Make certain that the file is located in the folder where Windows Media Player is attempting to access the media. To play a file from your computer's hard drive, click the Start button and select the Search button. Enter the name of the media you are attempting to watch or listen to. Write down the file location, right-click the file, and select Open In Windows Media Player. In Vista, navigate to the file, right click it, and choose Play (if the file is set to play in WMP) or choose Open With and select Windows Media Player.

If you're trying to stream media from a Web site, the content may no longer exist on the Web site's server. It's also possible that the file format is not supported by Windows Media Player. To verify if Windows Media Player supports the type of file you want to play, visit support.microsoft .com/kb/316992. ▌

Error: LOW DISK SPACE You are running out of disk space on [*computer name and drive letter*]. To free space on this drive by deleting old or unnecessary files, click here . . .

Translation: Your hard drive has too little room for virtual memory. You have used up the space on your hard drive.

Solution: You need to perform maintenance by deleting old or unnecessary files and possibly upgrade to a larger hard drive or move some of your files to external storage. You should also run Disk Cleanup and Disk Defragmenter in order to free up space on your hard drive. In WinXP click Start, Control Panel, Performance And Maintenance, and Free Up Space On Your Hard Drive to launch Disk Cleanup. To run Disk Defragmenter, click Rearrange Items On Your Hard Disk To Make Programs Run Faster in Performance And Maintenance. In Vista, click Start, type **Disk Cleanup** in the Start Search box, click Disk Cleanup, and follow the directions on-screen. To launch Disk Defragmenter in Vista, type **Disk Defragmenter** in the Start Search box and then follow the directions you see on the screen. ▌

Error: To help protect your computer, Windows has closed this program. Name: Generic Host process for Win 32 Services.
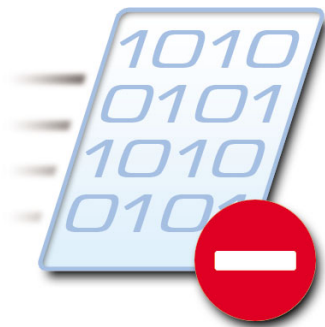
Translation: Windows' DEP (Data Execution Prevention) feature has detected a problem with a driver or program, and has shut it down in case it is a security risk. The Generic Host Process itself probably isn't the culprit, but one of the processes under its command is.

Solution: The best solution is to find the process with the problem, such as a driver, and update it with the latest version from the manufacturer. If the error message occurs when you launch a particular program, check for an update.

If it happens after every bootup, disable all items in the Startup list: Click Start and Run, type **msconfig** (in Vista type **msconfig** into the Start Search box), press ENTER, and click the Startup tab. Click Disable All, Apply, and OK. Next re-enable one of the processes and reboot. If the error message doesn't occur, repeat the re-enabling and rebooting procedure until you discover the problem driver or application.

If there is no update for the troublesome app or driver, and you are certain that its process is not a security risk, you might disable DEP's monitoring of it. Check the Microsoft articles at support.microsoft.com /kb/875351 and support.microsoft .com/kb/875352 for detailed information on how to do this. ▌

Have questions about an error message you've seen? Send us your message (errormessages@smartcomputing.com), and we'll try to decipher it. Tell us what version of Windows you're using, give the full text of the error message, and provide as many details in your explanation as possible. Volume prohibits individual replies.

FAST FIXES

Update For Office Outlook 2003 Junk Email Folder

Problem: Office Outlook 2003 incorrectly assigns some emails as junk mail when they should go to the Inbox.

Solution: To update Outlook with a more current definition of which emails should be considered junk mail, download an update. Go to www.microsoft.com/downloads, type **KB956077** in the Search field and click Go. From the results list, click the Update For Office Outlook 2003 Junk Email Filter (KB956077) link. On the following page, click Download, found in the blue box. Save the file to your hard drive. Once the download is complete, locate the file and double-click it to begin the installation. Follow the on-screen directions to install the file. When it is complete, restart your computer.

www.microsoft.com

Security Update For Windows Media Encoder 9 Series

Problem: Microsoft has detected a security issue in Windows Media Encoder 9 Series that could allow an attacker to compromise and gain control of your system.

Solution: To secure Windows Media Encoder 9 and your Windows-based system, go to www.microsoft.com/download and download an update. Type **KB954156** in the Search field and click Go. The results list will contain an update for each operating system available (such as Windows Vista/XP/Server 2003). Choose the link that corresponds to your operating system, and on the following page, click the Download button. Save the file to your hard drive and, once the download is complete, double-click it to start the installation. Follow any on-screen directions to finish the install process. Restart your computer.

www.microsoft.com

iTunes 8 Update

Problem: Previous versions of iTunes lacked HD (high-definition) video availability.

Solution: To download HD video for a computer and iPod, and to take advantage of other new iTunes features such as Genius Playlists and visualizers, download the latest version of iTunes. Go to www.apple.com, type **iTunes 8** in the Search field, and press ENTER. From the results list, choose Download iTunes in the top box. On the next page, click the Download Now button and save the file to your hard drive. When the download is complete, locate the file and double-click it to begin the installation. Carefully read the directions to complete the installation. When finished, restart your computer.

www.apple.com

Security Update For Microsoft Office 2003

Problem: A vulnerability in Microsoft Office 2003 could allow an attacker to compromise your system by remotely executing code.

Solution: To safeguard Office and your system, download an update from Microsoft. Go to www.microsoft.com/downloads and type **KB953404** in the Search field. Click Go. On the results page, click the Security Update For Microsoft Office 2003 (KB953404) link. On the Download page, review the Description and click Download. After you save the file to your hard drive and the download is complete, double-click the file. Follow the on-screen directions to complete the installation and restart your computer.

www.microsoft.com

Windows Media Components Update For QuickTime

Problem: QuickTime does not support Windows Media files such as WMA (Windows Media Audio) and WMV (Windows Media Video) files, creating compatibility issues.

Solution: In order to play Windows Media files in QuickTime, download a Microsoft component for QuickTime. Go to www.microsoft.com/downloads and type **Windows Media Components Update For QuickTime** in the Search field and press ENTER. From the results list, choose the link with the same name. Click the Download button and save the file to your hard drive. Once the download is complete, locate the file and double-click it. Carefully read the instructions to complete the installation and restart your computer.

www.microsoft.com

FIX OF THE MONTH

Adobe Installer Transform Tool

Problem: When you try to repair, update, or uninstall Adobe Acrobat 8 or Adobe Reader 8, you receive the following message: "Error applying transforms. Verify that the specified transform paths are valid."

Solution: This error occurs because the transform files (that enable the program to be modified and installed) are applied incorrectly, causing the install process to fail. To correct this error, download the Adobe Installer Transform Tool. Go to www.adobe.com, type **KB404307** in the Search field, and press ENTER. From the results list, choose Acrobat: For Windows: Adobe Installer Transform Tool. On the next page, click the Proceed To Download button, and then click Download Now. When the download is complete, locate the file on your hard drive, double-click it, and follow the on-screen directions to complete the installation. When finished, restart your computer.

www.adobe.com

Q&A

Online

Q I have a notebook computer that connects to the Internet using a USB Verizon high-speed wireless card. Can I attach a wireless router or something so other computers can access the Internet through this connection?

A Before you proceed, carefully read your contract with Verizon, with an eye out for limits on the amount of traffic you're allowed in a monthly period. Many broadband providers are instituting bandwidth caps, and you may be in for a surprise if you use your connection extensively without understanding the pricing.

There are many ways to share your Internet connection; our recommendation is to use a device such as CradlePoint Technology's CTR350 Cellular Travel Router ($149.99; www.cradlepoint.com). This compact appliance transforms your cellular modem into a Wi-Fi hotspot you can use for several computers.

We like the CTR350 for several reasons: It supports WPA (Wi-Fi Protected Access) security, includes a firewall to block intruders, includes an Ethernet port for computers that don't have a Wi-Fi card, and packs this in a small device the size of a deck of cards.

If not all your computers have Wi-Fi adapters, you'll need to purchase an Ethernet hub to connect to the CTR350's port.

Q I keep reading about Web 2.0. Am I missing out on something?

A The Internet is fertile ground for buzzwords, and "Web 2.0" is one of the latest to spring forth. The exact definition is ephemeral, but we'll try to outline the basics of what constitutes Web 2.0.

First, don't fear that you've been missing out on a new experience. If you've been using the Internet in the last year, it would have been hard to avoid Web 2.0 sites and apps.

At its core, Web 2.0 is really about user-generated content. This content can be in the form of a "blog" where readers can reply to articles posted by the author. It can be photos shared on sites such as Flickr.com where users can post comments and "tag" photos with categories.

It can be a site such as Digg.com, where users can post links to Web sites and both comment on the Web site's content, as well as vote for it.

For many users, these types of sites are the Internet. In fact, many of the early Internet pioneers decry the notion of Web 2.0 as jargon and hype. Our recommendation is to enjoy the sites and applications you find on the Internet without worrying whether they're Web 2.0. Sooner or later, someone will try to tout the next thing on the Internet as "Web 3.0."

Multimedia

Q My children recently gave me a gift of a Digital Photo Album Keychain from Sharper Image and the instruction booklet says to disable virus software before installing the driver software. How do I disable and then re-enable the virus software?

A Most antivirus programs for Windows will have a small icon in your System Tray. If you click the icon, you'll usually launch a management window that will allow you to temporarily disable your antivirus protection. If you're using an antivirus package that doesn't have a System Tray icon, check the manufacturer's Web site for any instruction manuals specific to your version.

The reason that the instructions want you to disable the software is because it's possible the antivirus software will think the software driver for the digital album is a virus. Antivirus software usually tries to match software with a signature of a virus. If it matches, it either blocks the software from being installed or moves it to a quarantine folder.

Windows

Q I get auto updates to Windows Vista at least once and sometimes twice a week, usually to update Windows Defender. However, I still haven't gotten Service Pack 1. Is there a reason why? Also, what does the Malicious Software Removal Tool do, and how do I know it's working?

A If you have Windows Update properly configured for automatic updating, you should have already downloaded and installed Service Pack 1. First check to see if you already have Service Pack 1. Click Start, right-click Computer, and select Properties. If Service Pack 1 is installed, you'll see a reference to Windows Vista SP1 in the Windows Edition section.

If you don't have SP1 installed, the best way to install it is to make sure that Windows Update is properly configured. Click Start, All Programs, and then Windows Update. Next click Change Settings. We recommend selecting Install Updates Automatically (Recommended) with the Every Day option. Choose a time of day when you know your computer will be turned on. If you don't have Windows Update configured for automatic downloading and installation of patches, you're unnecessarily exposing your computer. It's too easy to forget to manually check for updates, and Windows Update will usually prompt you before restarting your computer. Also, checkmark the Include Recommended Updates When Downloading, Installing, Or Notifying Me About Updates box. Finally, click OK.

Next, you'll want to have Windows Update manually query Microsoft's site for updates. In the Windows Update pane, click Check For Updates. When it completes its check, click View Available Updates, mark the checkboxes for the updates you wish to install, and click Install. If Service Pack 1 doesn't appear, you'll need to manually download it from Microsoft's Download Center at tinyurl.com/52ojdq.

Once you've downloaded SP1, click the installer and follow the instructions to complete the installation.

Another tool that Microsoft installs through Windows Update is the Malicious Software Removal Tool. It searches and removes malicious software from your PC. The Malicious Software Removal Tool runs behind the scenes and only reports when it finds an infection.

Microsoft updates the Malicious Software Removal Tool each month with new signatures that match recently released malware. Although this tool won't protect you against each and every virus or piece of spyware, it does a reasonable job, and we recommend keeping it.

Online

Q How can I keep unauthorized people from reading emails I send? Many of my emails have confidential information in them, and I don't even want people to be able to forward the emails.

A In its native form, email is wildly insecure. It's sent across the Internet unencrypted, it can be circulated to third parties, and it's prone to easy forgery. Despite this, there are some steps you can take to protect yourself.

When security professionals talk about email, they focus on CIA: Confidentiality, Integrity, and Authentication. Confidentiality means keeping your email from being read by unauthorized people. Integrity means keeping people from tampering with emails you've sent. Authentication refers to proving that an email originated from you.

Two of the most common ways to provide CIA for your email are through the use of public key encryption or digital certificates. Programs from companies such as PGP (www.pgp.com) integrate with your email client to encrypt your email with keys that you exchange with recipients. You can also use digital certificates from companies such as Thawte (www.thawte.com) to encrypt and digitally "sign" your emails. Using a digital certificate from Thawte can be easier than exchanging keys because Thawte verifies your digital certificate.

Neither of these solutions will prevent a legitimate recipient from forwarding your emails to a third party. To guard against this, you'll need an application such as eCipher ($79.95 per year for the Pro version; www.ecipher.com).

Frequently Asked Questions

Answers to users' most common questions about PC Backup

If your PC suffers from a severe fault, such as hard drive failure or a virus attack that you simply can't clear, you can use the restore disc to return your PC to its "factory fresh" state.

FAQ **What is the difference between a factory restore disc and a backup? Do I need to make a backup even when I have a restore disc?**

A restore disc is typically a CD or DVD that ships with a new PC and contains a complete image of the operating system and basic applications provided by the PC manufacturer. If your PC suffers from a severe fault, such as hard drive failure or a virus attack that you simply can't clear, you can use the restore disc to return your PC to its "factory fresh" state.

By comparison, a backup is basically a copy of data that you make periodically to a CD, DVD, a USB hard drive, or other media. There are many ways to back up a PC. For example, a small, simple backup may only copy your recent Word documents or Microsoft Money files. These types of backups guard against accidental file deletion or corruption. More comprehensive backups can preserve your important applications, as well as data. These backups are ideal for protecting applications that you may have downloaded or no longer have the original installation media for. The largest and most complete backups can even capture the entire current state of your PC for complete recovery in the event of drive failure.

Factory restore discs are convenient, but they don't keep track of your system's evolution over time—they don't capture your driver updates, operating system patches, new applications and their patches, and all of the data that you created. So, if you restore a PC from its recovery disc, you'll need to reinstall all of the patches and programs that you've added since the system was purchased, and all of the data that you created will be lost unless you've made copies of those files.

There is no rule that says you must create backups, but they can be a lifesaver if you take the time to create them and keep them up-to-date. A full backup can capture the entire system state and allow you to restore your PC

to the moment that the backup was created, saving hours (even days) of updates, software reinstallation, and system reconfiguration.

FAQ **Can I use Windows Vista's Backup utility to make full-system backups, or should I use third-party software?**

We recommend using third-party software to create your full-system backups. The backup software that ships with consumer versions of Windows Vista (Home Basic and Home Premium) only backs up data files, not applications or the operating system. Fortunately, there are many great backup tools available. You may already have a third-party backup utility on your PC. If not, you can easily find backup software, such as Acronis True Image Home 2009 ($49.99; www.acronis.com), online or at a local electronics store.

FAQ **How often should I make backups? How should I test my backups?**

Backup tasks can be as simple or as complicated as you choose to make them. Most home users can probably create a full backup every six months and then just save daily or weekly backups of their work files on a rewriteable CD, a USB flash drive, or an external hard drive. It's always a good idea to create a full-system backup any time that you make a significant change to your system, such as replacing the video card with a powerful new graphics adapter or adding a major application. Small businesses can implement more sophisticated backups. For example, a small business may start with a full-system backup perhaps every three months and then perform incremental weekly (or even daily) backups to capture everything that has changed since the last backup and still create daily backups of important work folders for their users or servers.

Usually, home users and many small-business owners do not formally test their backups. In this case, just be sure to verify the backups as they are being made. This ensures that the data written to the media is readable. ▮

ACTION EDITOR

HP Makes Good On Refund & Dell Customer Receives Credit Due

Last November, I purchased an HP desktop, monitor, printer, and scanner online. The desktop had a defective DVD drive, and HP sent a replacement drive for it immediately. Since my hand shakes somewhat, I asked a technician at home to install it. An HP case manager agreed to my hiring of a local technician. At the case manager's request, I faxed a receipt for a refund of $99 (the cost of the installation). That was Jan. 28, 2008.

I phoned her after I didn't receive the promised refund by the end of February. She seemed surprised I had not received the check. Since then, I have spoken with three different case managers, all of whom agreed I should have received the check. Each one said they would leave a message for the original case manager to call me back. I'm still waiting. Eventually, I asked to speak to a supervisor and was told the supervisors don't talk to customers. At that point, I wrote to the HP CEO and president, as well as the board president. I received no other response except the customary formal acknowledgement from Customer Relations. That was in April 2008. No response. No check.

Name withheld
Monroe Township, N.J.

We passed along the reader's grievance to our HP representative. He replied to our email stating that he would send our message to the customer resolution team. We checked in with the HP rep six days after our initial conversation with him; he told us that the refund check was on its way to the customer. The reader informed us that an HP representative called to double-check that he had spoken to a case manager. Six days later, we heard from the reader, who stated that his $99 check arrived from HP.

In September 2007, I purchased a Dell computer system. This purchase came with a nice $50 gift card. I tried to use this gift card to purchase a product from Dell; they refused to honor it, claiming that it was only good for a few months after the original purchase and was-out-of date. I pointed out that the card clearly states that I had two additional months before it expired in November 2008.

The Dell representative refused to honor the card. After I was given the runaround for over an hour, I spoke directly to a Dell manager at Customer Care. She absolutely refused to honor the card. She even admitted to me that the validation dates embossed on the card were probably in error but continued to tell me that it is Dell's policy not to honor such cards.

If it is possible to intervene with Dell on my behalf, I would be grateful.

Robert Bertin
Canaan, N.Y.

After confirming with Robert that Dell had yet to honor his gift card, we sent an email to our Dell contact notifying her that Robert was unable to use his gift card to make a purchase. Anne informed us that Robert's case would be sent to the executive escalation team on that same day. The day after this correspondence, Robert emailed us, stating that an executive support representative at Dell contacted him to say that she had unsuccessfully attempted to identify the card as active and explained that Dell was having problems with its original gift card vendor (consequently, Dell dropped this vendor and hired a new company). The support representative instructed Robert to make a purchase from Dell for more than $50 and send her the order number in order to institute a credit of $50 to Robert's account. Robert followed these instructions, and he received his $50 credit four days after submitting his order to Dell. ▮▮

Yes, Yes, Yes, I Accept

Do you rush headlong into commitment, caught up in the thrill of new potential, heedless of long-term consequences and "minor" details? Forget about whirlwind romances and impulsive pet store purchases. I'm worried about commitments we make far more often than those big decisions. I'm talking about installing software. Too many of us blindly stroll along the garden path of accepting every proposal, every suggestion, and every (legally binding) agreement that comes our way. I've learned that there's a lot to gain by taking your time, paying attention to details, and knowing what you're getting into. If you're similarly cautious, you'll save yourself lots of reconfiguration, troubleshooting, and support headaches in the long run.

My first advice is the most obvious. It's also the guidance we're most likely to ignore. Pay attention to details. Read the fine print. How are you going to know whether you're agreeing to let the company selling (or giving away) that cool new utility sell your email address unless you read their licensing agreement? How can you tell exactly how long your trial software will last and what happens to the files created during that time unless you read the demo agreement? I understand that reading every dry word of every excruciating EULA (End-User License Agreement) is beyond the endurance of mere mortals. But at least try to skim through, looking for anything unusual or suspicious. And there's no good reason not to pay close attention to the small amounts of text on the other screens. Every once in a while, I find myself reflexively clicking OK without even looking at what's on-screen. At times like these, I invariably notice that, three clicks ago, I agreed to add yet another useful Internet Explorer toolbar or signed away my firstborn in exchange for "promotional considerations." Don't get caught napping (and childless). Slow down and pay attention to what you're putting on that expensive machine.

While you're reading each of those options, think about what a few of them mean. The choice between Standard and Custom (or Advanced) installation is one of the most important. Sure, you might save 30 seconds and three clicks by setting up that application exactly the way its manufacturer's marketing department recommends, without even looking. I think you're better off taking the time to keep an eye on what they're up to. I always, without fail, take the custom installation path—despite any scary warnings about them being for "advanced" or "experienced" users. You'll be amazed at what you find. Even if you don't change a single default, you'll learn something about where the software resides and how it integrates with other parts of the system. You might even discover useful options or configuration choices that you didn't know you had.

While reviewing the choices provided by a custom installation, watch out for a few traps. I always—always—refuse to add new things to my Desktop. We've all seen those Desktops cluttered with files, folders, and icons. How anyone ever finds anything in those messes is beyond me. You already know where and how to get at your programs—it's called the Programs menu. Avoid extra toolbars like the plague, as well. I've never found an add-on toolbar I prefer to just customizing IE, but if you find a browser toolbar you like, then stick with it. Letting programs add extra toolbars only slows things down and makes things harder to find.

Finally, don't be afraid to walk away. When you discover required add-on "components" that look suspiciously like spyware—and you will—cancel the installation. When you notice that there's no way to complete the setup without providing your email address and signing up for spam, decline the agreement and find another application. Don't get roped into a situation that's bad for your computer just because you're afraid there are no other options. No useful software is ever without some kind of competition. Or, as my dad used to tell me, there are always more fish in the sea. ▌▌

BY **GREGORY ANDERSON**

Gregory Anderson is a regular contributor to *Smart Computing* and several other technology publications. He keeps a sharp eye (with the help of thick glasses) on computing trends and enjoys working with geeks of all stripes—most of the time. Share chronicles of careful commitment at **gregory-anderson@smartcomputing.com**.

OVATION

Each month, the *Smart Computing* staff gets to work with all kinds of new computing and consumer electronics products. Here are some of the favorite items that recently crossed our desks.

Paint Shop Pro Photo X2 Ultimate

$99.99 ı Corel ı www.corel.com

Paint Shop Pro Photo X2 Ultimate helps you edit and create beautiful works of art with your photos. I enjoyed using both the easy editing features along with the more advanced features such as HDR (High Dynamic Range), which lets you merge photos taken at different exposures for the best detail in highlights and shadows. In addition to great photo-editing features, the Ultimate edition comes with a 2GB USB flash drive for backing up digital photos, support for more than 250 camera RAW formats, Corel Painter Photo Essentials 4, and much more. I especially like that this package comes with media recovery software, which can be very useful when a memory card becomes corrupted or you accidentally format the card before transferring its pictures to your PC. ∎

by Jennifer Johnson

PhotoSave DVD

$9.99 for three discs ı Verbatim ı www.verbatim.com

As with Memorex's SimpleSave (page 92 in the May 2008 issue), Verbatim's PhotoSave DVD is blank DVD-R media with friendly backup software that runs automatically. There's no need to install anything, so it's a great gift for technologically challenged users. At $3 to $3.33 per disc, however, you're paying for convenience.

Pop in a PhotoSave disc, and it can search your Windows 2000/XP/Vista PC, digital camera, and other storage media for virtually any type of photo file. Next, it can burn your photos to its 4.5GB storage area. ∎

by Marty Sems

XShot 2.0

$29.95 ı XShot ı www.xshotpix.com

Snapping a self-portrait while trying to capture the landscape behind you can be a photographer's biggest challenge. After numerous attempts to squeeze yourself (plus friends and family) into the frame, the snapshot still may not be quite right.

The XShot 2.0 is a retractable telescopic arm that will end your point-and-shoot annoyances. Using the tripod port at the bottom of your digital camera or camcorder, you can attach either device to the XShot with a few quick twists. Set your timer or activate video mode, and you're ready to go. Because the XShot extends up to 37 inches, I had no trouble photographing myself along with the background (the rule of thirds works best). Additionally, the XShot is perfect for shooting concert photos above the crowd—assuming you can get it past security. ∎

by Joanna Safford