ComputorEdge™ Online — 06/04/10

This issue:
Is Someone Watching with Spyware Software?

Stop spyware from "phoning home" to the mothership with your data! Use anti-spyware protection.

Table of Contents:

[Wally Wang's Apple Farm](#) by Wally Wang

Spyware on the Macintosh
Although the threat of spyware infecting a Macintosh is low, those still worried about Macintosh spyware should consider MacScan. Also, the rise of electronic self-publishing; what will Apple reveal at its annual developers conference?; the iPhone/iPad market seems to be exploding for developers; the multiple technical limitations of Flash; and a tip on switching to Internet radio stations for your listening pleasure.

[Rob, The ComputorTutor: Technology Solutions](#) by Rob Spahitz

Word Styles
This week we explore Word's Style features, which you may have used before. However, you probably didn't know just how much potential this feature has to save you a lot of time.

[Worldwide News & Product Reviews](#) by Charles Carr

The latest in tech news and hot product reviews.
Study: Video Games Improve Cognitive Function—Time-wasters may be good for your brain after all; Audio-Technica ATW-1821 Dual Wireless Microphones—A review of the high-quality wireless mics; NEC MultiSync LCD3090WQXi 30-inch LCD Monitor—Jam-packed with advanced technologies and features.

DEPARTMENTS:

[EdgeWord: A Note from the Publisher](#) by Jack Dunning

Amazon.com Is the Online Shopping King
When online shopping is the only alternative, Amazon.com has forged a reputation for customer service, integrity and selection. Plus, the reviews are compelling.

[Editor's Letters: Tips and Thoughts from Readers](#) by ComputorEdge Staff

Computer and Internet tips, plus comments on the articles and columns.
"Java vs. JavaScript Correction," "Digital Antenna—Alternative to Cable," "YouTube Article," "Wally's Two Cents"

Digital Dave

"Digital Dave answers your tech questions." by *Digital Dave*

Is copying and pasting files to a new hard drive an easy way to defragment files? Also, a primer on the Apple iPad's battery life and instructions on prolonging its use.

Dear Digital Dave,

I have a 1.5TB external USB 2 hard drive. The drive is almost full and needs to be defragmented. Windows Defragmenter says there is not enough HDD free space to defragment efficiently. If I copy/paste all the files to another, larger HDD, will the files be defragmented as they are moved? Is copy/paste a defacto defragmenter ?

Chuck Farmer
Broomfield, CO

Dear Chuck,

Whether or not copying files to another hard drive will act as a defragmenter depends upon how the target drive has been previously used. If it is an empty drive then yes, the files should be copied upon the new drive as contiguous files. If there are other files already on the drive, then it depends upon how fragmented those files are.

In order to defragment a drive, a certain percentage of the drive needs to be available when moving the files around. The process consists of moving the fragmented files to another location on the drive while clearing space for rewriting the file in one physically contiguous area. This means that at times there may be a number of duplicate files written while areas of the drive are being cleared. The more fragmented files and the less available drive space, the longer the process will take. If there is too little empty drive space, then the program will not start.

Your idea is reasonable; however, you do not need to move all of the files to another media. If you move only enough to get your defragmenter running, then you can clean up the original drive then copy the moved files back. However, you will be in the same situation if you need to defragment again.

For whatever your use, it does sound like you need a larger hard drive. When you initially copy everything to the new drive, it should come in defragmented.

Digital Dave

Digital Dave's Tip

After last week's question on laptop battery life, I started thinking about the issue people have raised concerning the iPad battery and the fact that it can't be swapped out by the user. It is worthwhile to take a look at the Apple iPad's battery.

Apple and the iPad Battery

Apple has installed a lithium-ion polymer battery in the iPad. This is the same type of battery that is used in cell phones. Although its characteristics are similar to the lithium-ion batteries used in laptop computers, it is lighter, easier to physically redesign and, in the long run, should be cheaper to manufacture. The lithium-ion polymer battery for the iPad was specifically designed for its task.

Many people feel that Apple has made replacing the iPad battery difficult because Apple is run by control freaks. To some degree that is probably true, but there could be other motives for this approach. One of the reasons that Apple may have made replacing the battery a factory process could be due to their understanding of the battery problem. The charging and recharging of these batteries is a semi-delicate process requiring just the right circuitry. Having people throw third-party batteries into their iPad that may or may not be of the same quality could muddy an already difficult support issue. Apple knows that it will have problems with its batteries and it wants to stay ahead of them. It will take a year or so to determine if Apple will be successful in its approach to the iPad battery problem.

Today's battery technology is what it is. While there are improvements every year, few appear to be quantum leaps. When picking the iPad battery, Apple needed to optimize from what's available. Lithium-ion polymer batteries are the best for right now and offer better future potential in both battery life and reducing manufacturing costs. However, just like all batteries, they will not last forever. A dead battery in an iPad that touts portability as a major feature could become a huge support (and reputation) issue for Apple. That's why Apple has an iPad replacement policy for when the battery dies.

As long as you have not damaged the iPad in some other way, Apple will replace your iPad with a refurbished iPad for a $99 service fee. (Your old iPad would presumably go into the refurbishment queue as a replacement for another iPad user with a dead battery.) This is almost like getting a brand new iPad for $99—except it won't actually be brand new. This way Apple will be able to more quickly get your (well, someone's) iPad back to you. While the concept seems reasonable, there are a couple of quirks.

First, you will need to back up all of your iPad content to your iTunes account. If there is any personal content on the "newish" iPad that you get back, it won't be yours. (I'm sure that Apple will be doing a clean install on all returned iPads.) Second, if there are any blips in the returned system, they won't be the ones you're familiar with. It just feels funny that you're getting someone else's iPad. You don't know how they treated the device (or where it's been?).

Extending iPad Battery Life

Apple knows that your iPad battery will eventually fail. This is not Apple's fault; all batteries fail.

The only question is how long before it happens. Some people will get years of service from a single battery, whereas others may find themselves going through batteries in a year or less. How long a battery lives depends very much on how the device is used. (With the millions of iPads now selling, in a year or two, Apple may regret not making the battery user replaceable.)

As I discussed last week, lithium-ion batteries last the longest when at a 50 percent charge and sitting in the refrigerator. While you can put the iPad in the refrigerator when not in use, it's not likely that most people will do that. There are still a number of things that you can do to prolong the overall life of your iPad battery.

The charging circuitry in the iPad will quickly charge the battery to 80 percent, and then revert to a trickle charge. My understanding is that when the 80 percent is reached, the iPad will indicate that the charge is complete. This is annoying to many people since they will not accept anything less than 100 percent. If the charger is left on, the battery will continue to charge to 100 percent, but this may not be what's best for the life of the battery.

The battery will degrade faster at a 100 percent charge than an 80 percent charge. Remember, an approximately 50 percent charge is optimum for longer lithium-ion battery life. If you don't need the extra running time, then for battery longevity you are actually better off removing the charger when you reach that initial 80 percent. Only go to the full 100 percent when you know that you will need it—say on a long trip with no recharge power available.

By the same reason, don't leave you iPad plugged in for long periods of time. The people who generally go through laptop batteries quickly are those who leave their computer plugged in all of the time with the battery in it. The process of keeping the battery at 100 percent charge at all times does not help it, plus heat is the other enemy of lithium-ion batteries.

Turn off the iPad when you're not using it. It's not a cell phone. Not only will you save the power from the current charge, as noted, the heat from a running computer will also shorten battery life. Keep and use the iPad in a cool location, although you aren't required to put it in the refrigerator.

It is too soon after Apple's release of the iPad to know how the battery will perform. The coming year will tell the tale. Hopefully, you will be one of the people who get a long battery life.

Digital Dave

What Is Spyware and How to Remove It?
"Common sense plus technology can keep your computer safe." by Pete Choppin

Why has the spyware problem gotten so out of hand? And more importantly, what you can do about it to protect your vital data?

A couple of years ago, the worst thing that could happen to you while surfing the Internet was to get bombarded by pop-up ads. Lately, though, the growth of spyware, software designed to covertly collect information from your computer, has reached epidemic proportions and is only getting worse.

Unfortunately, removal techniques that worked just a couple of months ago are no longer effective in many cases, and new types of spyware being released are more advanced than most computer viruses. In this article, I will discuss why the spyware problem has gotten so out of hand and more importantly, what you can do about it.

How Does Spyware Work?

Let's begin by talking about the ways in which spyware gets installed. Spyware gets installed in a variety of ways. Some mainstream companies offer free programs that come bundled with various types of spyware. When you install the application, you are also installing the spyware component. Such companies often disclose their intent in the software's end user license agreement (EULA). However, the end user license agreement tends to be so long and so full of legal jargon that almost no one bothers to read it prior to installing the software.

While some companies bundle spyware with applications, other companies trick users into installing spyware. What typically happens during the course of surfing the Internet is that a user

will see a pop-up window that is disguised to look like a Windows error message. The actual error message displayed by these windows differs widely, but the goal is the same: to get the user to click on a button. The user thinks that they are clicking a button that will fix the alleged error, when in reality they are initiating a spyware installation sequence.

Recently, a particularly insidious type of spyware known as "rogue anti-spyware" masquerades as spyware detection. Most of these will create a false alert of a virus infection on your computer and then create pop-ups prompting you to install the remedy, which is actually spyware or malware itself. These programs are designed to appear genuine—meaning they may mimic legitimate programs, use false awards and reviews to rope you in, or employ other deceptive tactics. It's also a good idea to familiarize yourself with common phishing scams, and to be cautious of links in e-mail messages and on social networking sites.

What Can You Do About Spyware?
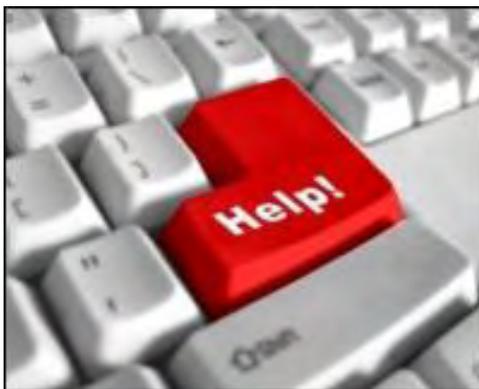
The methods in which spyware spread are only part of the problem. The other part of the problem is a lack of reliable methods for detecting and removing spyware. For some reason, the big antivirus companies have traditionally shunned spyware. Over about the last year, more spyware detection and removal capabilities have been built into antivirus programs than ever before. Even so, the anti-spyware capabilities built into antivirus programs tend to be mediocre at best. Our antivirus software where I work includes anti-spyware as well. But we have noticed many incidents of spyware problems that have somehow eluded our Symantec Endpoint Protection. Unfortunately, many companies depend on their antivirus software to keep them safe while online, but they do not realize that antivirus programs ignore the bulk of the spyware that's out there.

The best defense against spyware is to practice defensive computing. Don't click on advertising. Don't download any software from unknown sources, especially without reading its documentation and end user license agreement. Find a trustworthy review before downloading. Anti-spyware software helps, but most experts say common sense can go a long way toward avoiding spyware.

A good prevention method is to use common sense as well as technology. There are several effective tools available to help combat spyware.

Security Suites

Internet security suites have advantages and disadvantages when compared with individual programs. They are usually less expensive than buying separate standalone programs. If you plan to buy antivirus, anti-spyware and firewall software, the suites are certain to be cheaper. They don't all co-exist with free anti-spyware programs, but otherwise, they greatly reduce the likelihood of software and system conflicts. If you are uncomfortable with installing and using software, a single program is an elegant solution. If you want extras, such as spam filters and parental controls (both are controversial and not completely effective), a suite gives you everything.

However, experts say most Internet security suites are not as effective as standalone programs, especially at preventing spyware. They include aggressive and sometimes intrusive firewalls that you may not need (primarily if you already have a hardware firewall—most wireless routers include a firewall). The firewalls are not optional installations with the majority of suites.

A good example of an Internet security suite is Norton Internet Security 2010 (*www.symantec. com/norton/internet-security*). Reviewers say it is slim and speedy. NIS 2010 is also one of the only full-featured suites to be competitive with standalone programs for spyware detection and removal. PCMag.com's Neil Rubenking says Norton's malware removal scores are record-setting in his tests, beating out competitors like BitDefender and Prevx. Tested on commercial keyloggers, Norton does well above average.

Commercial Spyware Removers

If you are looking for a full-featured solution, but you want to avoid cumbersome packages, there are very good tools dedicated to spyware detection and removal. One that has consistently rated high is PC Tools Spyware Doctor (*www. pctools.com/spyware-doctor/*). According to reviewers it is one of the most effective commercial anti-spyware programs. Software developers constantly tweak these programs and issue incremental updates. In some cases, the update enables one program to leapfrog a competitor in spyware detection and removal ability. The downside is that updates are sometimes rushed to market, and they often introduce system and software conflicts that didn't exist with the previous version.

Free Spyware Removers

Several highly regarded, free anti-spyware programs are available, and all the free programs have limited functionality, so they aren't the best choice as your primary anti-spyware defense. However, reviews suggest using one or more of these to supplement paid versions of anti-spyware.

If your computer is running Windows 7 or Vista, you already have Windows Defender, a free anti-spyware tool. Make sure real-time protection is turned on (the default option). The program is also available as a free download for Windows XP. In PC World's tests, Windows Defender is excellent at detecting adware, but it barely removes half of it. It's much poorer at catching spyware.

Safer Networking Spybot Search & Destroy (*www.safer-networking.org/en/index.html*) was one of the first tools to combat spyware, and it is the most similar free alternative to the commercial programs. Unlike Ad-Aware, Spybot does have some real-time protection. It blocks attempts to hijack your Web browser and change items in your host file, and it has an immunization tool that modifies Internet Explorer to block malware from known perpetrators. It also supports real-time protection for alternative browsers such as Firefox and Opera.

Malwarebytes' Anti-Malware (*www.malwarebytes.org/*) received a high rating (4.5 out of 5 stars) from CNet's Download.com. Their editors give it an Editors' Choice designation. Users largely concur, giving it the same rating after more than 3,000 votes. The program also scores well at 2-Spyware.com, coming in second behind Spyware Doctor. Experts say that the biggest negative is that the free version of Malwarebytes Anti-Malware is somewhat crippled in that it does not provide real-time protection or allow you to schedule updates or scans. For that, you have to step up to the paid version. Otherwise, the program is easy to use, quick and effective.

It is a good idea to use at least one program, or a combination of spyware removal software, but do not become dependent on these. They are not foolproof and no software can replace your own good sense.

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Pete has been a devout reader of *ComputorEdge* since 1990 and contributes regularly to featured articles as well as the Linux Lessons section of *ComputorEdge*. He can be contacted at *pchoppin@comcast.net* but prefers to have comments on *ComputorEdge* articles submitted to the editor and posted for the benefit of all readers.

Spybot Search & Destroy

"Cure your PC of nasty malware--for free." by Michael J. Ross

> To cure your PC of what ails it, you can turn to one of several anti-spyware applications available on the market. One of the most popular and highly regarded freeware alternatives is Spybot Search & Destroy.

Most computer users are familiar with the concept of spyware—at least, they understand that it is something that can end up on their computers and cause some sort of harm, similar to viruses. The average computer user arguably has no need to understand the intricacies of spyware, or any other form of malware. But at a minimum, they should be cognizant that it is malicious software that collects personal information, usually with the intent of sending that information to third parties, without the owner's knowledge or consent. If anyone would like to learn the historical, technical and legal details of spyware, then an excellent place to begin is the Wikipedia entry (*en.wikipedia.org/wiki/Spyware*).

Stanley installs the ultimate in anti-spyware programs.

The realm of malware is replete with medical references. You will hear software vendors urge prospective customers to "inoculate" their systems against possible "infection" by the latest "strain" of "computer virus" that happens to be "spreading" across the Internet. Aside from the melodramatic value—which can then become transmuted into monetary value—the analogies are in many ways quite valid, because there are definite parallels between computational and biological viruses, and the means of battling against them. Just as we humans can minimize the risks of ill health through prevention and curing, the same is true of protecting the health of our vulnerable PCs.

In terms of preventive medicine for your body, it is best to employ a multi-pronged strategy involving optimal diet, sleep, exercise and other factors. Likewise, the best approach for preventing your computer from ever falling prey to malware—including spyware—is by adhering to several best practices: Install a software or hardware firewall that can detect and selectively block incoming traffic (such as attacks from hackers via your broadband connection to the Internet) and outgoing traffic (such as spyware "phoning home" to the miscreants who created it). Avoid dicey Web sites—especially those that ask you to install anything on your computer just to access tempting goodies, such as videos. Use the latest version of a safe browser (e.g., Firefox (*www.mozilla.com/en-US/firefox/*)) and see if it has add-ons that further enhance your security (*addons.mozilla.org/en-US/firefox/*

browse/type:1/cat:12).

Calling Dr. Spybot

Despite following these and other security precautions, it is quite possible that your computer will get hit with some spyware, at one point or another in the future. That's where the other side of the computer health-maintenance coin comes into play. To cure your PC of what ails it, you can turn to one of several anti-spyware applications available on the market. Some are focused exclusively on battling spyware, while others include it as just one component in an overall security package. The solutions available range from costly to free, and there has been no evidence so far that the former is any better than the latter. In this article we will examine one of the most popular and highly regarded freeware alternatives: Spybot Search & Destroy, developed and offered by Safer Networking Ltd (*www.safer-networking.org/*).

Figure 1. Safer Networking home page (English version).

Spybot is one of five software products made by this firm, and is undoubtedly its most well-known. The good folks at Safer Networking are constantly looking for new types of spyware, and, in response, updating the detection patterns that Spybot uses for catching potential spyware. As with any solid malware-protection product, Spybot makes it possible to update the detection patterns without having to download the entire product and reinstall it. We will examine that process in a moment.

Although there are other free spyware programs out there, Safer Networking's track record of frequently updating against the latest threats is but one reason why Spybot is an excellent choice. Secondly, it looks for more than 700,000 detection patterns, and counting. Third, in the numerous head-to-head competitions conducted by computer industry publications such as PCMag.com and PC World, Spybot has garnered top honors. Fourth, it supports no fewer than 26 browsers "for immunization and restricted access shortcuts." Lastly, installing and running the program is quite easy, which we will take a look at next.

Healthy Beginnings

The best way to see what Spybot is capable of is by trying it out. If you have your hard drive divided into multiple partitions, and at least two of them are bootable, then you have the option of installing Spybot on one partition and yet running it from another—a capability not shared by most security programs. To get started, click on any one of the download links on any of the Spybot Web pages, and save the file (version 1.6.2, at this time) someplace on your PC where you can easily find it. Open the installation file, and follow the on-screen instructions, going from one dialog box to the next, until you have completed the installation process. If you would like to read detailed information for each step of the process, check the tutorial page (*www.safer-networking.org/en/tutorial/*), which also includes screenshots.

All of the default values should work for the average computer user. But there is one dialog box, titled Select Additional Tasks, at which you should make some decisions.
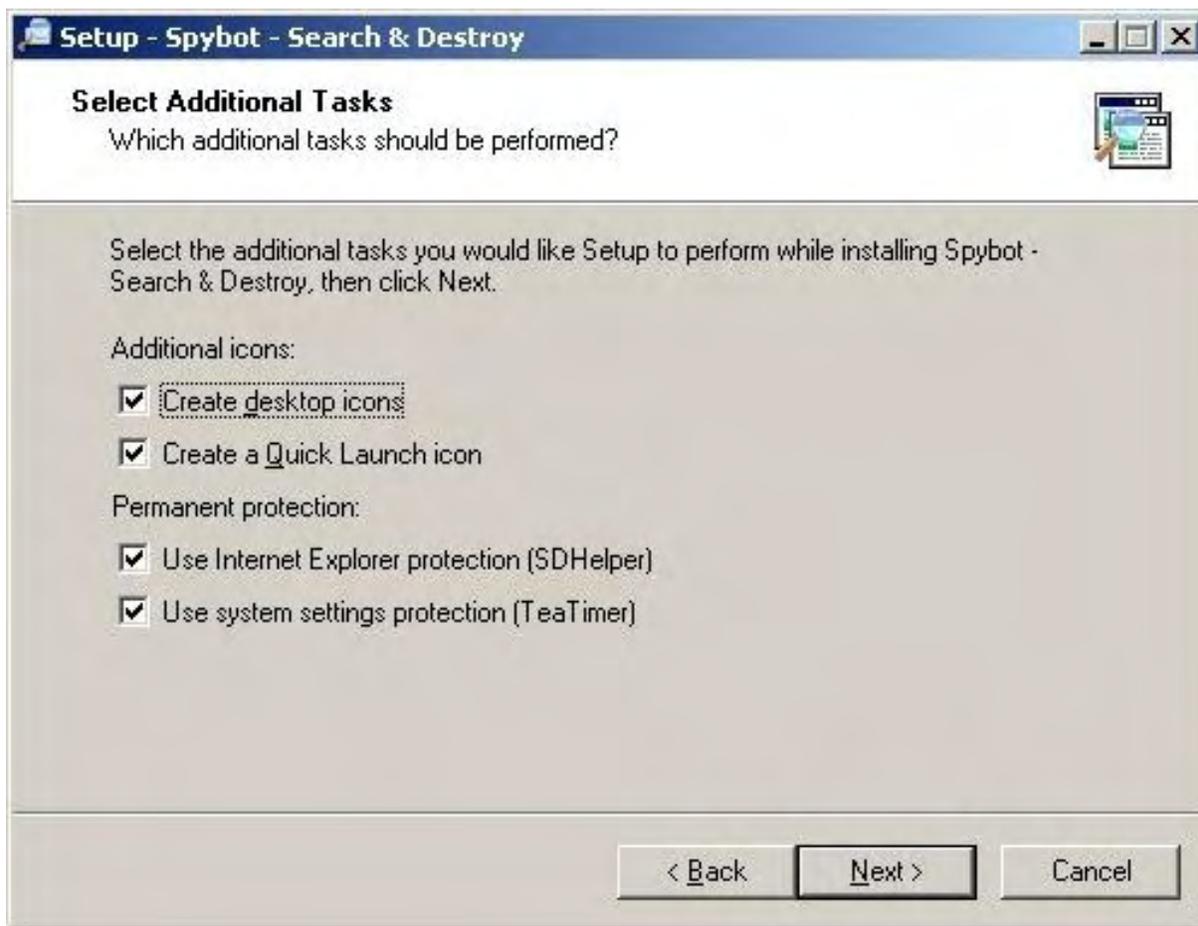
Figure 2. Select Additional Tasks dialog box.

Naturally, Spybot allows you to scan your entire system for any spyware that managed to make it past your defenses. But the application also offers real-time protection, which can be thought of as the preventive medicine that can reduce the risks of later depending entirely upon the curative phase. In particular, the Immunize feature works within some of the leading browsers (Firefox, Internet Explorer and Opera) to prevent Web sites from infecting your browser with what are known as "tracking cookies," which allow unscrupulous online organizations to track your movements on the Internet.

The SDHelper is specific to Internet Explorer, because that is the only browser unsafe enough to run ActiveX components on Web pages; this feature can block those attempts. TeaTimer prevents unwanted files from being installed on your system, by constantly monitoring the computer processes that get started, and giving you an opportunity to have Spybot instantly shut down the one being called, at the moment or in the future; you can optionally delete the file that initiated the call. Also, TeaTimer can squash any attempts by programs to modify your Windows Registry or your Hosts file (used by browsers to redirect from one Web site address to another). On the aforementioned dialog box, you will need to decide whether or not to enable SDHelper and TeaTimer.

During installation, Spybot will attempt to send a packet to a remote server, and then try to connect to safer-networking.org. Both of these are legitimate, and can be safely allowed by your firewall. (You do have a firewall catching these outgoing requests, right?)

Spy vs. Spy

When the installation process is finished, the installer, by default, will begin running Spybot. You can perform preliminary steps such as saving a copy of your Registry, checking for updates (which isn't necessary, since you just downloaded it), and immunizing your system. After these steps, you reach the main screen of the interface.
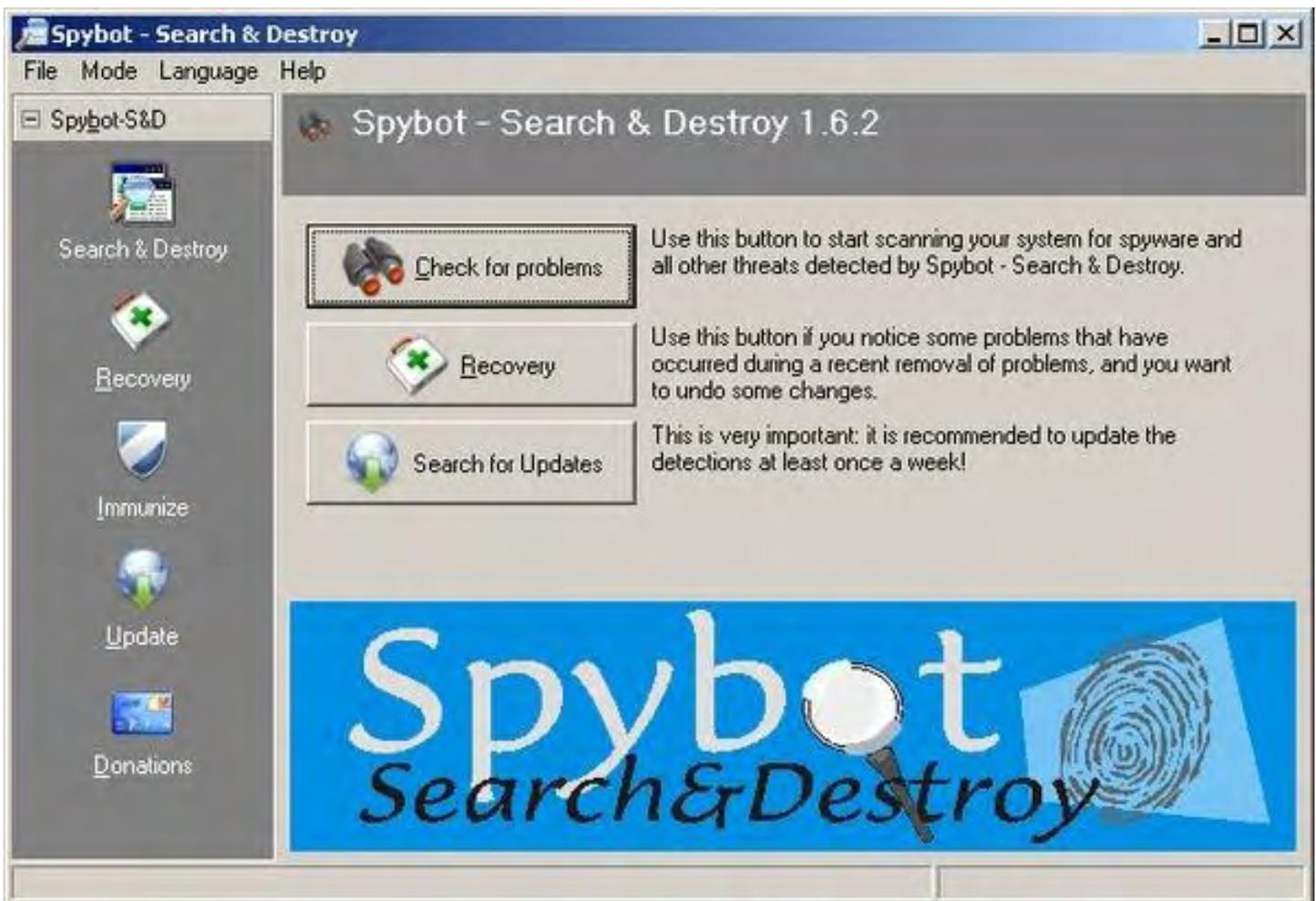

Figure 3. Spybot main screen.

Click the "Check for problems" button to have the program begin scanning all of the files and folders on all of your hard drives. You will be asked whether Spybot can delete any temporary files, including those created by any unsaved changes in other applications you might have open at the time. A tip of the day will be displayed, but you have an option to disable that from occurring in the future. Once the scanning starts, you may as well take a break from your computer, because the process can take a fair amount of time—in proportion to the number and size of your files and hard drives. Eventually, the scanning will finish, and Spybot will show you a list of security problems, if any.

Figure 4. Spybot results screen.

All detected spyware components are reported, and you are given the option of having Spybot try to fix the infections (usually by deleting the files entirely, or do nothing, which is only advised for items that you thoroughly understand, such as having Microsoft Windows Security Center disabled).

To learn more about Spybot, you can read the product overview, tutorial and FAQ pages on the Safer Networking Web site, which also has news and articles. OpenSBI is a file format you can use to provide Spybot with custom detection databases; the documentation for this is on their wiki (*wiki.spybot.info/index.php/Main_Page*). If you find Spybot helpful, consider donating any amount of money, in one of four major currencies, including U.S. dollars.

As of this writing, the English version of the homepage displays a testimonial by customer "Carol D.," who offers the following post-treatment assessment: "This is a great product. It has helped to improve the performance of my computer. I find I'm not swearing at it as much anymore..." If Spybot does nothing more than reduce the global epidemic of computer-directed cursing, then it will be well worth the time taken to administer the medicine.

Michael J. Ross is a Web developer (*www.ross.ws*), writer, and freelance editor. He creates Web sites that help entrepreneurs turn their ideas into profitable online businesses.
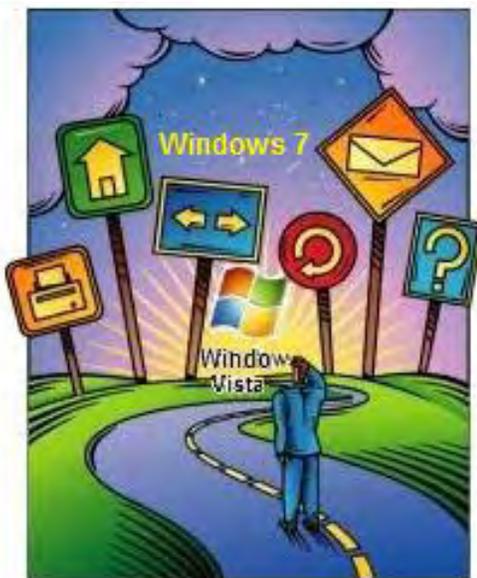
Windows Tips and Tricks
"The Windows Address Toolbar" by Jack Dunning

If you prefer to use the keyboard to directly access Web sites and programs, then the Windows Address toolbar may interest you.

Windows gives you multiple methods for finding files, loading programs and surfing the Web. In fact, there are so many ways to do these things that most people are not familiar with many of them. In the past few weeks I've been reviewing features in the Taskbar—in particular adding new toolbars. The Windows Taskbar, which by default is at the bottom of the screen, has a couple of other built-in toolbars worth noting. If you prefer to use the keyboard to directly access Web sites and programs, then the Windows Address toolbar may interest you.

To add the Address toolbar to the Windows Taskbar, right-click on an empty area of the Taskbar and check Toolbars/Address, as shown in Figure 1. (Note: In Windows XP SP3, the Address toolbar was eliminated. There is a method to restore the Address bar by copying a file from Windows XP SP2 back to SP3. It can be found by searching the Web for "restore address bar in Windows XP SP3." The Address toolbar is available in both Windows 7 and Vista.) An alternative method for adding the Address toolbar is to open the Properties window by right-clicking on the Taskbar or Start Menu icon and selecting Properties. Check the Address box in the Toolbars menu, then Apply.
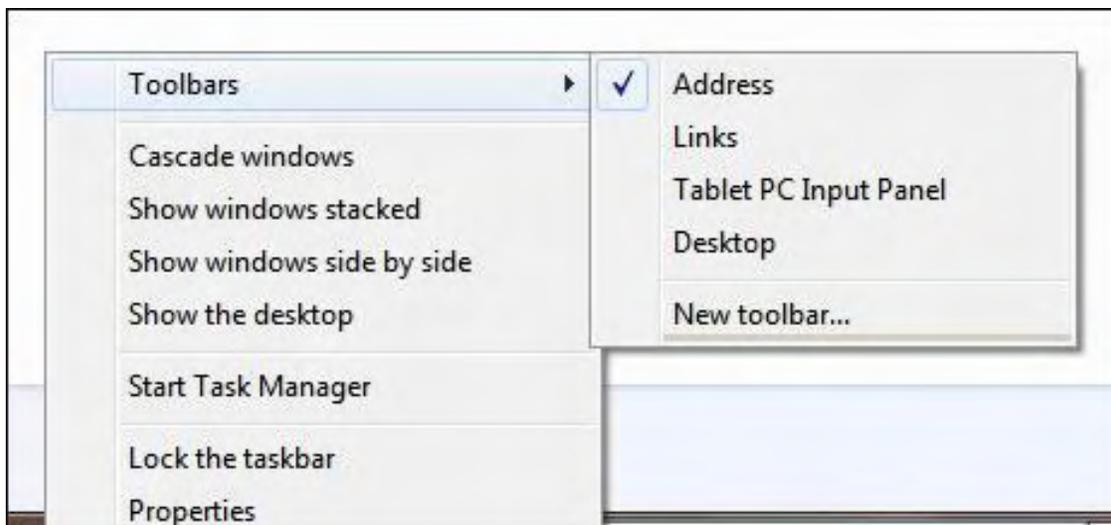
Figure 1. Adding the Address toolbar to the Windows Taskbar.

The address bar will be added to the Taskbar as shown in Figure 2. If your Taskbar is unlocked (right-click), then you can adjust the size of the address input field with a click and hold of the left-mouse on the dotted area just to the left of the bar, then dragging it to the left for a larger field or to the right for a smaller field.
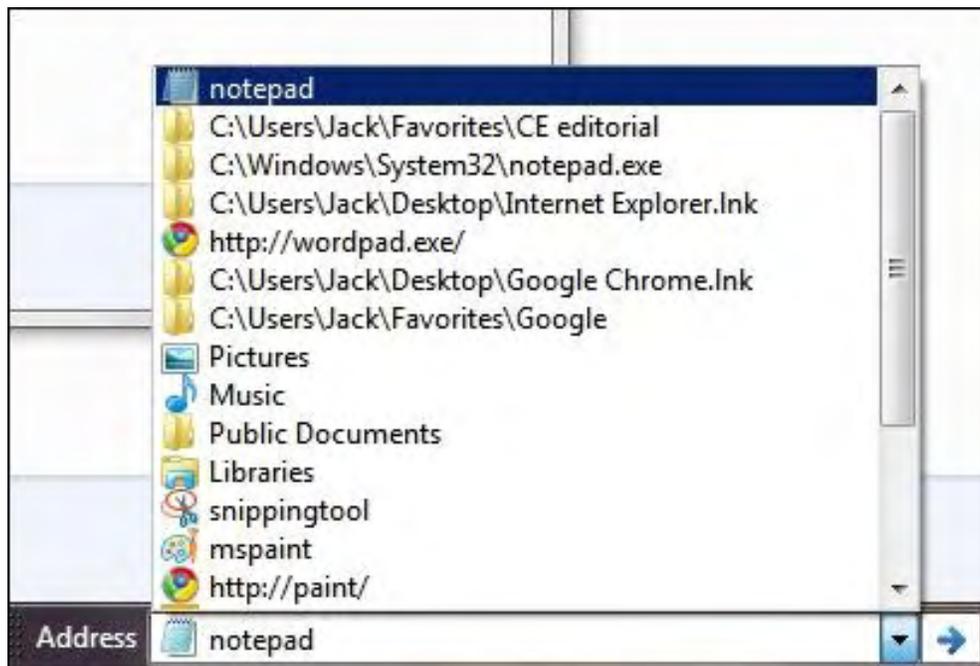

Figure 2. Once the Address toolbar is added to the Windows Taskbar, Web sites and programs can be accessed directly by typing in the location or selecting from the recently opened list.

The Address toolbar is most useful if you know the exact URL of a Web site or the program name that you want to open. When you enter a name or address, the PATH of your computer is first searched to determine if it is a program name. In order to load a program, you need both the exact name of the program that comes before the ".exe," and that program must be within the search PATH of the computer. (The search PATH is a list of folders in which the computer will look for programs and/or data when called from the Command Prompt window.)

For example, Notepad can be opened by typing "notepad" in the Address toolbar. The program name is notepad.exe and is found in the PATH. However, WordPad will not open because the location of the program file is not in the PATH. The Windows Paint program will open only if you type "mspaint" or "mspaint.exe" which is the actual name of the image-editing program file.

If the term typed in the Address field is not found on the computer, then the default browser will open to load what is assumed to be a URL. If you mistype a program name or URL, the browser will open with the error page. Typing or pasting any Web address (http:// not needed) will send the default browser to that location. This saves the step of first loading the browser, but the address must be a valid, complete Web address. You may also enter the equivalent numeric IP without the http://.

The Address toolbar will maintain a list of recently opened locations that can be accessed by clicking the down arrow on the right as shown in Figure 2. If you type the first letter or two, then you will be offered some suggestions, although they will not necessarily include all options. If you

want to do a Web search, the option "search for 'x'" will appear, with x being the letters you have keyed in. If you select this search option, the default browser will open with the default search engine loading your term(s). This search capability may be the best use of the Address toolbar, especially if you are someone's phone shout-out for a difficult question on Cash Cab.

Whether the Address toolbar becomes part of your regular way of computing with Windows is solely dependent upon what suits you. Put it on your Taskbar and play with it. You may just want to leave it there.

Jack is the publisher of *ComputorEdge* Magazine. He's been with the magazine since first issue on May 16, 1983. Back then, it was called *The Byte Buyer*. His Web site is *www.computoredge. com*. He can be reached at *ceeditor@computoredge.com*

Wally Wang's Apple Farm
"Spyware on the Macintosh" by Wally Wang

Although the threat of spyware infecting a Macintosh is low, those still worried about Macintosh spyware should consider MacScan. Also, the rise of electronic self-publishing; what will Apple reveal at its annual developers conference?; the iPhone/iPad market seems to be exploding for developers; the multiple technical limitations of Flash; and a tip on switching to Internet radio stations for your listening pleasure.

Theoretically, every operating system can be attacked by viruses, Trojan horses, worms and spyware. Realistically, the threat still remains low on the Macintosh and iPhone/iPad. One reason why the virus threat is nearly nonexistent is the nature of computer viruses themselves.

A virus can spread only by infecting another file and waiting until someone copies that file to another computer. Thus it's possible that a computer could be infected with hundreds of the most potent viruses in the world, but if nobody bothers to copy those infected files, those viruses can't spread.

Nowadays, the majority of threats come from worms, Trojan horses and spyware. Worms can infect a computer all by themselves by prowling around a network or the Internet and looking for computers unprotected by a firewall (or a firewall that the worm knows how to circumvent). Trojan horses get on a computer through the user's actions in downloading or opening an unknown file, such as one received through e-mail or by clicking on a Web page advertising a phony program. Since Trojan horses can spread through the user's actions, no amount of technological defenses can protect the user from his or her own mistakes.

Even if you have a firewall, worms and hackers can still infect your computer by exploiting flaws in Flash (*www.computerworld.com/s/article/9140768/ Flash_flaw_puts_most_sites_users_at_risk_say_researchers*). Flash videos may look pretty, but with the added ability to view ads and videos comes the prospect of greater security risks and potential for infections. (Anyone still want Flash on a mobile phone?)

Spyware is more of a payload that infects a computer through a Trojan horse or a worm. Once spyware gets on a computer, it can either secretly record keystrokes to retrieve passwords and credit card numbers, or it can retrieve data off the Internet and flood the screen with a never-ending barrage of ads. Spyware may not physically damage a computer, but it can be annoying at best or financially disastrous at worse.

Although the threat of spyware infecting a Macintosh is low (no Macintosh at an Apple Store runs

the usual gamut of antivirus and anti-spyware software commonly found on Windows PCs, despite constant Internet connections and hundreds of people playing with them every day), the threat of spyware still remains. For those still worried about Macintosh spyware, consider MacScan (*macscan.securemac.com*).

While MacScan has simply built a foundation to detect any possible future Macintosh spyware programs, the main value of the program is to identify and block cookies used by Web sites to track your browsing behavior.

Figure 1. MacScan can protect against Mac OS X spyware.

Since spyware can often infect computers through the Internet, the truly paranoid (running Mac OS X or Windows) can switch to a less popular browser (such as Opera), which will avoid any potential spyware infections that know how to exploit flaws in Safari (or Internet Explorer on Windows).

To further protect yourself, download a free copy of Virtual Box (*www.virtualbox.org*) and create a virtual machine running OpenBSD (*www.openbsd.org*), considered one of the most secure operating systems available. Now only browse the Internet using OpenBSD.

If spyware wants to infect your computer, it will have to defeat OpenBSD and circumvent Virtual

Box before it could attack Mac OS X (or Windows) on your computer. This multi-layer defense will likely stop nearly all spyware, giving you the greatest possible security short of not using a computer at all.

Self Publishing for the Masses

Back in 1985, Aldus started a revolution by introducing PageMaker for the Macintosh. For the first time, people could use a personal computer to design and print flyers, menus, signs and reports that used to require a typesetter. Desktop publishing gave individuals the power to become their own publisher.

Unfortunately, desktop publishing programs alone couldn't solve the problem of distribution that regular book publishers could offer. If you wanted to sell a thousand copies of a book, you still had to physically print a thousand copies, bind them, store them in a warehouse, and then hope to sell them to make a profit.

To avoid the problem of printing and storing multiple copies of a book, Apple has introduced a self-publishing option for their iBook Store (*www.maclife.com/article/news/ apple_reveals_new_service_authors_sell_their_books_directly_ibookstore*). The idea is that anyone can create an e-book, upload it to the iBook Store, and sell it to a worldwide audience, avoiding the hassle of dealing with publishers altogether. (In traditional publishing, the publisher keeps 80 to 90 percent of the profits and the author gets 10 to 20 percent. In electronic self-publishing, the electronic bookstore only keeps 10 to 30 percent and the author keeps the remaining 70 to 90 percent.)

Electronic self-publishing isn't just limited to Apple's iBook Store. Amazon also offers a self-publishing option for its Kindle (*www.amazon.com/gp/seller-account/mm-summary-page.html? topic=200260520*) while Barnes & Noble offers self-publishing options (*www.barnesandnoble. com/pubit/index.asp*) as well. Although self-publishing will likely flood the market with low-quality e-books, electronic self-publishing will likely satisfy niche markets that current publishers are either ignoring or neglecting.

One niche market that seems to have taken advantage of electronic self-publishing is the gay and lesbian market. Look in any bookstore for romance novels involving gay or lesbian characters, and the choices are small, if not nonexistent. However, visit SmashWords (*www. smashwords.com*) and you can see a thriving community of gay and lesbian authors, cheerfully writing, publishing and selling Harlequin-type romances strictly for gays and lesbians. Without electronic self-publishing, such books would probably have never found any type of widespread distribution, but with electronic self-publishing, these authors and their novels can reach a global audience that had previously been denied to them.

Figure 2. Electronic self-publishing has created opportunities for gay and lesbian authors.

With e-readers like the Kindle and e-reading software available on computers and devices like the iPad, the market for self-publishing is wide open. If you're a frustrated author, consider self-publishing. Whether you make a lot of money or nothing at all, the joy of reaching an audience may be more important than getting rich (at least initially).

Apple's Developers Conference

On June 7, Apple will host its annual developer's conference. What everyone's expecting is the new version of the iPhone with a higher-resolution screen, longer battery life (10-plus hours), multitasking (for apps that are specifically rewritten to allow multitasking), and folders for organizing apps on your Home screen.

Also expect new versions of the iMac, Mac mini, Mac Pro and MacBook Air. At the time of its introduction, the MacBook Air seemed revolutionary with its slim design, low weight (3 pounds) and long battery life (5 hours). Compared to the iPad, (1.5 pounds and 10 hour battery life), the current MacBook Air looks weak and obsolete, so expect a longer battery life and possibly even lighter weight. Also expect new versions of iLife and the iWork office suite and a programmer's toolkit for creating add-ons for Safari.

Now here are the long-shot possibilities that Apple might also reveal at their developer's conference:

Sprint gets the iPhone. By sticking exclusively with AT&T, Apple is losing sales to people unwilling to switch cellular phone networks. By offering the iPhone on Sprint, Apple can increase the number of users who might want an iPhone. After Sprint, Verizon may be next to get the iPhone later this year, just in time for Christmas.

Video chatting. The new iPhone may include a front-facing camera, allowing you to video chat with other iPhone users or with iChat users on a Macintosh.

Microsoft's Bing search engine as an option on the iPhone. Apple doesn't want to depend too much on Google, so it may turn to Microsoft to counter Google's influence.

The Worldwide iPad Market

While most American Apple Stores can't keep the iPad in stock, Apple has finally released the iPad overseas. People camped out overnight for the privilege of getting an iPad in Australia (*www.smh.com.au/digital-life/ipad/ipad-mania-as-buyers-say-iwant-20100529-wmgz.html*), Canada (*www.vancouversun.com/technology/iPad+fever+hits+Vancouver+buyers+line+early +Apple+downtown+store/3087216/story.html*), Scotland (*www.scotsman.com/news/The-iPad-launch-iCame-iSaw.6328225.jp*), and Japan (*bits.blogs.nytimes.com/2010/05/27/ipads-arrival-in-tokyo-causes-japanese-to-reflect/*). Other countries that recently received the iPad include Germany, Spain, Italy and the United Kingdom.

Combined with the million or so iPads Apple has sold in the United States alone, Apple will likely sell 5 to 8 million iPads in this year. Toss in the millions of iPhones that Apple sells every year and you have one of the biggest markets for mobile devices. If you're a developer, you can't ignore the potentially lucrative market for developing iPhone/iPad apps.

The problem with iPhone/iPad development is that it's vastly different than developing Windows applications using Visual Basic or C#. In Visual Basic, it's easy to visually design an interface and write code to modify the appearance of your user interface. More importantly, you can clearly see how a Visual Basic or C# program works by following its various commands.

In comparison, creating an iPhone/iPad app involves thinking exclusively in object-oriented programming. To design an iPhone/iPad app, you use a visual designer called Interface Builder. However, the flow of control of your program is much harder to understand since a program consists of multiple objects passing commands to each other, so it's not clear at first glance exactly which part of your code runs at any given time.

Experienced programmers will likely have more problems developing iPhone/iPad apps than novices who won't have to "unlearn" their ideas for how programming should work. To learn iPhone/iPad programming, grab as many iPhone programming books as you can and start plowing through all of them. Eventually, you'll start to understand how iPhone/iPad programming works and how Apple organizes its iPhone/iPad programming documentation.

Currently, I'm reading *iPhone SDK Development (*www.amazon.com/gp/product/1934356255? ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1934356255*)* by Bill Dudney and Chris Adamson. Like most iPhone programming books, this book provides plenty of sample

programs that you can type in and study. Although I've only just started this book, this was the first iPhone programming book that took the time to explain how to use the various features of the Xcode editor, which other iPhone programming books simply ignored.

If you're an experienced programmer, you can probably start developing your own iPhone/iPad apps within six months to a year. Once you become proficient at iPhone/iPad programming, you may find your skills in high demand, which can guarantee that you'll always have a job compared to other programmers who chose to ignore the iPhone/iPad altogether.

The Real Problem with Flash

Like most people, I initially thought the lack of Flash support on the iPhone and iPad was a serious omission. Only through additional research did I discover that Flash has been absent on every mobile phone, so criticizing the iPhone for its lack of Flash support is as misleading as criticizing General Motors for not selling cars that can run on tap water and fly to the moon. The implication of such misguided criticism is that other car companies do make cars that run on tap water and fly to the moon. In the same way, criticizing the iPhone for its lack of Flash support implies that other mobile phones do run Flash, which is not true at all.

Of course, Adobe has been promising Flash ever since Apple introduced the iPhone in 2007. Engadget even printed a rumor in 2008 that Adobe would soon have Flash running on the iPhone (*www.engadget.com/2008/03/19/adobe-says-flash-is-coming-to-the-iphone/*). It only took Microsoft three years to develop Windows 7, so why is it taking Adobe the same amount of time to finally deliver a touch-gesture version of Flash for mobile devices, a project that should certainly be less challenging than polishing an entire operating system (Vista to Windows 7)?

The easy answer is that Adobe is either lazy or incompetent. The technical answer may be that it doesn't matter how good (or lousy) Adobe's programmers may be because Flash has inherent problems of its own as explained in this article printed in Mobile Beat (*mobile.venturebeat.com/2010/01/26/flash-iphone-skyfire/*).

One problem with Flash centers on its assumptions that it will run on a computer with a mouse (for pointing and choosing commands). This explains why Flash has lacked the ability to detect touch gestures, which would have made all touchscreen phones (iPhone, Android, webOS and BlackBerry touchscreen phones) incapable of controlling Flash menus and buttons through finger gestures alone.

A more critical assumption is that any computer running Flash will have plenty of memory, processing speed, and bandwidth for downloading Flash videos from a Web site to a browser. The problem isn't whether a mobile device has Flash or not, but whether the mobile device has a fast Internet connection and a powerful processor.

Assuming Flash on a mobile phone, viewing Flash-enabled Web sites would mean long waits while the Flash video streams from the Web site to your mobile device. From a user's point of view, this long wait might appear as if the mobile phone has frozen when it's really the fault of the cellular network's bandwidth and speed. Anyone want to wait a few minutes just to view a single Web page running Flash?

Another technical problem with Flash involves its high processing requirements because it stores

video as vector graphics. That means instead of downloading a movie or photograph consisting of pixels, Flash (like all vector graphics programs) stores its images as mathematical formulas. To display vector images requires that the computer process this information.

Desktop and laptop computers have plenty of processing and electrical power, but mobile devices do not. The result is that the weaker, slower processors in mobile phones may draw Flash videos with lots of stuttering and pausing. Even if a mobile device's processor could display a Flash video smoothly, the constant processing requires power, thus draining the mobile device's battery. How happy would people be viewing Flash on a mobile phone if it drained their batteries just to display a handful of Flash Web pages in a jerky, staccato fashion?

Whether Adobe gets Flash running on a mobile phone or not, the need for high bandwidth (to get the Flash video to the mobile phone) and the need for processing (to display the Flash video) means that you need an extremely fast cellular phone network and a mobile phone with a powerful processor and massive battery to withstand the constant power drain required to process and display Flash video.

Until that happens, displaying Flash seamlessly on today's mobile devices appears impossible unless every Web site in the world that currently uses Flash converts their Flash videos to optimize them for mobile devices.

The only other way Flash can work on mobile devices is if cellular phone networks dramatically speed up while processors and battery life in mobile phones dramatically increase as well.

On desktop computers (and laptops), Flash can work brilliantly. On mobile devices (not just the iPhone), getting Flash to work can be as difficult as trying to shove an elephant through a cat door.

The next time someone criticizes the iPhone for its lack of Flash support, there's a good chance that person doesn't realize that all mobile phones are unable to run Flash (not just the iPhone), and that Flash was designed originally for desktop computers and can't handle the slower cellular phone network Internet speeds, the weaker mobile phone processors, and the limited battery life of mobile phones.

Adobe is currently optimizing its Flash player to process videos more efficiently and not drain as much power, but it's doubtful that Adobe's programmers can get Flash to work as well on mobile devices until mobile processors reach the current processing power of today's desktop computers and the batteries of mobile devices can maintain a charge despite constant demands to process Flash videos. Even then, Adobe (and Apple) can still do nothing to fix the cellular phone network's bandwidth limitation.

As a result of these multiple technical limitations, the prospect of Flash running on your mobile phone any time soon may be a pleasant fantasy that we can all wish for like peace in the Middle East and the elimination of poverty and injustice on planet Earth.

*   *   *

If you're tired of listening to your music collection, switch to an Internet radio station. Just load iTunes (on either the Macintosh or Windows) and click on the Radio group in the left pane. The

right pane will list different types of radio stations such as Rock, Jazz, or Sports. Click on a category, choose a radio station, and you can start listening to a radio station from anywhere in the world.
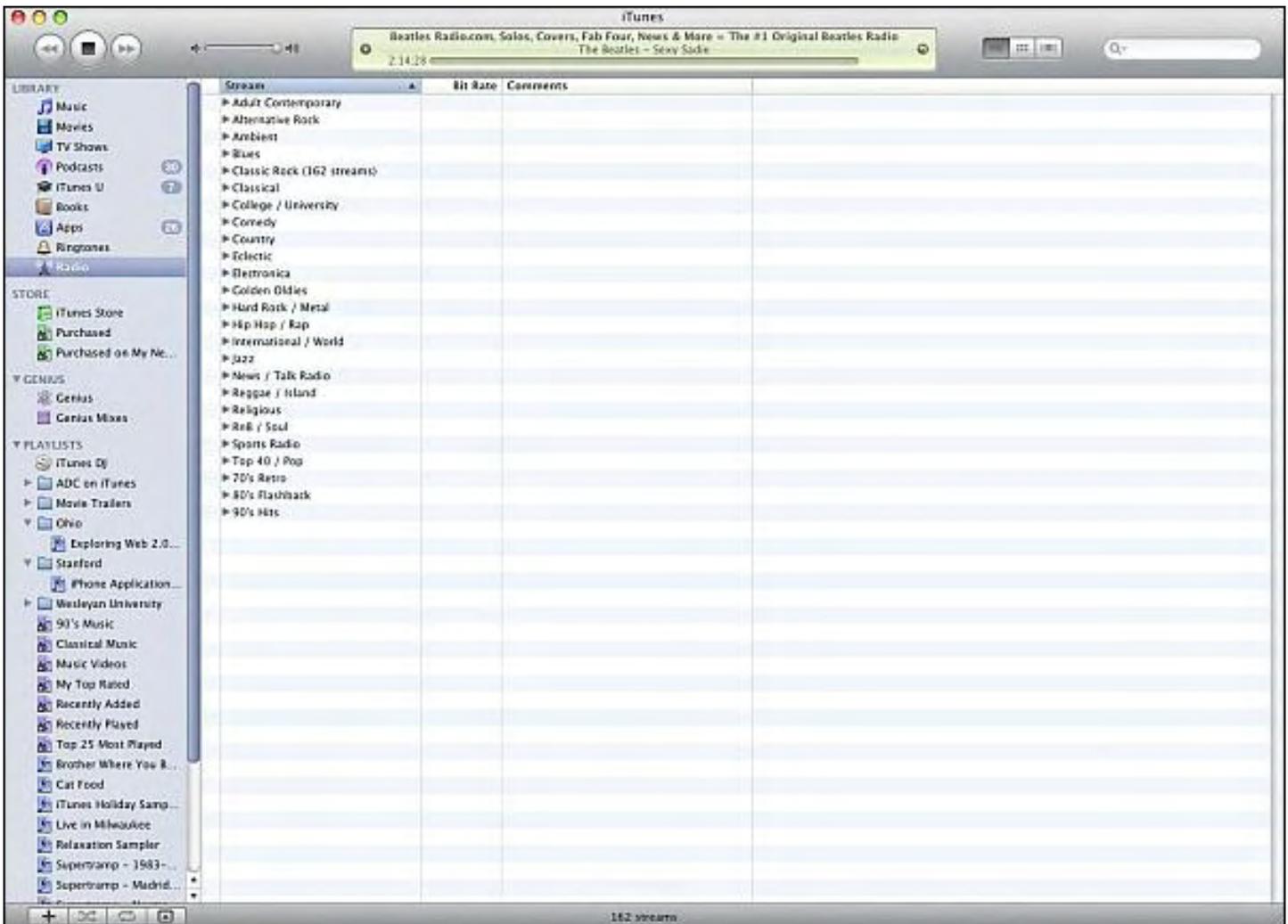
Figure 3. iTunes lists different Internet radio station categories.

In the early days, before Wally became an Internationally renowned comedian, computer book writer, and generally cool guy, Wally Wang used to hang around The Byte Buyer dangling participles with Jack Dunning and go to the gym to pump iron with Dan Gookin.

Wally is responsible for the following books:

• Microsoft Office 2007 for Dummies (*www.amazon.com/gp/product/0470009233? ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0470009233*),
• Beginning Programming for Dummies (*www.amazon.com/gp/product/0470088702? ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0470088702*),
• Breaking Into Acting for Dummies with Larry Garrison (*www.amazon.com/gp/ product/0764554468?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0764554468*), Beginning Programming All-in-One Reference for Dummies (*www.amazon.com/gp/product/0470108541?*

ie=UTF8&tag=the15minmovme-
20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0470108541),
• Steal This Computer Book 4.0 (*www.amazon.com/gp/product/1593271050?*
ie=UTF8&tag=the15minmovme-
20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1593271050),
• Visual Basic Express 2005: Now Playing (*www.amazon.com/gp/product/1593270593?*
ie=UTF8&tag=the15minmovme-
20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1593270593),
• My New Mac (*www.amazon.com/gp/product/1593271646?ie=UTF8&tag=the15minmovme-*
20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1593271646),
• My New iPhone (*www.amazon.com/gp/product/1593271956?ie=UTF8&tag=the15minmovme-*
20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1593271956),
• Strategic Entrepreneurism with Jon Fisher and Gerald Fisher (*www.amazon.com/gp/*
product/1590791894?ie=UTF8&tag=the15minmovme-
20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1590791894).

When not performing stand-up comedy or writing computer books, he likes to paper trade stocks with the video game Stock Reflex (*www.plimus.com/jsp/download_trial.jsp?*
contractId=1722712&referrer=wwang), using the techniques he learned from a professional Wall Street day trader.

In his spare time, Wally likes blogging about movies and writing screenplays at his site "The 15 Minute Movie Method." (*www.15minutemoviemethod.com/*) Wally can be reached at *wally@computoredge.com*.

Rob, The ComputorTutor: Technology Solutions

"Word Styles" by Rob Spahitz

This week we explore Word's Style features, which you may have used before. However, you probably didn't know just how much potential this feature has to save you a lot of time.

This week we explore a feature topic that you may have used before without realizing it. However, you probably didn't know just how much potential this feature has to save you a lot of time if you do more than just a little writing.

First, by default, Word will present all text in a predefined font size, face (name), color, etc. This is defined in your Normal.dot file, which we'll explore in a future article. Unless you changed this (which people rarely do), then you get whatever default settings came when you installed your version of Word.

For example, my Word 2002 installation uses font Times New Roman point size 12 with black text. However, my Word 2010 installation uses font Calibri point size 11 with black text. Each of these has a different default "Normal" style.

If you want to change styles, you can use some of the previous features we looked at. You can add bold, italics, underlining and/or bullets. You can also change font names, sizes and colors. However, if you turn any of these on, it's only temporary. Suppose that you want to re-use a particular style in several places? There are at least three solutions.

Copy-and-paste will typically preserve all of the styles from one place to another. From there you can continue typing, and the style is retained. This is fine for one or two things, but tedious if you're doing it over and over.

Format Painter

Format Painter is a really nice feature that takes an existing format and "paints" it to a new location (character, word, sentence, paragraph, etc.). Typically it applies to a word, but can also be used on anything you select. Let's see how that works.

Add some text to a Word document, such as "Rob The ComputorTutor is amazing." Change the word ComputorTutor so that it is bolded, italics and red. Now look for the little paintbrush in your Word 2010 Ribbon Bar's Home tab/Clipboard box, or in the older versions next to the cut/copy/paste icons. (Since this is a non-standard function, it does not appear in your menus as a standard entry.) The brush appears circled in Figure 1.

Figure 1. Format Painter.

To make this work, start by selecting the text that you'd like to copy. You can either select the entire word(s) or just put the blinking cursor somewhere inside the text with the format that you want to copy. In this case, you can put the cursor anywhere inside the word ComputorTutor. Now click on the brush icon. It will appear that nothing has happened, but while you move the cursor around the document, instead of an arrow you will see a paintbrush. Now click in the middle of the word "amazing." You should now see the formatting of that word changed to bold, italics and red. You could have also dragged the cursor along the text that you wanted to highlight or click on the left margin to highlight a whole row.

This Format Painter is great for one-time use, but are there other options? Well, yes. You could cancel the painter by clicking the brush again. Or you could lock the brush on so that everywhere you click, that text will be re-formatted. For this, double-click the Format Painter brush icon. Click everywhere you want to format. To complete this, click the icon again to unlock it.

For those curious about the inner workings, this is really a specialized version of Paste. The shortcut keys for this are Ctrl+Shift+C to copy formatting, then Ctrl+Shift+V to paste the format to the current word or selection.

Named Styles

If you are working with many styles, you probably need a better method than copy-paste or copy-format-paste-format. This is where named styles come into play. Interestingly, you may already be familiar with Styles. If you've ever used predefined headings, you've used named styles. What may not have been as obvious is that custom-named styles are almost as easy as that.

Suppose you decide that you want to organize a document with some section headings, but you don't like the predefined standards. For example, you want the headings to appear in blue, font size 16 and italics. You could select each heading, one at a time, and apply blue, then size 16, then italics. Then repeat for the next one...and the next one.

A better way is to create a custom style. Apply the settings to one piece of text, and then add a name in the Style box, as seen in Figure 2.
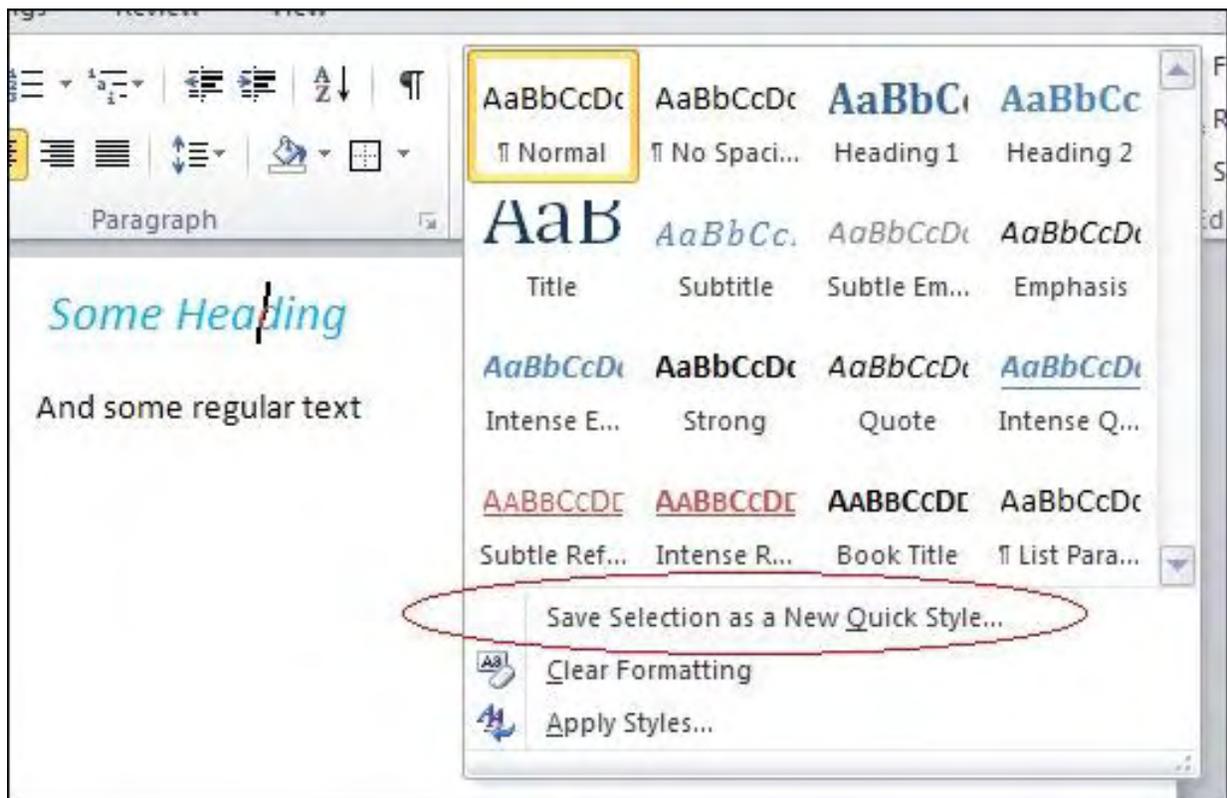
Figure 2. Adding a Custom Style Name.

This will open a new window that lets you create a new named style such as "NewHeading." When completed, Word 2010 will show this as the first Style in the list (in the yellow box in Figure 2)..

Figure 3. Word 2003 Custom Style Creation.

Now, how do you use these custom styles? That's the easy part. You use them just like any other styles. Specifically, select the word(s) you want to change to the specified style, locate the Style you want in the Ribbon Bar box (or Style dropdown list in Word 2003) and click to select. The text will now change to the new style. Note that if you do not select anything, normally the style will apply to the entire paragraph. However, the settings in the Style are applied only to the unchanged parts of the style, i.e., only the parts that are the same as the original style. For example, if you add bold to the text before applying the style, that portion remains bold. Furthermore, if you change some of the text to red, that portion will remain red while the rest turns blue.

Style Updates

OK. Suppose that you create this awesome new style and then realize you forgot one piece, or later decide to change it. What do you do?

There are a few answers. You could delete the previous Style, update the Style, or create a new document so you can start over. Let's explore the updating option.

First, make sure your cursor is located on some text of the style you'd like to change, such as the NewHeading style. If you're not sure, just check the Style box and it will show you the style for the current selection. Alternately, you can change the current selection by picking the style you'd like to change, as previously indicated.

Next, right-click on the selected Style and you'll see a menu, as shown in Figure 4.
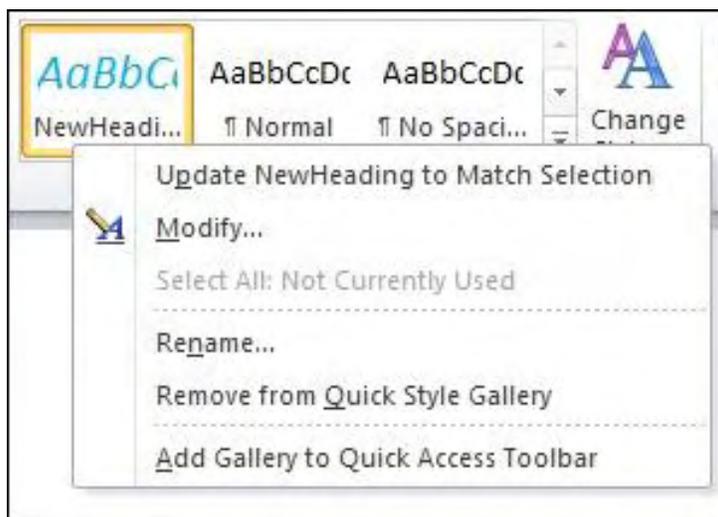
Figure 4. Changing a Style.

If you are using Word 2003, there's a little "AA" picture located next to the Style dropdown box. Click on that and it will open a separate Styles panel. Locate the style in the list of styles and right-click for a menu similar to Figure 4.

Now you can update the Style to match your changes. Click on "Update 'your-style-name' to Match Selection" and the Style is changed.

If you'd like to make additional changes that are not part of the current selection, choose "Modify..." to get a new window such as the one seen in Figure 5.
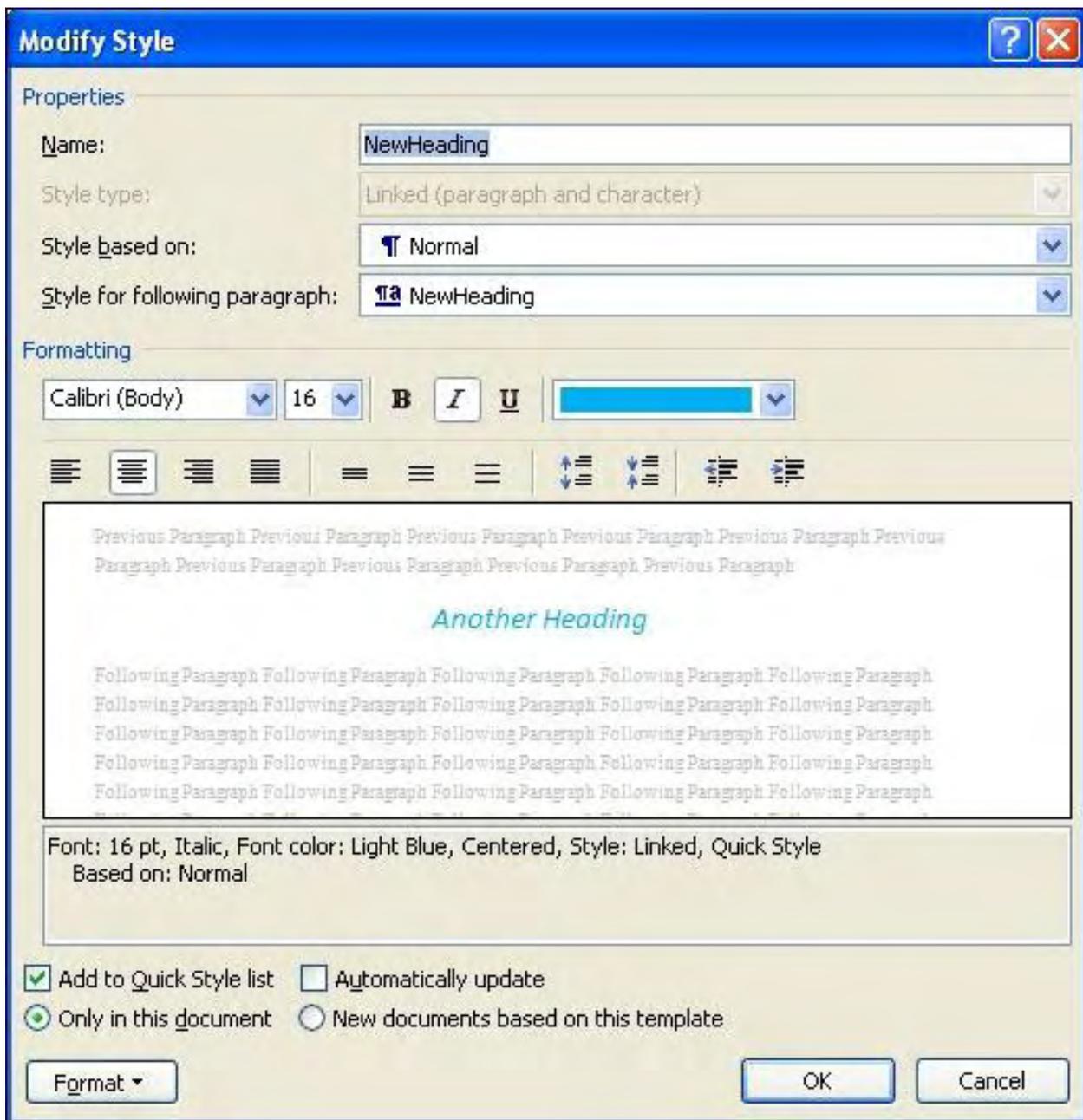
Figure 5. Modifying More of a Style.

At the top, pick the style you'd like to change or add a new style name. Then you can start to customize that style. If you'd like to start from scratch, choose Normal in the box labeled "Style based on." However, if you want to start from something close to what you want, pick a different style. You can also adjust other Properties as needed.

Next are the Formats you'd like to apply to this style. As seen previously with text settings, you can pick a font name, size, weight (bold), italics, underlining and color (as seen above with settings Calibri, 16, not bold, italics on, no underline, and blue).

Continuing, you can adjust your paragraph alignment (left, centered, right, justified) and the line spacing (single, 1.5, double). You can then adjust the spacing before and/or after the paragraph and the amount of indenting on the left.

As you change the settings, you see a sample box and, below it, a listing of the settings. My settings show "Font: 16 pt, Italic, Font color: Light Blue, Centered, Style: Linked, Quick Style Based on Normal."

You also see a few other settings that allow quick access to this style or to allow access from other Word documents.

Finally, you have a Format button. If the above were not enough, this button gives you access to additional settings for the text, paragraphs, etc., as shown in Figure 6.
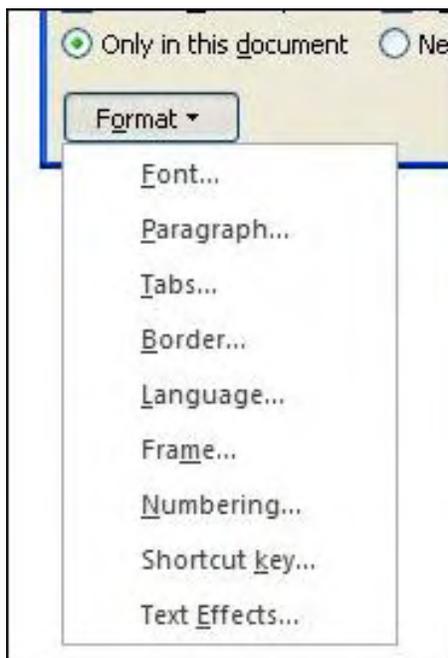
Figure 6. Additional Styles Settings.

When you save the setting, all text that uses that style will immediately update to match your changes, without any additional effort on your part.

Overall, using Styles is an amazing way to quickly reformat select portions of your document. Without this feature, you'd spend a lot of time locating and updating blocks of text to match your desired changes. For small documents, Styles may not be worth the effort, but for larger, more formal documents, this will potentially save you hours of work.

Next week, we start exploring features in Word 2010's Insert tab, including the Pages box and Tables box.

Rob has been in the computer industry for over 25 years and is currently a part-time teacher, offering classes in Excel, Access, Visual Basic, and a variety of other technical tools. He has loved *ComputorEdge* since 1990 and can be contacted at *RSpahitz@Dogopoly.com*.

Looking for a great boardgame? Grab a copy from DOGOPOLY.com (*dogopoly. com*) and have a dog-gone great time.

Worldwide News & Product Reviews

"The latest in tech news and hot product reviews." by Charles Carr

Study: Video Games Improve Cognitive Function—Time-wasters may be good for your brain after all; Audio-Technica ATW-1821 Dual Wireless Microphones—A review of the high-quality wireless mics; NEC MultiSync LCD3090WQXi 30-inch LCD Monitor—Jam-packed with advanced technologies and features.

Study: Video Games Improve Cognitive Function

East Carolina University Psychophysiology Department Unveils Preliminary Findings at Games For Health Conference

PopCap Games (*www.popcap.com*) sent us information about preliminary results of a new study being conducted by East Carolina University's Psychophysiology Lab that have identified improvements in cognitive function through the playing of "casual" video games, like the ones PopCap makes. (Note: PopCap Games says it did not in any way underwrite the study; they're just really glad it was done.)

The study, which has been underway for nearly six months and will be completed later this year, explores the effects of the games on the short-term cognitive acuity of players aged 50 and older. In each instance, sizable improvements were identified in the performance of the experimental group as compared to the control group.

Dr. Carmen Russoniello, director of the Psychophysiology Lab and Biofeedback Clinic at ECU, said, "The initial results of the study are very intriguing, in that they suggest that the 'active participation' required while playing a casual video game like Bejeweled provides an opportunity for mental exercise that more passive activities, like watching television, do not. Future applications could include prescriptive applications using casual video games to potentially stave off Alzheimer's disease and other dementia-type disorders."

Measurements were achieved through tracking of Electroencephalography (EEG) brain waves as well as subjects' participation in the standardized Trail Making Test. Both cognitive response time (the speed with which a subject completes a task) and executive function (the frequency of correctly completing parts of the task) were tracked. Those subjects who played Bejeweled or Peggle (both of which are PopCap games) for 30-minute periods showed an 87 percent improvement in cognitive response time and a 215 percent increase in executive functioning when compared to a control group. According to ECU, these improvements in overall cognitive acuity are comparable to changes recorded after other types of cognitive interventions such as mindfulness-based cognitive therapy and cognitive remediation therapy.

"Video games with more complex rules and controls, and more sophisticated or detailed imagery

—so-called 'hardcore' video games—might provide similar cognitive benefits for many people," said Russoniello. "But those games take significantly longer to learn to play and appeal to a considerably narrower subset of the overall population, especially older consumers. In our experience, 'casual' video games are ideal both in terms of their accessibility and ease of understanding and because they appeal to nearly everyone."

Audio-Technica ATW-1821 Dual Wireless Microphones

When it's time to turn that spiffy video camera into something more newsy—say, an interview for the local newspaper or a video blog—you're going to be in the market for a couple of high-quality wireless mics—the kind you see on pretty much every news broadcast. Audio-Technica's (*www. audio-technica.com/cms/wls_systems/89aff02a96d55e38/index.html*) ATW-1821 gives you just that—an ATW-R1820 dual-channel receiver, two ATW-T1801 UniPak body-pack transmitters, and two lavaliere microphones.

Some quick specs from A-T:

• Headphone monitor output with independent level control (on the receiver)
• Compact receiver is easy to mount on a camera
• UHF reception with 996 frequencies selectable in 25 kHz steps
• Automatic frequency scanning for easy selection of open channels
• Tone Lock squelch system eliminates interference when transmitter is off
• Two independent balanced outputs
• Battery fuel-level indicators on transmitters and receiver
• Soft-touch controls for easy frequency selection
• True Diversity operation for resistance to multi-path interference and dropouts
• LCD frequency and battery status display with backlight
• Antenna and AF Peak LED indicators
• Dual-channel receiver can operate in single-receiver mode to extend battery life when only one audio channel is in use (dual-channel systems)
• Transmitters operate in low or high transmission modes to conserve battery life/maximize power
• Receiver powered by AA batteries or AC adapter. Body packs each powered by two AA

batteries.

The body-pack transmitters feature a professional locking 4-pin connector compatible with all Audio-Technica Wireless Essentials microphones. The ATW-T1802 plug-on transmitters feature a locking XLR connector for adapting dynamic and condenser microphones.

While we had the rig, I used it to mic two separate quiet-voiced actors in a professional theater production and do a couple of television interviews. In every case the sound was excellent with never a dropout or issue with noise.

At $1,795 list (although I've seen them online for quite a bit less), this is not an inexpensive setup —until you compare the ATW-1821 with other options costing many times more. Note that the 1800 series is also available in several other configurations, including single-channel.

My only gripe with the ATW-1821 is that pairing up the wireless transmitters with the receiver was a bit of a pain. Bring your reading glasses. Still, once it's done, it's done.

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NEC MultiSync LCD3090WQXi 30-inch LCD Monitor

The 30-inch NEC MultiSync LCD3090WQXi widescreen LCD display is the kind of monitor you would see on the floor of the New York Stock Exchange or in an air traffic control center—places where money is no object and no compromise is made for quality or dependability.

For example, although not as "sexy," an NEC engineer explained to me that the LCD3090WQXi is physically much thicker (see pic) than most competing displays specifically so that it can dissipate heat through the back and sides rather than out the front through the LCD panel, the very reason many panels fail. That's exactly what happened with a Gateway XHD3000 30-inch

monitor I bought a couple of years ago. Just a few weeks after the one-year warranty expired (how do companies time that so well?), the LCD fried big time. Gateway told me it had stopped servicing the unit except for ones still under warranty. The NEC LCD3090WQXi comes with a three-year parts and labor warranty standard that even includes the backlight.

The LCD3090WQXi has a pair of dual-link DVI ports: DVI-D and DVI-I. The DVI-I connector allows you to connect both digital and analog sources to the monitor (both dual-link DVI and DVI-to-VGA connectors come in the box).

The LCD3090WQXi is jam-packed with advanced technologies and features—although, again, not necessarily the sexy ones. For example, even with a chassis this large, no USB bus is offered. There's also no HDMI input. Still, the picture is what this monitor is all about, and it's a stunner. Bright, true colors with great visibility, day in and day out.

As you might expect, the NEC MultiSync LCD3090WQXi (*www.necdisplay.com/Products/ Product/?product=4af7b335-9302-4429-8d73-74c35a363b57*) isn't cheap. It lists for $2,199.99 at NEC's online store, but burn through a couple of cheaper displays in as many years and you might come to the same conclusion I did about price vs. value.

Quick specs:

• Diagonal: 30 inches widescreen (16:10)
• Display Type: H-IPS TFT
• Native Resolution: 2,560 x 1,600
• Contrast: 1,000:1
• Brightness: 350cd/m²
• Pixel Response: 6ms (grey-to-grey), 12ms typical (6ms white-to-black; 6ms black-to-white)
• Viewing Angles: 178/178 degrees H/V
• Inputs: One dual-link DVI-D (with HDCP) and one dual-link DVI-I (with HDCP)

• Chassis Adjust: Tilt, rotate, height and swivel
• Warranty: Thee years, parts and labor (including the backlight)

In addition to being an editor and columnist for *ComputorEdge* and *ComputerScene* Magazines, where he has written hundreds of feature articles and cover stories over the past decade, Charles Carr has also penned well over 1,000 non-tech newspaper and magazine articles and columns for various publications, including two widely-read columns each week for San Diego's *North County Times* newspaper.

Carr has covered such diverse topics as pesticide use in area schools, invasive background checks for county volunteers, asthma awareness, the debate over standards-based grading, potential vulnerabilities in electronic voting machines, and Southern California's devastating 2003 and 2007 wildfires. He has also written many humorous pieces.

Carr has also edited dozens of stories and articles written by others which have appeared in major publications and web sites across the country.

He has been a contributor and technical advisor to *L.A. and San Diego Parent* magazines and receives dozens of requests a year to appear on Southern California television and radio stations to talk about important events in the tech world.

Carr has judged many writing competitions including San Diego Press Club and Time-Warner Communications contests and was sole judge for the national NAPPA Tech Toys awards for five years (which his kids really appreciated). He was recently a judge for the national "Poetry Out Loud" competition.

He has won many writing accolades, including Press Club awards for Best Column Writing, Consumer Writing and Best Arts and Entertainment, and has repeatedly taken top honors in San Diego Songwriter's Guild competitions for his original musical compositions.

Carr will soon publish his first book, *What a World*, a collection of his best writings.

Learn more at *www.charlescarr.com*.

EdgeWord: A Note from the Publisher

"Amazon.com Is the Online Shopping King" by Jack Dunning

When online shopping is the only alternative, Amazon. com has forged a reputation for customer service, integrity and selection. Plus, the reviews are compelling.

Even if I plan to buy locally, I will check the Web for products and prices. Sometimes all I want to do is read the reviews, so I can make a better choice. Many of the Web retailers include reviews from their customers and they often help to clear up the confusion. At times I will get on the Web just to confirm that a local on-sale purchase was actually a good deal.

There are two big pluses to shopping at a local store. The first is that you can actually see and touch the product. Browsing products on the Web can always be a little tricky. I've seen the same picture used for a number of different products. The second primary motivation is the immediate availability of the product—if it's in stock. No waiting for it to be shipped. No shipping and handling fees—although many online businesses often offer free shipping. Plus, if a problem is found with the product, it's much easier to return it to a local store and get a new one.

Having said all that, there are times when online shopping is the only alternative. You can find virtually anything you want on the Web. Many products are too obscure to be carried in your local store. There just aren't enough customers to make carrying the product worth the retailer's time or space. That means the Web becomes the first place to go, whether you're digging for information to buy locally or looking for those hard-to-get products.

With almost any product Web search, Amazon.com is at or near the top of the list. That's a testament to the success of the company. Having started as a book seller, now almost anything you desire can be purchased through Amazon. Although they carry many of the products, Amazon advertises and sells far more than they package and have delivered. They do this by representing other Internet retailers—often even if the retailer is selling a product that is stocked by Amazon.

This situation works out for everyone. Customers have the assurance that Amazon is vouching for the retailer, the retailer gets to feed off the name and clout of Amazon marketing, and I'm sure that Amazon is getting a commission for every sale made by the retailer. It is surprising how open Amazon is to this type of relationship. Often huge companies want to keep every sale for themselves, regardless of the type of product (e.g., Apple). The openness displayed by Amazon is very comforting for the buyer. This system has allowed even the most obscure products to be offered by the online giant.

Amazon.com also has one of the best product-review systems. Even if you don't plan to buy from Amazon, it is worth your time to read the reviews. Those comments from other buyers and users can make or break your buying decision. If you can't find a review for a particular product on Amazon, you'll have trouble finding one anywhere.

I don't always buy from Amazon.com, but I almost always look to see if they can compete. They

were first with the most on the Internet and have built an excellent reputation for customer service and integrity. They hold the number one spot in Web retailing, and they deserve it.

Jack is the publisher of *ComputorEdge* Magazine. He's been with the magazine since first issue on May 16, 1983. Back then, it was called *The Byte Buyer*. His Web site is *www.computoredge.com*. He can be reached at *ceeditor@computoredge.com*

Editor's Letters: Tips and Thoughts from Readers

"Computer and Internet tips, plus comments on the articles and columns." by ComputorEdge Staff

"Java vs. JavaScript Correction," "Digital Antenna—Alternative to Cable," "YouTube Article," "Wally's Two Cents"

Java vs. JavaScript Correction

[Regarding the March 5 Rob, The ComputorTutor: JavaScript Programming column:]

Thanks for the comments and reference, Philip.

There are definitely some slight differences between JavaScript and Java. However, Java was strongly based on C++, and I think this quote from your reference says it all:

"JavaScript was influenced by many languages and was designed to look like Java."

So I stand corrected.

-Rob Spahitz, San Diego, CA

Digital Antenna—Alternative to Cable

[Regarding the May 21 Digital Dave column:]

Just wanted to add a note about the digital antenna I just installed. The reception now is great! I had a wire connection issue, and that being cleared up my reception is easily rivaling that of cable. Here in San Diego I am getting all my local channels, plus a couple more, but considering the great weather we have here all the time, I haven't been able to judge the reception during storms yet. Time will tell.

The antenna I bought has a rotating feature, but I haven't needed to re-position the antenna to get optimal reception from all my local channels. Just lucky, I guess, for living in a section of town where that is possible. But I think many people will realize they really don't watch all those extra channels that cable offers, once they change over to an antenna and possibly supplement that with something like Netflix. Thanks for your information on the subject.

-Jerry Hughes, San Diego

Regarding HOAs not allowing a roof-mounted antenna: the Telecommunications Act of 1996 supersedes any regulation by your HOA and allows anyone to install a roof-top antenna. However, there are some exceptions for apartment buildings. Also, with a high-quality antenna I can get all the SD channels and most LA channels with excellent quality. This obviously is dependent on your location, but many people should be able to obtain similar results.

-Harris, San Diego, Ca

Over-the-air antennas provide a better signal for HD channels than most cable systems due to lossy compression utilized by many cable companies. There is no such thing as a digital antenna because the digital signals are broadcast over the same frequency bands as analog TV, although most stations are using the UHF band (Channel 14-to 69). In addition you are able to pick up all the sub-channels offered by most broadcast stations.

I have very basic cable (no set-top box) along with a rotatable amplified roof-top antenna and easily pick up stations up to 70 miles away without rotating my antenna (most distant stations are south of my location), and all the signals are excellent. With digital TV you either get the station or you don't.

I am using an HTPC (Home Theater Personal Computer) with two tuner cards and Snapstream's Beyond TV (with remote) and a wireless keyboard and mouse. Snapstream allows me to see all of my channels in a single guide grid (free guide data downloaded over the Internet), and I can record cable and over-the-air programs at the same time. I rarely watch live TV since BeyondTV includes DVR capabilities and I can skip the commercials and watch most hour-long shows in 45 minutes. I do miss some cable/satellite programming such as FOX News, but that is what the Internet is for. Since my PC is connected to my HDTV, it is easy to watch live and recorded cable and over-the-air and Internet TV, DVD/BD movies, surf the Net, read my e-mail (the last two usually on a second small HDTV next to the couch), etc., all from the comfort of my living room couch.

For more information, search the Internet for HD and OFF AIR or OVER THE AIR, and you can find a lot of information.

I think it is time for *ComputorEdge* to cover HTPCs [Home Theater PC]. I would be glad to write a more detailed article for that edition.

-Marcus, Alabama

We also did what Jerry describes, but have never been cable users. Before the converter, we only got a couple of local channels, but now get several. We use both internal and external antennas because we apparently have some hills between us and some of the stations. It's a great alternative to cable.

-Sandy, San Diego CA

We are taking Marcus up on his kind offer to give us more. The ComputorEdge *Issue of June 25 has been designated as the Home Theater PC issue.*

-Editor

YouTube Article

[Regarding Andrea Dunning's May 14 article, "Building Your Own YouTube Channel":]

Great article!

Thanks,

-Lynn Manning Ross, San Diego

Wally's Two Cents

[Regarding the May 21 Wally Wang's Apple Farm column:]

To Ron Cerrato: I don't think we came to opposite conclusions at all. I stated that Flash is not currently available "right now" on any mobile device. So all those critics claiming that they won't get an iPad or iPhone because it lacks Flash support might as well say they won't get a BlackBerry or Palm phone, because right now those phones also lack Flash support and have lacked Flash support long before the iPhone even existed.

In other words, claiming that lack of Flash support is a deficiency of the iPhone is just an invalid excuse when every other phone in the world has also lacked Flash support all this time. Adobe is working on developing a mobile version of Flash, but until it arrives, "right now" Flash support is lacking on other phones as well.

Perhaps you should consider writing a pro-Windows column since it appears that's where your interest lies. At least this would give you a chance to express your opinions in support of every company that you believe is worth following.

-Wally Wang

[Regarding the April 23 Wally Wang's Apple Farm column:]

The key is noticing the first line emphasizes "anti-Apple critics" as ignorant as written: "Most anti-Apple critics are appallingly ignorant."

That doesn't state that all Windows users are ignorant. It simply states that most anti-Apple critics are ignorant. By twisting the meaning as if I were claiming that all Windows users are ignorant is simply ignoring the fact stated in the first line. Ignoring facts is the definition of ignorance, which pretty much proves the first line that "Most anti-Apple critics are appallingly ignorant."

-Wally Wang

[Regarding the March 5 Wally Wang's Apple Farm column:]

If a copy of Windows 7 Home Premium comes with a free server, then why is Microsoft selling their Small Business Server for thousands of dollars? Wouldn't businesses be better off just using the free Microsoft IIs server? Either Microsoft is ripping businesses off with their Small Business Server or, more likely, the free Microsoft IIs server in Windows 7 isn't as full-featured as Microsoft's Small Business Server. Since Leopard Server is comparable to Microsoft's Small Business Server, that means the free Microsoft IIs server in Windows 7 isn't comparable to Leopard server either. Hence comparing the free Microsoft IIs server in Windows 7 isn't an accurate comparison to Snow Leopard server on the Macintosh.

-Wally Wang

ComputorEdge always wants to hear from you, our readers. If you have specific comments about one of our articles, please click the "Tell us what you think about this article!" link at the top or bottom of the article/column. Your comments will be attached to the column and may appear at a later time in the "Editor's Letters" section.

If you want to submit a short "ComputorQuick Review", or yell at us, please e-mail us at *ceeditor@computoredge.com*.