ComputorEdge™ Online — 09/11/09

This issue:
Setting Up and Viewing Webcams Around the World

A look at how to set up Webcams in Windows for Internet viewing, plus the many uses for Webcams.

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Wally Wang's Apple Farm by Wally Wang

Using a Webcam on the Mac

By recording and linking text, audio and video, Pear Note can turn your laptop Macintosh into the ultimate note-taking machine. Also, if every AT&T customer except for iPhone users can use MMS and tethering, what's holding up identical support for the iPhone? And for maximum efficiency, dump your old PowerPC programs if possible. You may not save a lot of disk space or memory, but every little bit can help.

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Digital Camera Internals

Some digital camera tips from a super-informed consumer; a reader is experiencing problems with Skype; and a call for social-networking experiences for next week's issue.

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Behind the Scenes of Webcam Setup

I knew that I wanted to set up a Webcam so that I could view it over the Internet. I had the computer and the camera, but I was concerned about getting bogged down in the process.

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Digital Dave

“Digital Dave answers your tech questions.” by *Digital Dave*

Is there a simple-to-use version of Linux a reader can load from a thumb drive?; a reader's hard drive is losing disk space after defragging; a reader wants info on VoIP systems and resources.

Dear Digital Dave,

I have a circa-2000 Gateway laptop (Win Me) that I would like to turn into a Linux platform just for the learning experience. The CD-ROM drive does not work, so I cannot load or boot Linux that way. I have not been able to locate a workable replacement drive and, to be honest, I don't want to spend any money on this, as this laptop is a candidate to be recycled.

To shorten the question, is there a simple-to-use version of Linux I can load from a thumb drive?

Jim Power
Escondido

Dear Jim,

This is an excellent question and one that has come up many times. With the capacity of thumb (flash) drives continually growing, you will be seeing more and more applications available on these little convenient modules. In many cases, users may bypass installing software on their hard drive, opting for the more portable media.

By using a thumb drive for Linux, you eliminate the need to partition your hard drive or set up a virtual machine on your computer. You will be able to boot to Linux directly from the handy little storage device.

One of the best articles I've seen on the topic was right here at *ComputorEdge*. Last March, Michael Ross wrote an excellent introduction (with links to how-to's) called "Linux on a Flash Drive: Shrinking OS meets growing-capacity drives." It's worth a look.

Digital Dave

Dear Digital Dave,

I have an interesting question—hopefully. I have Windows Vista 64-bit (thank you for your pity, but I hear Win 7 is better). When I defrag, it seems I lose hard drive space rather than gain any.

Example: The last time I defragged, I lost 20 gigs of space. My hard drive went from 180GB of free space to 158GB of free space. And for a while after defrag, I sometimes gain and lose hard drive space.

I've been using Vista's defrag software. I wonder if you can tell me why this happens, and if there's better software that can help me.

Thanks,

Ben Chavez
San Diego, Calif.

Dear Ben,

First, I should clear up the purpose of defragmenting a hard drive. It is not to clear up more space on the drive; therefore, it is unlikely that you would see more space on your drive after the process.

Defragmentation is done to take the various pieces of individual files that get spread all over the drive during the various writing and rewriting processes and put each into one big, contiguous file. This saves the drive head from needing to jump back and forth when reading a particular file, thus making the drive more efficient. Ideally, when completed the drive will have the exact same amount of space as it had when it started. However, this is rarely the case for a number of possible reasons.

Vista has a number of automatic backup programs and temporary files that may come into the mix. One backup is System Restore. If a System Restore point is created before or during a defrag, it can take up a number of gigs of hard drive space. The way most people deal with it is by using the hard drive cleanup program—right-click on the drive in Windows Explorer and select Properties. In the General tab, click Disk Cleanup. You will get a list of file types that you can mark for deletion in the Disk Cleanup tab of the displayed window. In the More Options tab, you can delete System Restore points and shadow files. Shadow files (application backup files) are only available in the Business version and above of Vista.)

Over time, Vista tends to take care of these things itself. In fact, you do not need to run defrag yourself in Vista, since by default it runs automatically every Wednesday morning at 3 a.m.

The Vista defrag program does not do a perfect defragging of the hard drive. Rather, it is optimized, trading off the amount of defragging it will do with the amount of efficiency that will be created. (By default, it doesn't defrag any files where the pieces are over 64MB.) However, unless you are continually manipulating numerous programs (installs and uninstalls) and files (writing and deleting), the default defragging should be good enough, so you don't have to do it yourself.

When drives were smaller, slower, and not automatic, defragging was much more of an issue. Today, I rarely ever think about doing a defrag myself.

Digital Dave

Dear Digital Dave,

I have recently started using VoIP (Magic Jack), and I find that it works well. I was wondering what other VoIP systems/sources are out there on the Web. What are some of the major features that I should look for? What are the major pitfalls for each system? For now I chose Magic Jack (20.00 Year) over Skype and Vonage (monthly fee) due to the cost. Your thoughts?
Dave Vail
King George, Va

Dear Dave,

Voice over IP (VoIP) telephone services have certainly come a long way and are here to stay. In the long term, VoIP competes primarily with the landline phones and long-distance companies, although many people are using their cell phone as their only telephone.

The primary strength and weakness of VoIP is the same: It is done over the Internet. This is a strength because once you have acquired Internet service, it's possible to get cheap VoIP telephone service over that same connection. However, the VoIP service is subject to the same limitations that you find in your Internet connection.

The quality of your phone call is going to depend upon the bandwidth of the Internet connection and the power of your hardware. Since the audio needs to be digitized, compressed, sent, decompressed and decoded, every stage of the process affects the result. In a local market, Internet calls may not compete with a landline telephone. However, if you make a good number of overseas calls, it may be very competitive with long-distance service that needs to bounce off satellites. If you have cable or DSL Internet service, VoIP may work out well for you. If you have satellite service, you may find the latency (time delay) unbearable.

Another problem is that VoIP is dependent upon your local power. Unlike a cell phone or landline, when the power goes out, you will have no phone service.

I expect that VoIP will continue to improve. Right now the primary reason for picking VoIP is price—especially if you have many people to talk to overseas. However, if you have powerful computers on both ends and broadband Internet connections, there are many ways, including Skype, that will connect you directly for free.

I welcome anyone else's thoughts on this topic—particularly if you have had experience with using VoIP. I've only been on the receiving end.

Digital Dave

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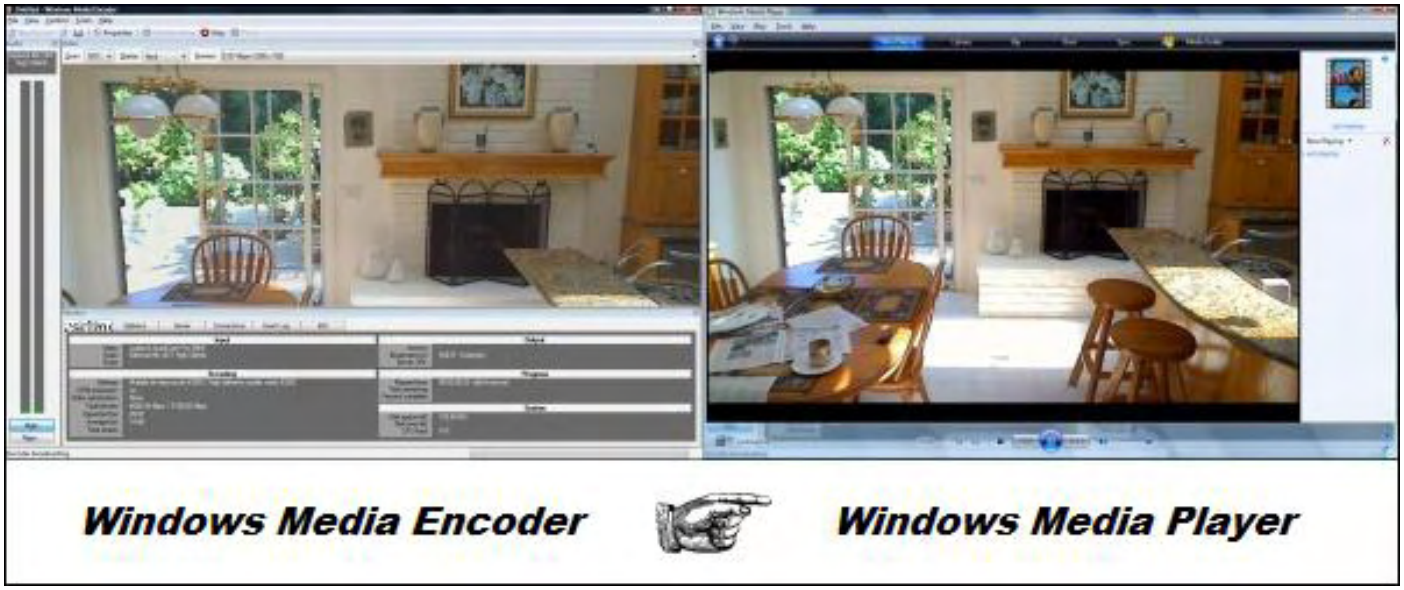

Easy Internet Webcam Setup for Windows

"Create a live Webcam broadcast that can be seen from anywhere in the world." by Jack Dunning

> There are certainly a number of good uses for Internet-accessible Webcams, such as security monitor or baby monitor, but the only problem seems to be how to set one up. Here's an approach that doesn't require geek-level competency.

This is something that I always wanted to do—or, at a minimum, learn how to do. I've looked at many Webcam feeds over the Internet (especially cameras located on mountain passes during the winter) and thought that it would be cool to set up my own Internet camera—accessible from anywhere.

At first, this task appears daunting and complicated. I know that the Webcam will need some sort of server (a computer), an external IP (an Internet address accessible from anywhere in the world), and software to make it all work. This is not as simple as word processing. Yet, if it can be done quickly and inexpensively, there are a myriad of uses for an Internet camera.

With an Internet camera installed in the home, a person could keep their eye on pets who may like to get into things while the owner is away. (At least, a person would be able to watch while the house is being torn up.) Webcams could be used as real-time security monitors while on vacation. Even if only accessing the Webcam over the home network, it could act as a baby monitor, giving both video and audio. There are certainly a number of good uses for Internet—accessible Webcams—the only problem seems to be how to set one up.

When I started my search for Webcam implementation, I assumed that I would need to download commercial software (30-day trial) and possibly obtain a fixed Internet address from my Internet service provider (ISP). My skepticism about the process may be the same hesitancy that most people feel about untried computer tasks. However, I found an approach that not only was free, but didn't require geek-level competency. I feel sure that most people with a little patience can do this fairly easily. All that is needed is a Windows computer, a Webcam and an Internet connection. (If you just want an internal home monitor, then you don't need the Internet, but you do need a network.)

Your Webcam

When picking out a Webcam, there are a few considerations that are specific before setting up an Internet camera. First, don't go too cheap. The lowest-price Webcams give the worst quality. The cheapest $30 Webcam

isn't worth the effort when an $80 model can yield excellent results. Resolution is the key. The low resolution 640x480 max image (300 kilopixels?) is pretty much useless. For a little more, you can get up to a 1,600x1,200 image with 2.0 megapixels. You may not be able to use all that for your Internet feed, but you will get a better picture even at a lower screen size and bandwidth.

The built-in laptop Webcams are awkward for an Internet camera because the computer must be moved and pointed at the subject. This is fine for a video phone call where you sit in front of the computer, but it's not great for surveillance. (Note: I don't know if this is a problem for most built-in Webcams or if it just relates to my HP laptop, but I wasn't able to get the notebook Webcam to broadcast with the software I describe in this article. An external USB Webcam plugged into the laptop worked fine. I don't know if there was some type of driver conflict. I expect that others may see the same thing—at least with HP laptops.)

If you use the USB type of Webcam, then the location of the camera must be within the five-foot limit of the USB cable. You will be able to independently aim the Webcam. If you use a wireless or network type of Webcam, there will be a much greater degree of freedom in camera placement.

A Webcam that has a swivel is much more flexible than the ones made to sit on top of a monitor. Generally, the screen-top Webcams only point straight ahead. This may make them difficult to mount in situations where you need to view a room at an angle.

Before you move on to setting up the video broadcast software, install the Webcam (and associated software) and make sure it works.

Getting Free Live Video Broadcast Software

I'm always amazed when I find free software from Microsoft. That was my feeling when I discovered Windows Movie Maker sitting on my Vista computer a number of weeks back. (See the article "Movie Making in Windows for the Neophyte—and It's Free!".) This time my search turned up Windows Media Encoder (*www.microsoft.com/windows/windowsmedia/forpros/encoder/default.mspx*). This program will turn your Webcam into a network camera, which you can view over your network or the Internet. While it may seem a little complicated to the newbie, if the steps outlined here are followed, it's relatively easy to set up an Internet camera with Windows Media Encoder.

The first step is to download and install Window Media Encoder. If you use the 64-bit version of Windows, you may want to try Windows Media Encoder x64 Edition 9 Series. If not, use the 32-bit version, which will run on either a 32-bit or 64-bit Windows computer. (As I mentioned above, I was not able to get either version to work with my built-in laptop Webcam. Both versions worked fine with various external Webcams.) The installation procedure is straightforward.

Once installed, run Windows Media Encoder. On your first screen you will get a New Session window similar to Figure 1. This window is the start of a wizard for setting up your video broadcast. Note that "Broadcast a live event" is selected. (This window may be opened at any time by clicking the New Session button in the main screen.) Click OK.

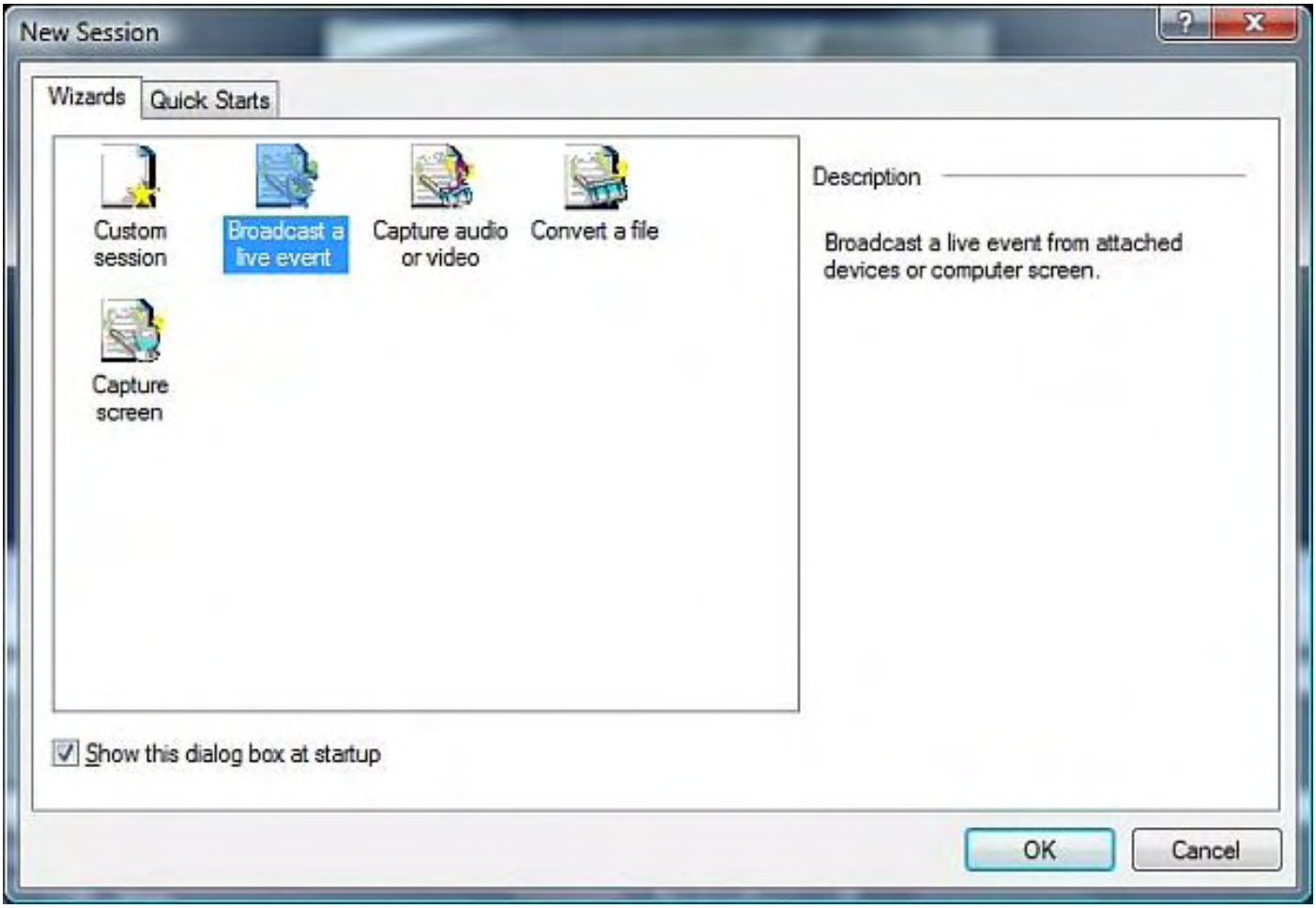

Figure 1. Windows Media Encoder New Session window.

The next window displays the Device Options (see Figure 2). Your Webcam should appear in the list with a separate audio option. If you have multiple choices and don't know which to pick, try them one at a time. You will be able to go back and change the selections.

Figure 2. Windows Media Encoder New Session window.

The next step is to select "Pull from encoder" from the Broadcast Method windows (see Figure 3). This method of broadcast makes the feed available to anyone who accesses the Webcam with Windows Media Player—pulls it from the camera via the network or Internet. The Push method would seek out a media server to send the feed —more complicated.

Figure 3. Windows Media Encoder Broadcast Method window.

The next window, Broadcast Connection, gets a little more complicated only because you will need to use this information later (see Figure 4). You will want to write down the HTTP port and possibly the network name of the computer. The port will most likely start as 8080. However, 8080 is a commonly used alternative port. Clicking the find Free Port button will give you a different, more obscure port number. Write it down.

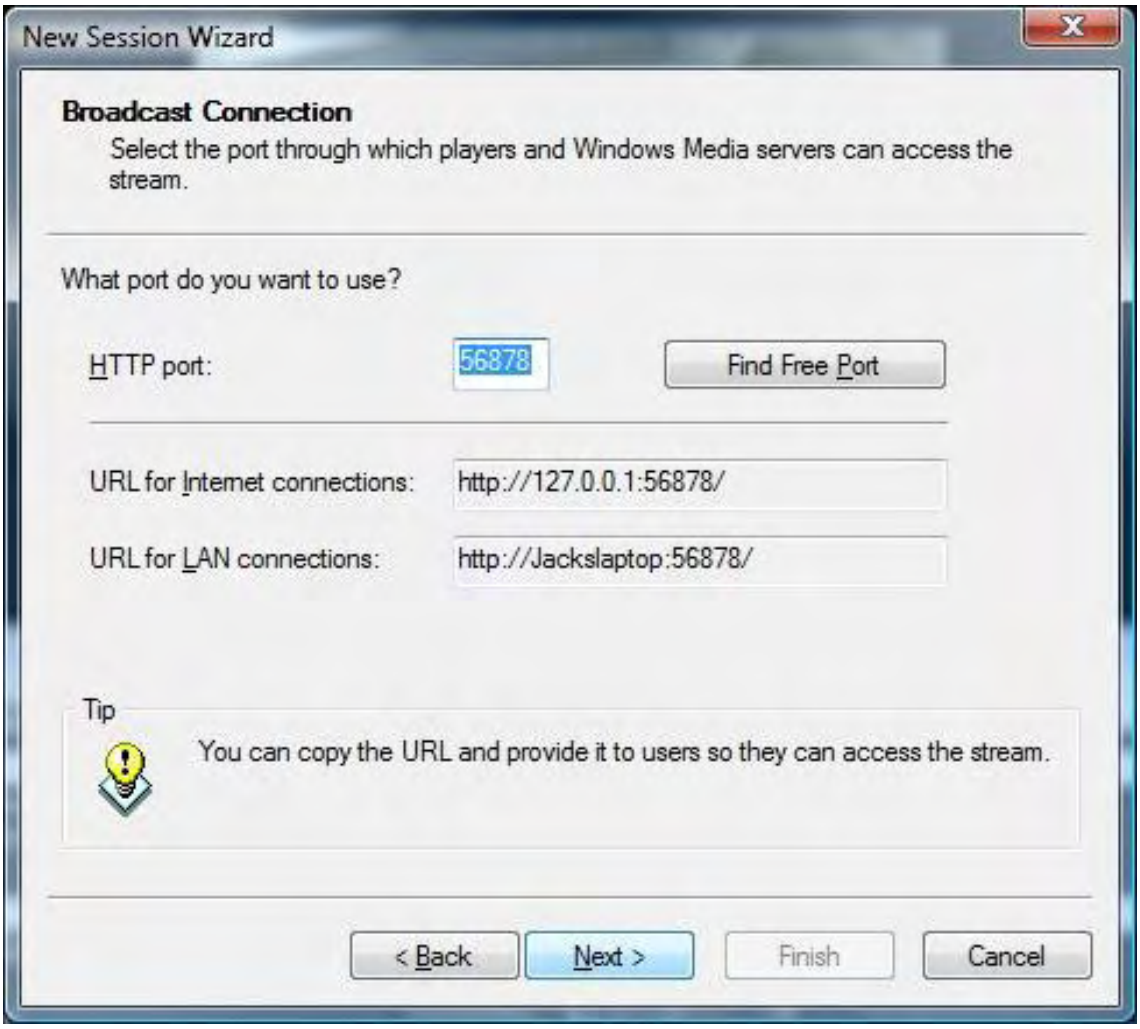

Figure 4. Windows Media Encoder Broadcast Connection window.

If you will be accessing the Webcam over your network (not the Internet), then you will be able to use the name and port number when entering the address into Windows Media Player (http://jackslaptop:56878/). When you complete setup with the wizard, this is the address you will use on the internal network.

However, for Internet access, you will need to know the specific internal IP of your computer (not the local 127.0.0.1 that you see in Figure 4). To get this IP, which is in the form 192.168.xxx.xxx, you will need to check your network settings. (For more information on getting your internal IP, see the September 4 column, "Windows Tips and Tricks".) The reason for recording these numbers is to later set up your router for forwarding any Internet request for the feed to the appropriate host computer—the one with the Webcam. This may sound complex, but it's not difficult to do.

The next window is Encoding Options (see Figure 5). The purpose of these options is to help you to select the optimum parameters (window size and quality) that will work for your available bandwidth. Initially, selecting "Live broadcast video" will offer an optimum for Internet video. Note that the top rate starts at 387Kbps. If you choose a slower rate, the broadcast screen size will be smaller.

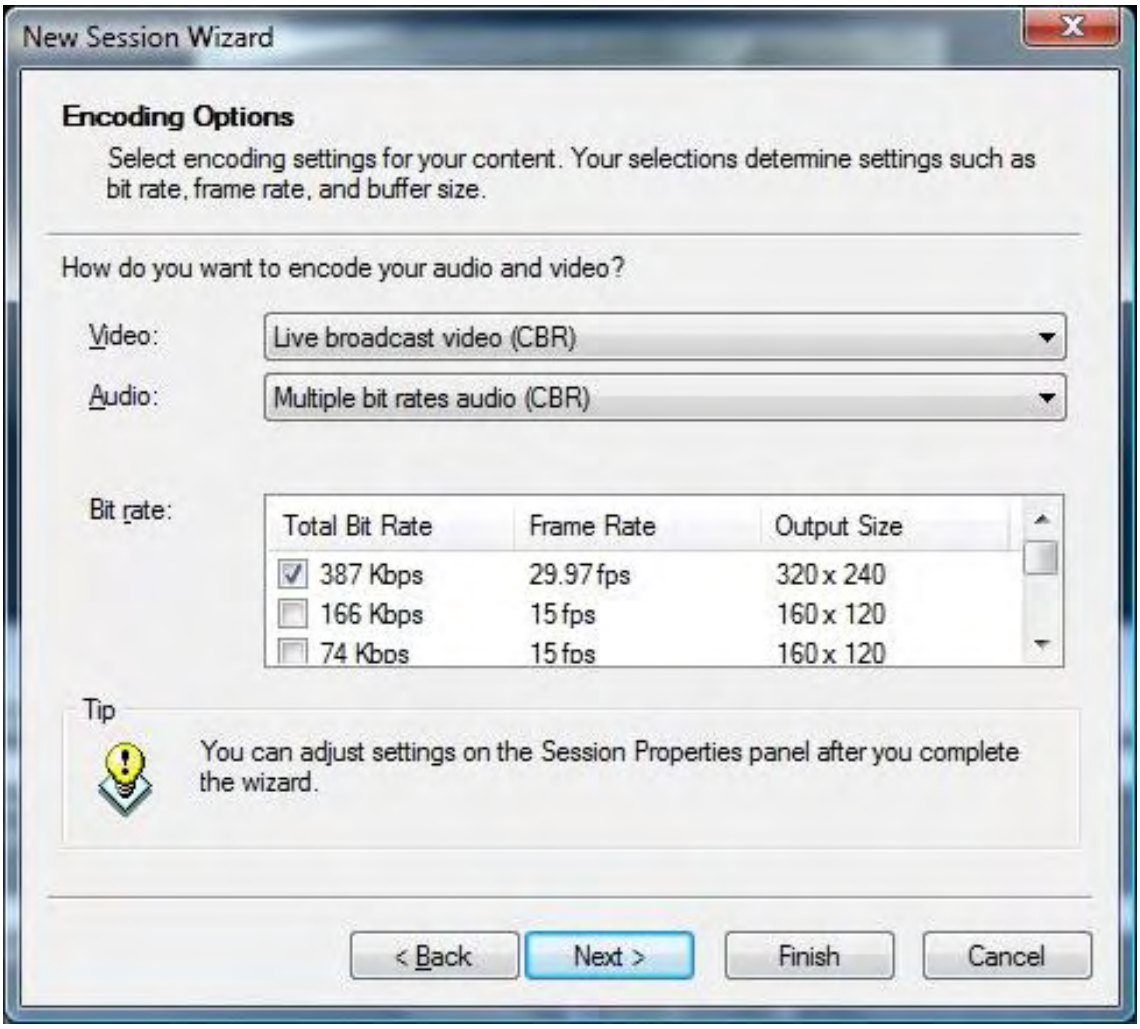

Figure 5. Windows Media Encoder Encoding Options window.

Which rate you select depends upon a variety of factors other than the bandwidth of your Internet connection—although your Internet bandwidth is a major factor. The speed and power of your Webcam-hosting computer is important. I found that my older converted Vista computer could not keep up the encoding at the default speed (387Kbps), returning an error (and shutting down) after about 12 minutes. The HP laptop with a dual-core processor had no problem processing the feed, running continually without an error. If you're planning to use an older computer to run an Internet camera, then you may need to restrict the video output size a little more.

Start with the default bandwidth and test various settings looking for the optimum setup. If you're doing internal network monitoring (e.g., a baby monitor), then you should be able to use the high-definition quality video (5137Kbps), which gives you the largest possible screen. (The quality of the picture will also depends upon the resolution of your Webcam. It will do no good to use higher-quality bandwidth schemes if your Webcam can't handle it.)

At this point, you will note that the Finish button is clickable. There are other administrative screens for adding titles and such, but for our purposes, click Finish. You will see a security warning telling you that anyone will be able to view your feed unless you restrict access (see Figure 6). The restrictions are implemented through the "Tools/Broadcast Security..." option by entering either allowed or disallowed IPs. For now, we not going to worry about who sees our video feed. In order for someone to see your camera feed, they would need to know the Internet address (IP) of your modem and the port you're using. Unless you tell, it's unlikely that you will be found. In any case, as my mother-in-law used to say, "Who'd be looking at you?"

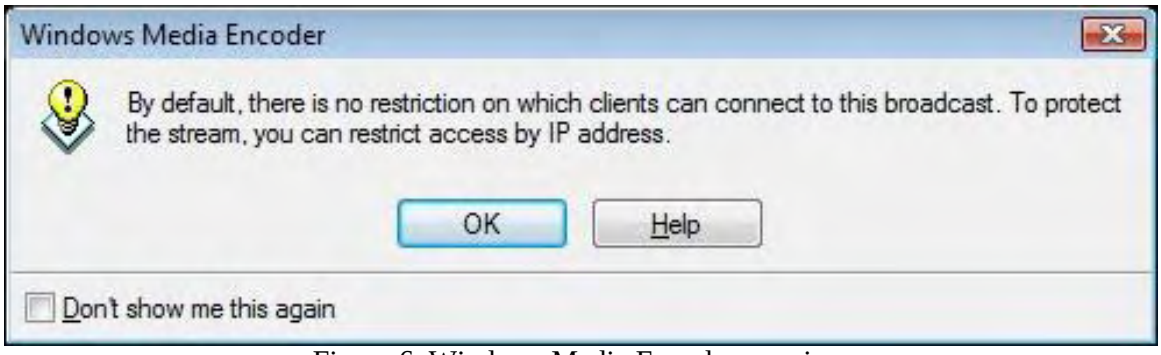

Figure 6. Windows Media Encoder warning.

At this point you should see a screen similar to Figure 7, except the Start Encoding button should be dimmed while the Stop button is active. As long as you see the Stop button available, the video feed is active. To make changes to the feed parameters (camera, bandwidth, etc.), you will need to Stop the feed and later Start Encoding again.

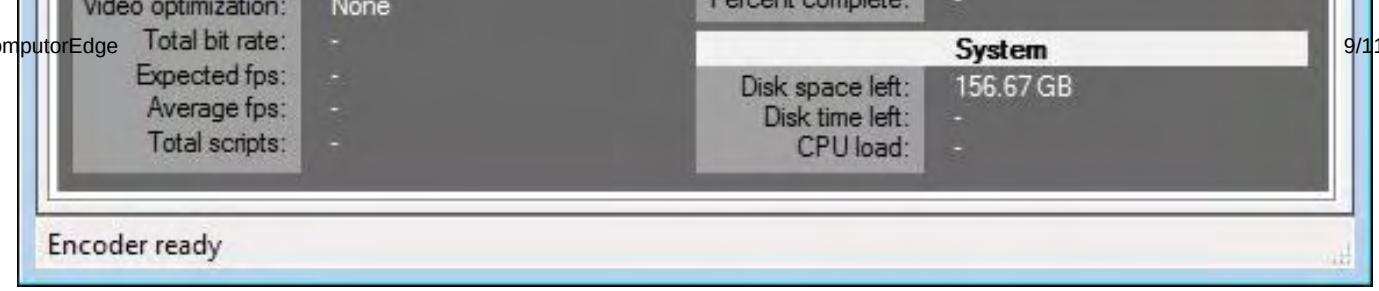

Figure 7. Windows Media Encoder main window.

At this point you should be able to view the feed on your local network by loading Windows Media Player and selecting "Open URL..." from the File menu. (If you don't see a File menu at the top of the player, push the ALT key. The menu should then appear at the top.) Enter the URL of the computer (or network name) along with the port, as shown in Figure 4. You should even be able to do this from the same computer. If all of that works, then the next step is making it available on the Internet.

Putting a Video Feed on the Internet

You have your Webcam feed working on your network, but at this point the firewall in the router is preventing outside computers from seeing the video. You will need to do two things to allow the rest of the world to find the live camera video. The first is to obtain the Internet address (external IP) of your modem. The second is to set up port forwarding (tell your router where to send the request when it comes in from the outside).

It is relatively easy to get the IP of your modem. Many sites, such as *modemip.com* and *whatismyip.com* will immediately tell you your modem IP. (Don't be shocked that your Internet IP is so easy to get. Any server on the Internet is capable of reading the IP of anyone accessing that server. If you surf the Web, you're sharing your IP with every site you visit. They also know what browser you're using, but not much more.) You will see the address listed at the top of the page. If you plug this number into any Internet-type program, it will find and attempt to access your modem, regardless of where you are located. Write down the IP. This address, along with the port number you copied down earlier, are the keys to accessing your camera feed.

Note: Most people do not have static (unchanging) IPs from their service providers. That means your modem IP could conceivably change at random times, or on modem reset. If this is the case, the IP for accessing your camera feed will change correspondingly. In these situations, you will either need to look up the new IP address whenever it changes, or get a fixed (unchanging address) from your service provider. If you're planning to use the Webcam on the Internet over the long term, it's recommend that your ask your ISP about a fixed IP for your modem. (For more information on setting up fixed IPs, see this week's "Windows Tips and Tricks" column.)

When you set up the feed with Windows Media Encoder, you made that video stream available from your host computer. However, if you have a router, its firewall is likely blocking the connection. You need to set up your router to forward any activity over that port to your host computer.

Port Forwarding

Port forwarding is a common procedure used to open a door in your router's firewall for special purposes. When port forwarding is in effect, whenever the router receives a request on the designated port, it is automatically sent to the listed computer IP. This technique is often used by online games and other specialized Internet programs. The procedure ensures that any activity coming in over a specific port will only be sent to the host machine. This is an administrative procedure that can be accomplished by logging onto the router (check your router manual for the logging-on procedure). Once you're logged on, set up port forwarding in a manner similar to Figure 8 using your own internal IP and port number.

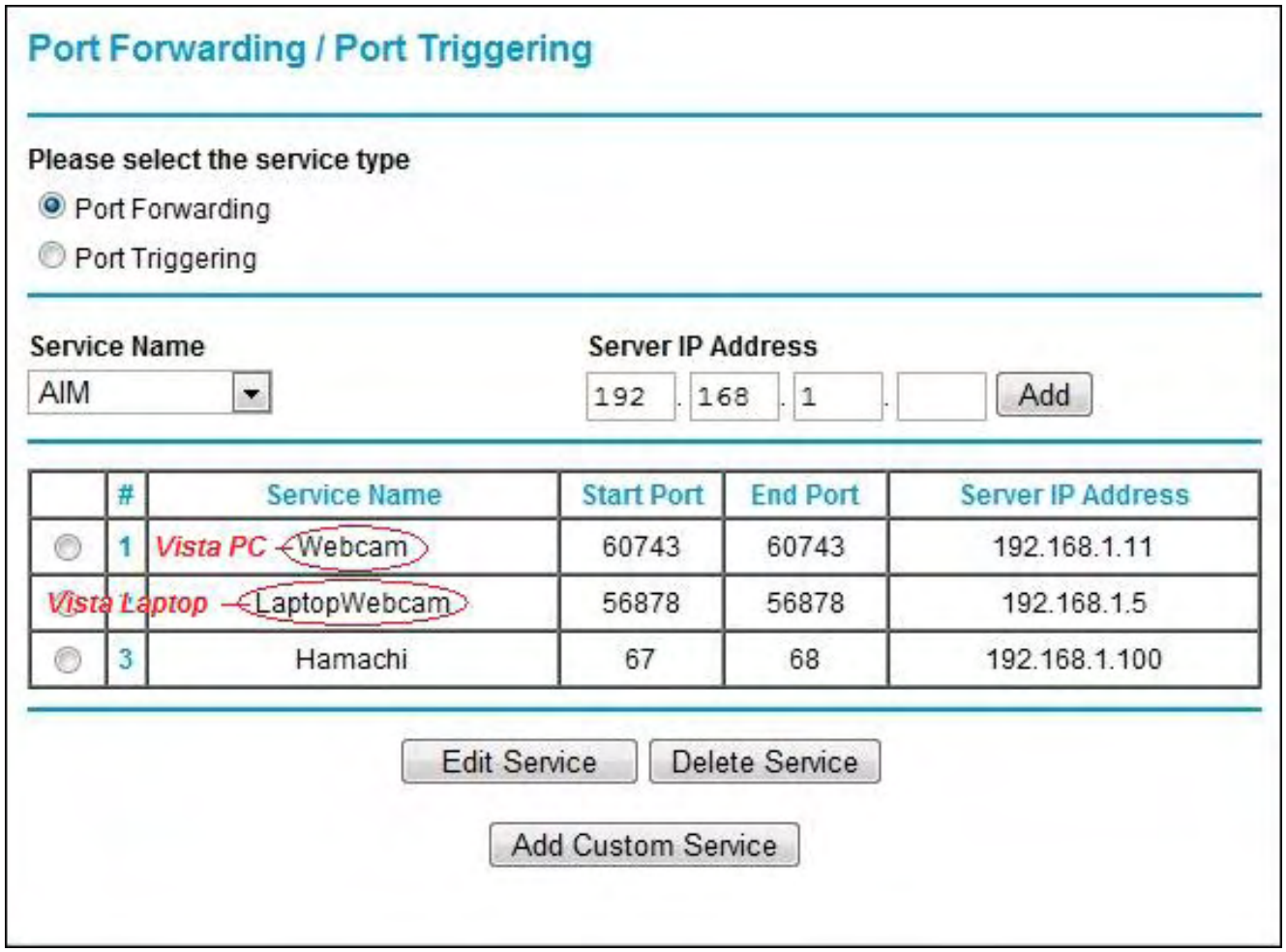

Figure 8. Port forwarding set up on a router.

The settings you use should conform to the parameters you wrote down from your Windows Media Encoder and the specific host computer's IP. In this case, one was a Vista PC and the other a Vista laptop.

Viewing the Internet Camera Feed

The last step is easy. Open Windows Media Player, and select "Open URL..." from the File menu as you did for an internal network computer. This time enter the IP address of the modem and the port number, such as: "http://64.44.200.64:56878/" (http://[your modem IP]:[port number]/). The feed should start loading (see Figure 9).

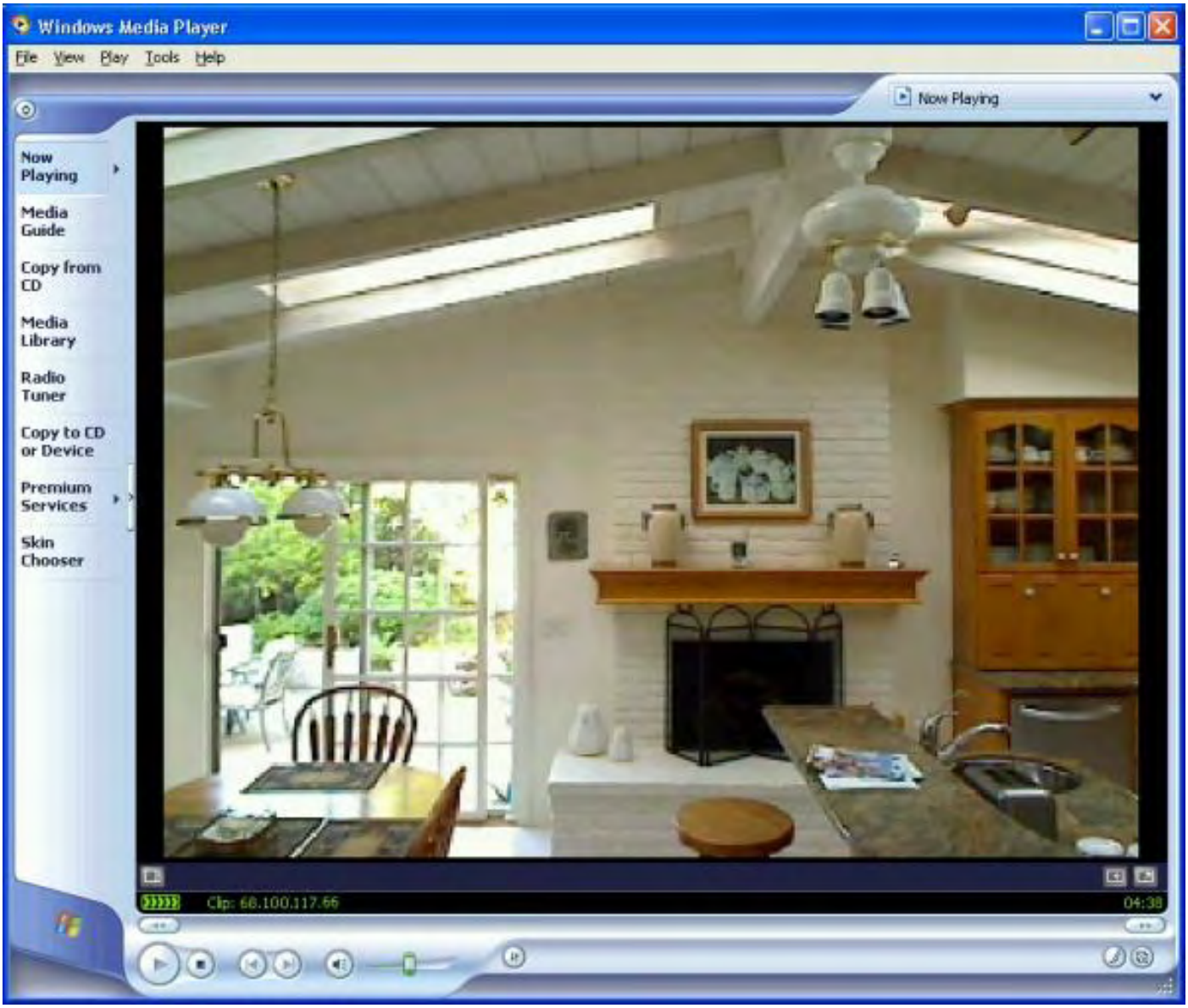

Figure 9. Windows Media Player showing Webcam feed.

Do this from any Windows computer in the world.

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*

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Webcams: More Useful than You Think

"From video calls to visiting outer space, have fun with Webcams." by Dawn Clement

Any computer with Internet access and a Webcam can be used to make video calls, but there are many other things you can do with your Webcam, from visiting the space station to viewing art.

A Webcam is a video-capture device connected to a computer. Originally, small cameras that attached to a computer via a cable, they have become increasingly popular. These little cameras are so ubiquitous that most modern laptops come with built-in Webcams. You may already have a Webcam and not know it! Why would you want a Webcam, you might ask? Well, they're actually kind of fun. You can make video calls to faraway friends, play games in a whole new way, visit places you would never otherwise get to see, and create art.

"Clarence is certain he saw Martians invading on the Internet Webcams."

There is a certain cool factor to using Webcams for video telephony. In the late 19th century, Alexander Graham Bell predicted that "the day would come when the man at the telephone would be able to see the distant person to whom he was speaking." That prediction came true less than 100 years later. The first video telephones hit the market in the 1960s, and there are still video telephones available today. They are, however, a niche market due to their high cost. Webcams offer an inexpensive (nearly free) alternative to traditional video telephones.

Any computer with Internet access and a Webcam can be used to make video calls. All you need to do is install some software. Most messenger programs (i.e., Yahoo Messenger, AOL Instant Messenger, Windows Live Messenger, Skype, etc.) have built in support for video calling. Video calls (actually chat sessions) are easy and fun, but there are other things you can do with your Webcam.

Use your Webcam to catalog your books, CDs and DVDs. Between my husband, myself, and our three kids, we have thousands of books, hundreds of CDs, and bookshelves full of DVDs. It gets hard to keep track of everything, and we occasionally purchase an item only to realize after the fact that it's a duplicate. There is an easy way for us (and you) to organize everything in a convenient manner. Webcams can be used to scan barcodes and create databases of books (or CDs or DVDs), which can then be used to make informed purchases. Of course, you will also need some software. Check out MediaMan (*www.imediaman.com*) and Delicious Monster (*www.delicious-monster.com*).

Did you know that you can use your Webcam to play motion-controlled games online? Motion-controlled games are not new (think Wii), but the idea of using a Webcam as the control mechanism is. Who knew that simple flash games could be transformed into technological wonders? You can find free games at My Live Cam (*www.mylivecam.com*) and Motion Games (*www.motiongames.net/*).

Create art with your Webcam. Performance artists the world over have adopted the Webcam as another medium to play with. For example, Noah Kalina has been taking a picture of himself with his Webcam every

day since 2000. You can view all of the pictures as a slide show and see how he's changed over the years by checking out his Web site (*www.everyday.noahkalina.com*). James Kuhn is a face painter who filmed his creations in action and posted them online (*hawhawjames.livejournal.com*). Japanese rock band Sour has created an incredible music video (*www.youtube.com/watch?v=WfBlUQguvyw*) from Webcam clips of their fans enjoying their music. It's definitely worth checking out. These artists' work is truly inspiring! You can create your own art pieces with special-effects software from sites such as *waves.tv* and *cameroid.com*, or even participate in a group project at *www.flickaday.com*.

You can also use your Webcam for video surveillance. All you need is your computer, your Webcam and some software, such as DeskShare (*www.deskshare.com/wcm.aspx*) or Softpedia (*www.softpedia.com/progScreenshots/Video-Surveillance-WebCam-Software-Basic-4-Camera-System-Screenshot-77816.html*). You never know when this will come in handy. Last year in New York, when Kait Duplaga's laptop was stolen, she used the built-in Webcam to take a picture of the thief, who was subsequently apprehended.

If you're camera shy or don't have a Webcam of your own, you can always watch somebody else's. There are literally millions of Webcams out there, and some of them are actually pointed at something interesting. See active volcanoes (*www.volcanolive.com/volcanocams.html*). Watch penguins play at the Monterey Bay Aquarium (*www.montereybayaquarium.org/efc/efc_splash/splash_cam.aspx*) or catch cute cheetahs cavorting at the National Zoo (*nationalzoo.si.edu*).

Visit outer space from the comfort of your own home. There are several good Webcams in space—there's more than one on the International Space Station (*www.nasa.gov/multimedia/nasatv/index.html?param=station*), there's one on the Tate Satellite (*www.tate.org.uk/space/webcam.htm*) (with some great shots of the Earth) and the European Space Agency even has one on Mars (*webservices.esa.int/blog/blog/6*).

More than likely, you'll find certain Webcam feeds online that you want to watch regularly. To make it easy on yourself, why not consider installing a Webcam aggregator to organize your favorite feeds? Free software is available online at sites such as Ksourcerer (*www.ksourcerer.org/software/free-webcam-watcher.php*).

Dawn Clement is a freelance writer, domestic engineer, and mother of three with a Masters of Arts in Philosophy and over nine years experience in technical support.

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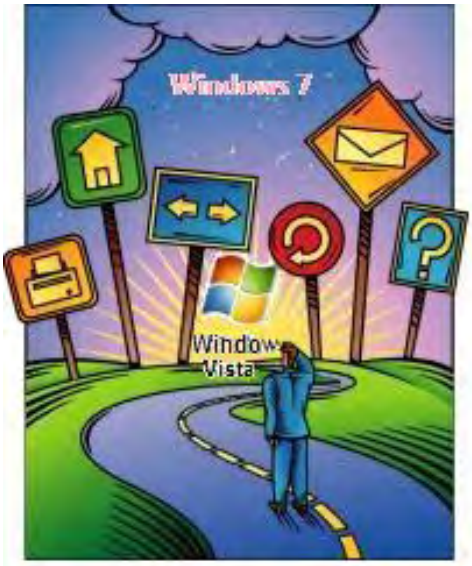

Windows Vista Tips and Tricks

(and some Windows 7)

Windows Tips and Tricks

"The Mysteries of DHCP" by Jack Dunning

With networks, there are always a few more things to discuss and tips to offer. One concept to review is the issue of Dynamic Host Configuration Protocol (DHCP).

Networks make working with computers a little more complex. That's why we need special tools to help us find solutions to network problems. Last week I discussed some basic information, how to use the Network and Sharing Center in Windows (Vista and 7), and the command "ping" to check the network connections. With networks, there are always a few more things to discuss and tips to offer. The first concept to review is the issue of Dynamic Host Configuration Protocol (DHCP).

DHCP is one of those mysterious terms that we see when we log on to our router. It is a setting that we rarely, if ever, touch. The reason for that is the DHCP default mode is almost always on—and that's what we normally want. So, why discuss it if it normally needs to be on? Because the situation that comes up this week that involves setting up an Internet-accessible Webcam may work better if we use a network address that isn't subject to changing—or a fixed IP.

DHCP is the system that a server—in this case the router—uses to automatically assign network addresses to devices (computers, network printers, IP cameras, etc.) as they come up on the network. In most home networks, that's exactly what we want. However, as explained in the article "Easy Internet Webcam Setup for Windows," we will want to port forward the outside viewing request to the proper computer or (IP camera). This requires us to set the IP of the computer in the router. It would be inconvenient if the router happened to assign a different IP to the computer on the next reset. The better we understand how to deal with DHCP (it's not really that complicated), the easier it is for us to do the right thing.

First, in general network troubleshooting, if you turn off DHCP, your router will not assign IPs to the network machines, and the computers will not be able to access the Internet. That is unless you assign a fixed, non-conflicting IP directly to the computer. The place you assign a fixed IP to your computer can be found by clicking View Status next to the network connection in the Network and Sharing Center. Click the Properties button, select one of the Internet Protocol Versions (4 or 6, they both use the same IP), then click Properties. You will see a window similar to Figure 1. The window will look very much alike in all Windows flavors.

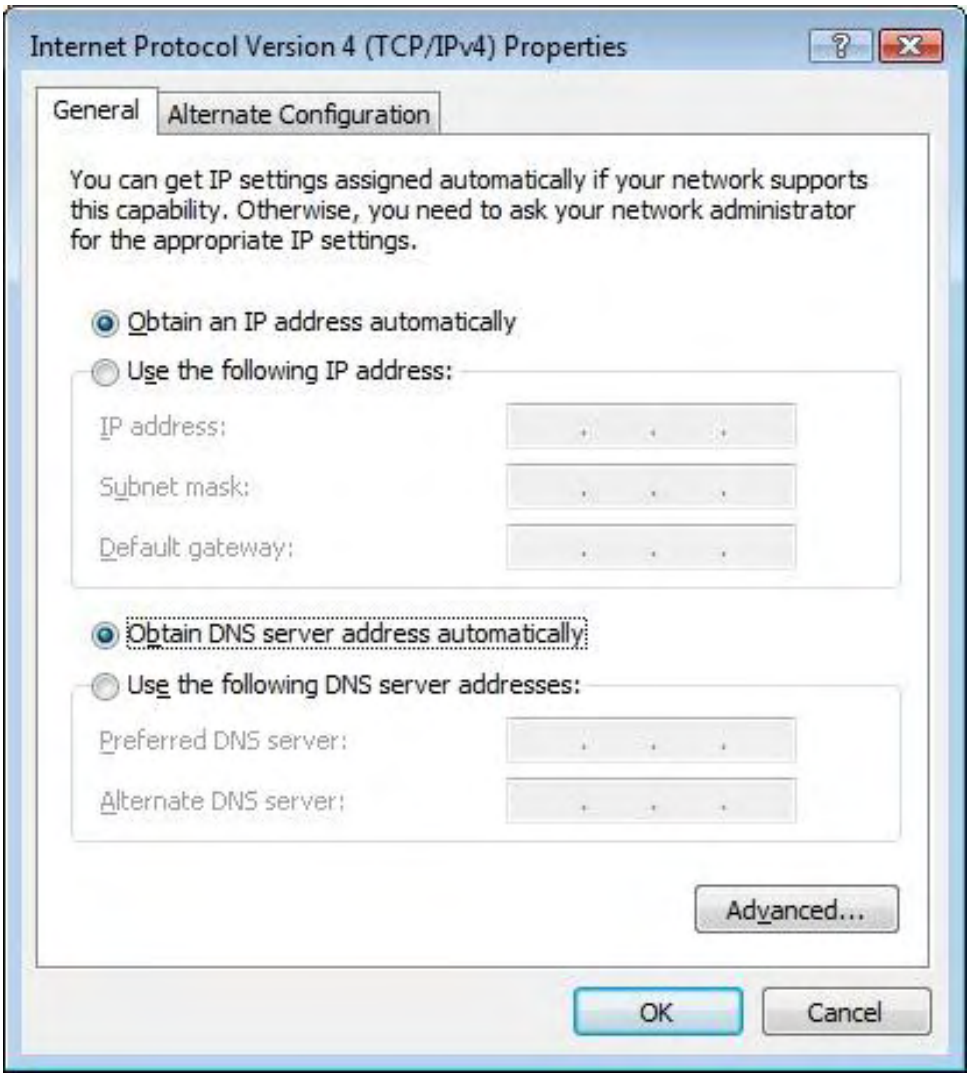

Figure 1. Internet Protocol window in Windows Vista.

Note that it is set to automatically obtain the IP address. This is what you usually want, but if you need to assign a fixed IP address, you would select the next item, "Use the following IP address:" and enter the desired numbers. You need to be sure that the address does not conflict with any other device on the network, nor that it will be inadvertently assigned to another device at a later date. To do this we either need to know all the other IPs on the network, or set up the router to prevent a future problem. We'll look at how to do both.

Setting DHCP in the Router

Check your router manual and log on by opening your browser and entering the router's IP. Don't know the router's IP? Click "View full map" in the Network and Sharing Center. You will open a window similar to Figure 2. Hover the cursor over the image of a router and an information box will open, as is circled in red. There is your router IP.

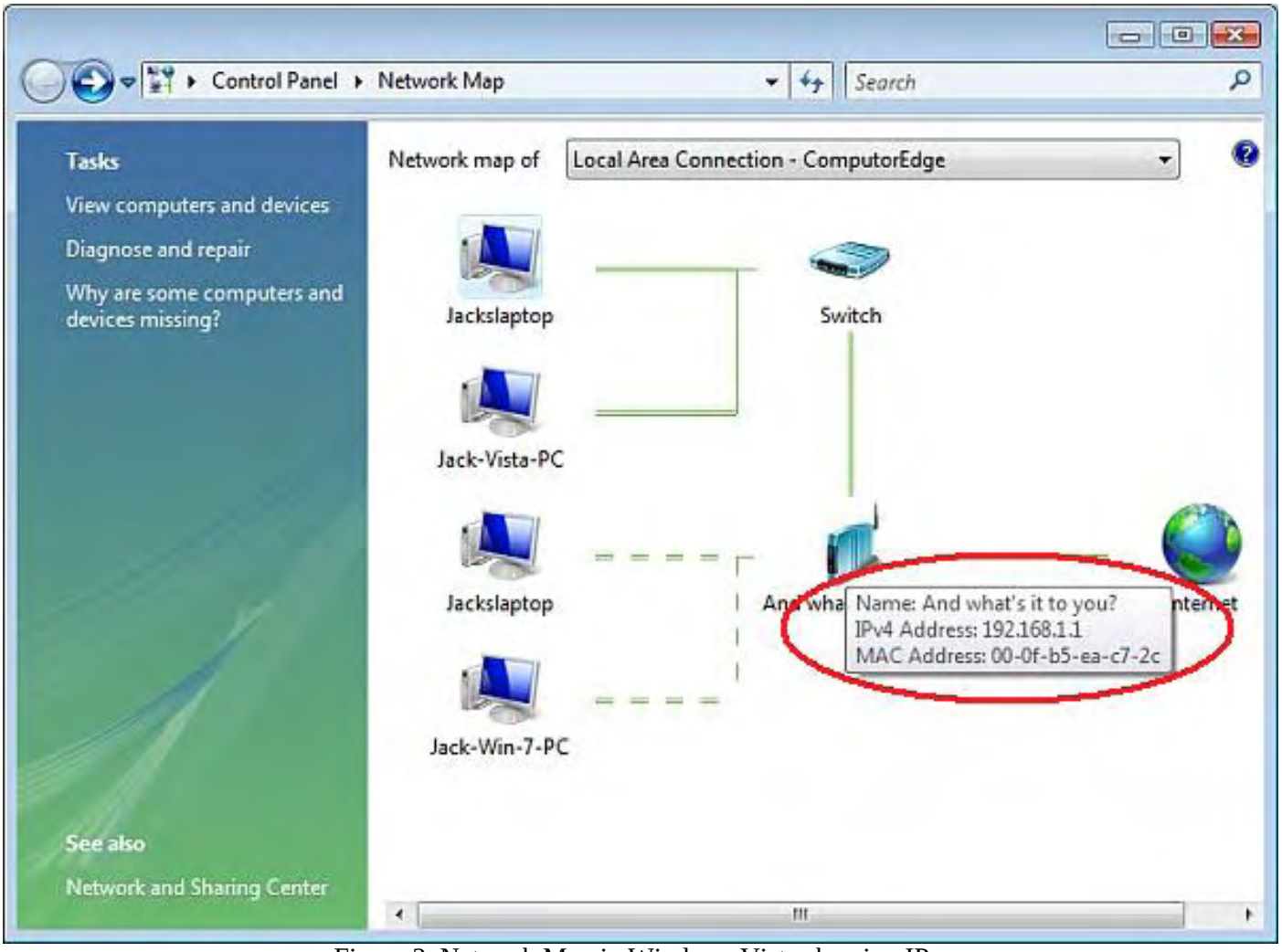

Figure 2. Network Map in Windows Vista showing IPs.

This is one of the tips for this week. You can also get the IPs of all the other computers on the network by hovering over each icon. Unfortunately, the map is not as reliable in showing the network printer on this network. The network printer also has an IP assigned to it. That can be found by going to the Printers feature and checking the Properties of the printer.

Once you are logged on to your router, you will normally find the setting you want in the Lan IP Setup section. (Name may vary depending upon the type of router; see Figure 3). If you are planning to use some fixed IPs and want to continue automatic assignment for all other new arrivals on the network, then the easiest solution is to set aside some addresses for the fixed IPs. This is done by either raising the lower end of the range (Starting IP Address) or lowering the upper end (Ending IP Address). This will prevent the DHCP from assigning any IP addresses outside the range. Then you could assign all the fixed IPs to that excluded range. For example, if you raised the Starting IP Address to 192.168.1.20, then you would be free to assign any address below, except the 192.168.1.1 (the router address), to a fixed device such as an IP cam or a computer hosting a Webcam.

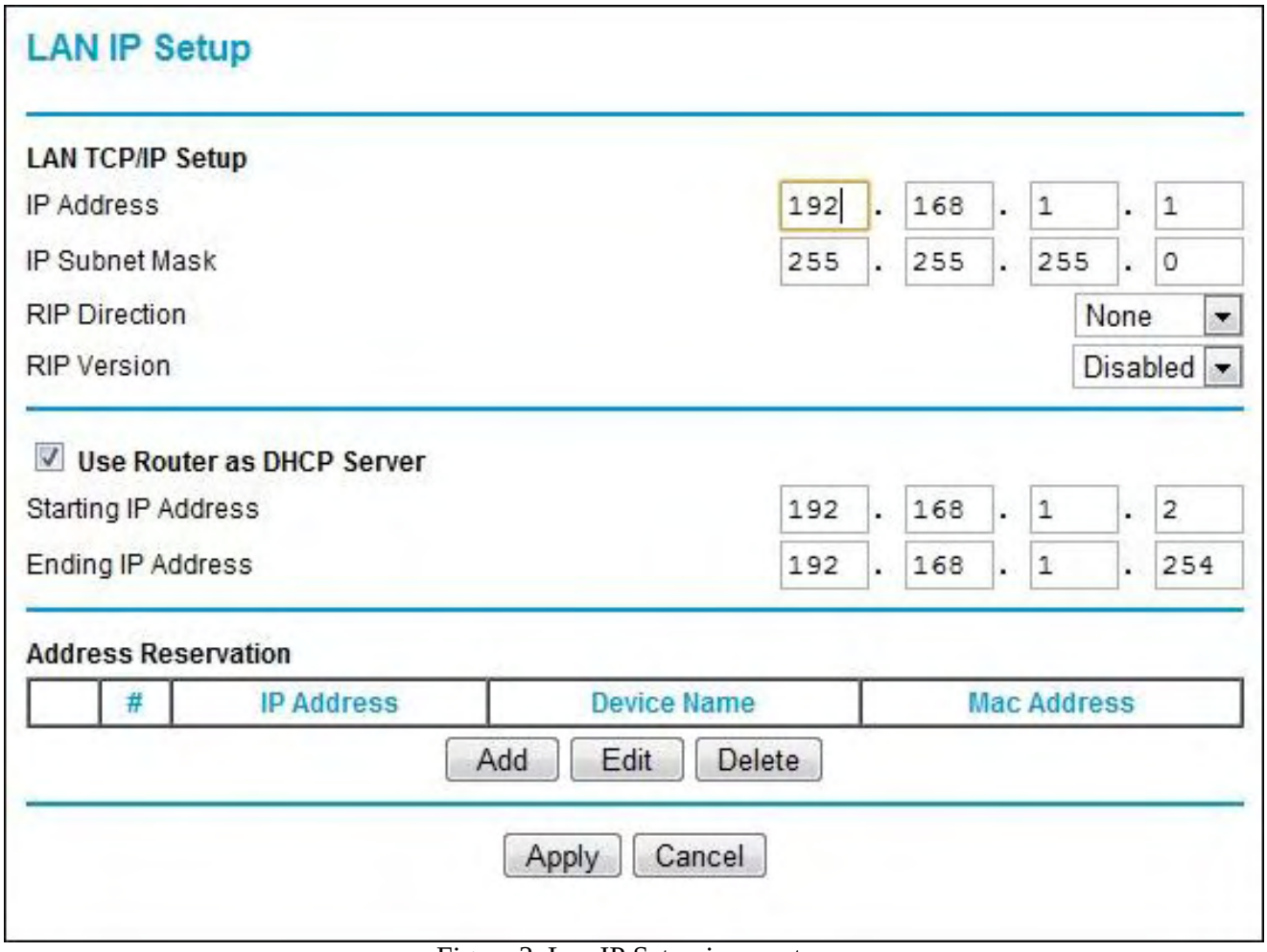

Figure 3. Lan IP Setup in a router.

If you're making changes to router (or computer) settings, it is a good idea to writer down the original values. That way you can always put things back to the way it was.

This network topic may fall into the category of too much information. However, if you can work your way through some of these techniques, then you will develop a better understanding of what is going on with your network and how the router fits in. The more you try these little things, the more network problems you will be able to solve.

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*

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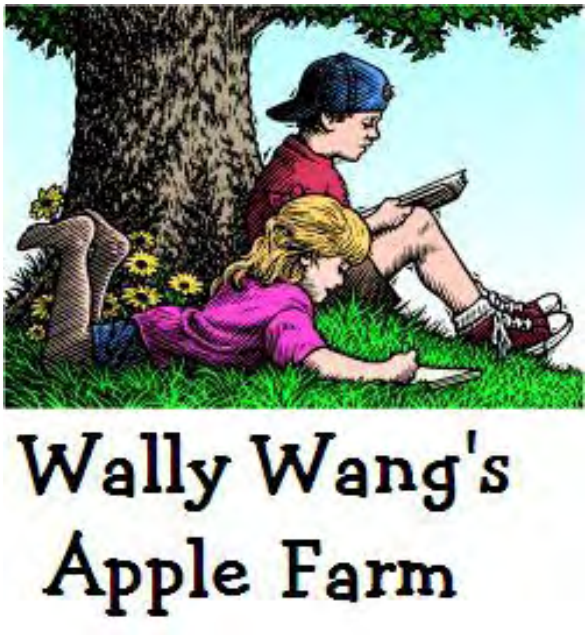

Wally Wang's Apple Farm

"Using a Webcam on the Mac" by Wally Wang

By recording and linking text, audio and video, Pear Note can turn your laptop Macintosh into the ultimate note-taking machine. Also, if every AT&T customer except for iPhone users can use MMS and tethering, what's holding up identical support for the iPhone? And for maximum efficiency, dump your old PowerPC programs if possible. You may not save a lot of disk space or memory, but every little bit can help.

Every Macintosh, except for the Mac mini and the Mac Pro, comes with a built-in Webcam. (You can always plug in a USB Webcam to give a Mac min or Mac Pro video capabilities.) For most people, this Webcam is about as useless as extra wisdom teeth. One common use for this Webcam is for video conferencing, which essentially lets you chat and see the person you're talking to at the same time.

Although you can use the included iChat program to video conference, you can also use AIM or Skype —or probably a dozen other programs that allow you to chat and view video at the same time. Video conferencing is one of those "gee-whiz" applications that looks cool when you see it being done, but quickly loses its novelty after you've tried it for yourself.

Figure 1. iChat lets you use a Webcam to do video conferencing.

A sillier use for the built-in Webcam is to use PhotoBooth, a program that turns your Macintosh into one of those photo vending machines where you sit inside, draw a curtain across the opening, pump in a few quarters, and let the machine take pictures of you and anyone else crammed into the booth with you.

Figure 2. PhotoBooth can take pictures of anyone sitting in front of the Webcam.

PhotoBooth lets you create unusual visual effects or remove the background altogether. Such effects also work with iChat, so you can give a video conference and make your face look distorted or create the illusion that you're standing on the beach when you're really inside a stuffy little apartment.

If you're a student, you might be particularly interested in a note-taking program called Pear Note (*www.usefulfruit.com/pearnote*). In the old days, students typically had two ways to take notes. First, they would write notes down during a lecture. Second, they might also tape record the lecture so they could play it back again. Pear Note combines these two features in a single program so your typed notes get synchronized with your recorded audio.

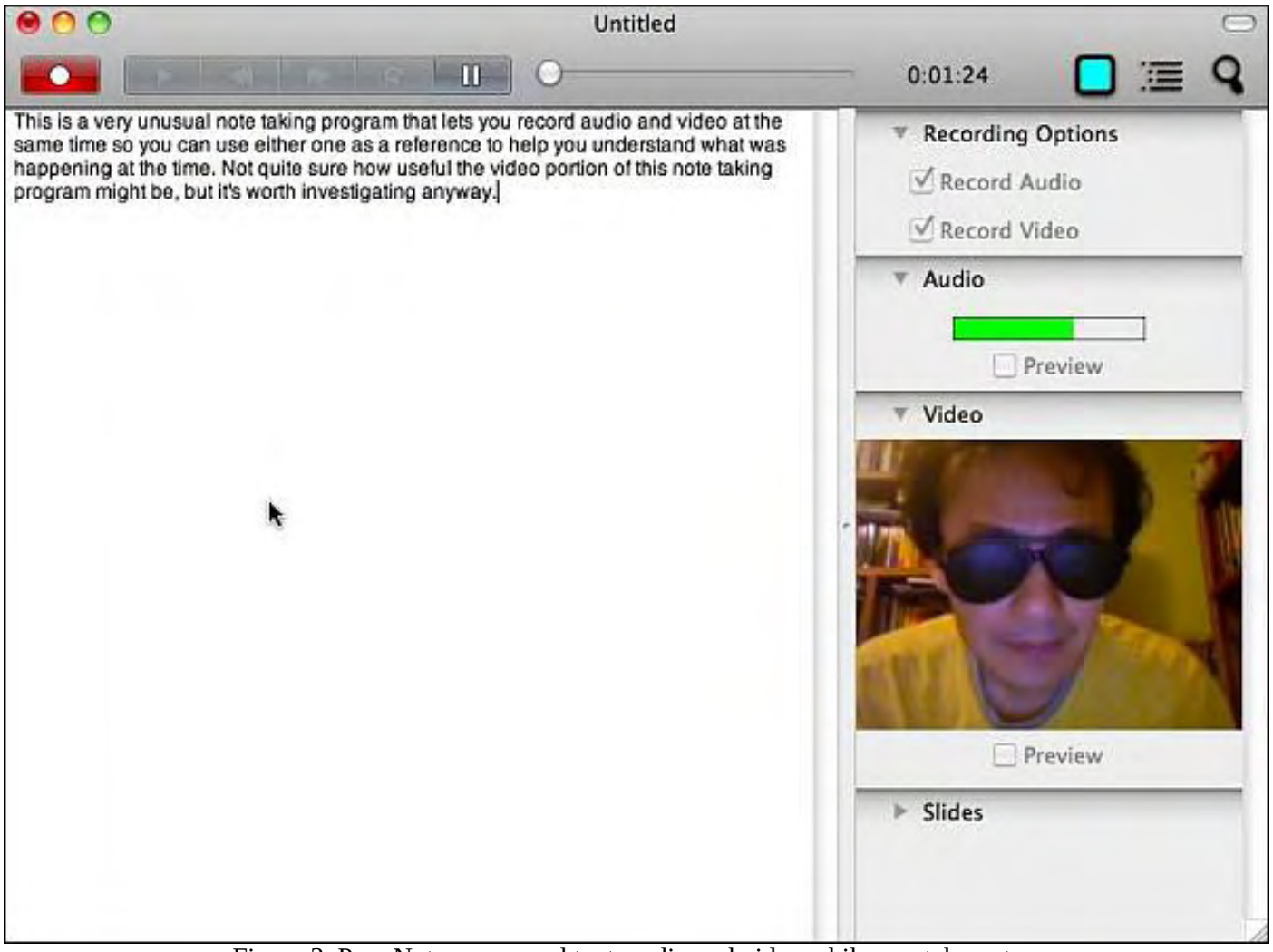

Figure 3. Pear Note can record text, audio and video while you take notes.

The purpose of recording text and audio (and even video) simultaneously becomes apparent when it's time to review your notes. Move the cursor in the middle of your text and Pear Note can play the sound that you heard at that exact moment (such as the part of the lecture you heard as you typed), as well as display the video of what your Webcam captured at that moment as well.

Capturing the video might seem pointless, since it's just going to show your face as you type, so you might want to turn off this video-recording feature. However, you might still find it useful to see when you might have started to nod off to sleep. The moment you see your face looking drowsy, you can listen to the audio portion to hear what you might have missed when you fell asleep during that part of the lecture.

Pear Note also lets you play the entire captured audio and video so you can hear what a speaker might have said and what you typed into Pear Note. If the speaker passes out a PDF file, a PowerPoint or Keynote presentation, you can save that presentation directly into Pear Note and review each slide as the speaker discusses it.

Now Pear Note will show you the exact slide you looked at while playing back the text you typed and the audio you heard, along with the video of your reaction at that exact moment in time.

By recording and linking text, audio and video, Pear Note can turn your laptop Macintosh into the ultimate note-taking machine. You might still wind up flunking a class anyway, but with the help of Pear Note, at least you can keep your notes organized and truly capture what occurred in each class rather than just relying on

written notes alone.

The Dilemma of the iPhone

Everyone who has an iPhone seems to love it, but almost all these same people seem to hate AT&T. Complaints range from dropped calls and spotty coverage to the lack of basic features long available to other AT&T customers, such as MMS (multimedia messaging service) and tethering, which lets you use a cell phone to connect a laptop to the Internet.

The strange thing is that AT&T offers both MMS and tethering on all their other phones except for the iPhone, so this isn't a capability that AT&T has to add. If every AT&T customer except for iPhone users can use MMS and tethering, what's holding up identical support for the iPhone?

AT&T's latest response is that iPhone users tend to use such features more often than ordinary cell phone users. Look at the browsers on most cell phones and they'll try your patience with clumsy navigation tools and minuscule screens that make each Web page look nearly indecipherable.

Photo-sharing sites like Flickr even report that no other cell phone users take more pictures than iPhone users. So AT&T's real problem isn't that their network can't offer MMS and tethering, but that they're afraid that too many iPhone users will use those features and overwhelm AT&T's network.

Feature-wise, the iPhone isn't the most advanced phone on the market, yet it makes its handful of features more accessible and fun to use than other cell phones. The real reason most other cell phone users don't use MMS and tethering is that these other cell phones make these features so hard to find and use that it's just not worth the effort. Despite offering more features, other cell phones effectively discourage users from taking advantage of these features, rendering this advantage useless.

By next year, rumors say that Apple will start selling the iPhone on other carriers, such as Verizon. Since Apple's rumored tablet computer will supposedly also be linked to Verizon's network, look for AT&T's current iPhone user base to defect en masse to Verizon when they complete their network upgrade to 4G. (Lest you think that 4G represents the peak of network speed, Japan is already moving to a 5G network.)

* * *

If you're going to upgrade your Macintosh to Snow Leopard (Mac OS X 10.6), you can expect to save approximately 10GB of disk space. Part of the reason for this savings is that Snow Leopard no longer installs Rosetta automatically.

Rosetta is Apple's special program that lets Intel Macs runs PowerPC programs. If you have older PowerPC programs and install Snow Leopard, you'll have to download Rosetta, which will gobble up a small amount of disk space (approximately 3MB or the size of a typical MP3 file).

While Rosetta runs flawlessly and doesn't take up much space, you might not want to install Rosetta just to run a handful of ancient PowerPC programs. To avoid using Rosetta, update your PowerPC programs for Intel versions. To find out what type of program you have on your Macintosh, right-click on each program stored in your Application folder. When a pop-up menu appears, choose Get Info and a window appears.

Under the Kind category of this window, you'll see one of three options:

• Universal

• Intel

• PowerPC

Universal means that the program can run on both Intel and PowerPC Macs. This is the category that most programs will fall under. Universal programs basically contain both Intel and PowerPC code smashed into a single file, which means your program files are twice as large as they need to be.

Intel means that the program is designed to run only on Intel-based Macs, which is what newer programs are doing, particularly many of Adobe's programs. You cannot run an Intel program on an older PowerPC Mac.

PowerPC means that the program is designed to run on older Macs. Most older software programs are either PowerPC or Universal programs.

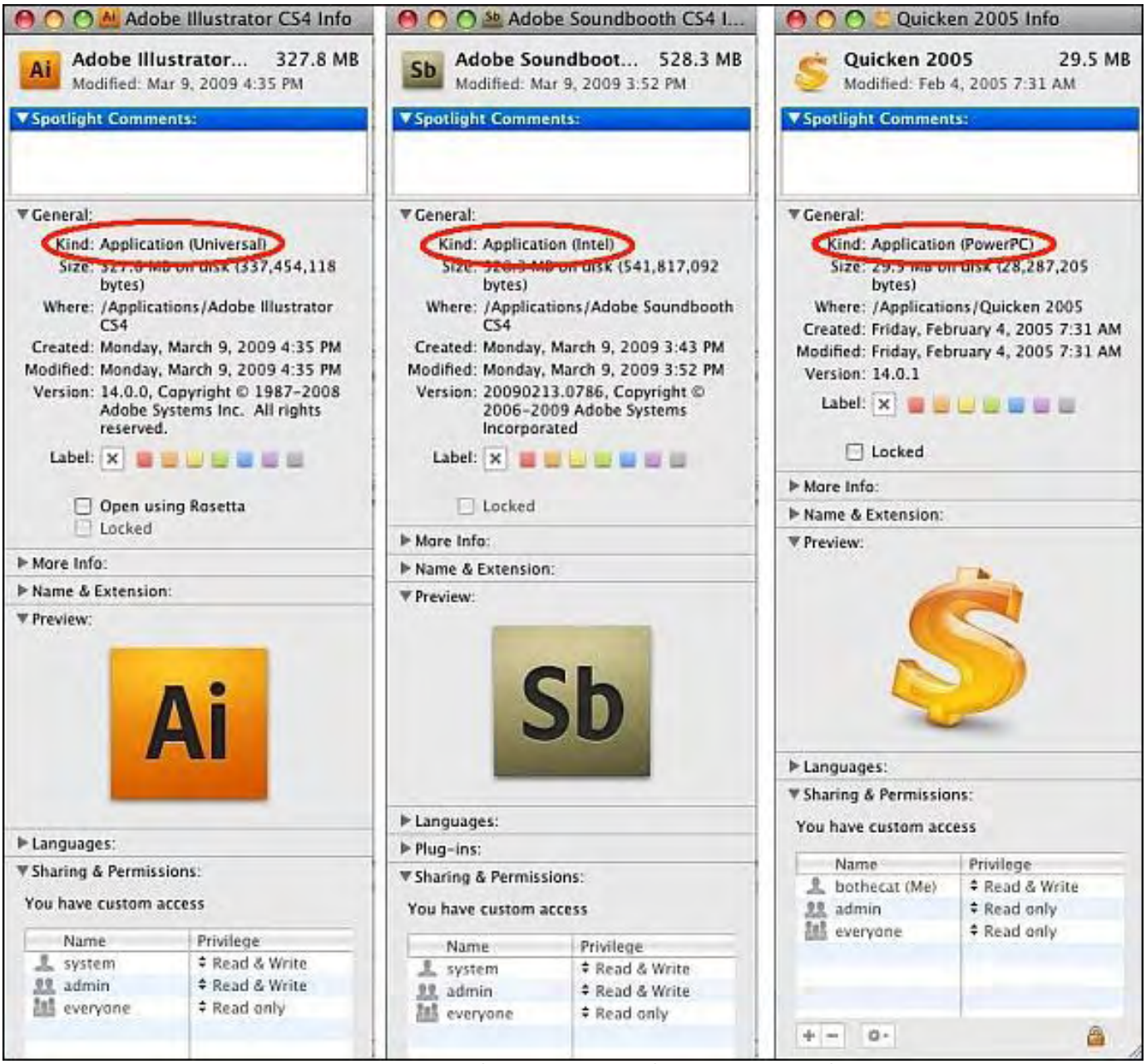

Figure 4. The three types of programs identified by the Get Info window.

While you can run PowerPC programs just fine under Snow Leopard if you download Rosetta (for free), you might just want to dump all PowerPC programs and use only Intel or Universal programs instead. PowerPC

programs that use Rosetta will be slower than Intel or Universal programs, while taking up a little more memory to run as a result.

For maximum efficiency, dump your old PowerPC programs if possible. You may not save a lot of disk space or memory, but every little bit can help.

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*)

Every Saturday morning from 9:00 am - 10:00 am in San Diego, you can hear Wally with fellow co-hosts Dane Henderson and Candace Lee, on the radio show CyberSports Today (*cybersportstoday.com/*), which covers the video gaming industry on ESPN Radio 800 AM. Wally covers the military history side of the video game industry.

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.

Wally can be reached at *wally@computoredge.com* and at his personal web site (*www.wallacewang.com/*).

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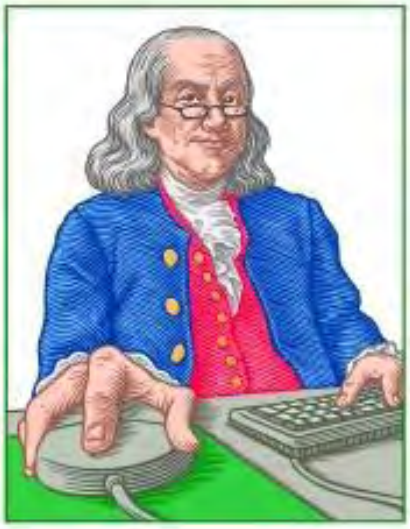

Linux Lessons: Tips and Tricks from Users

"Linux users share ideas and ask for help." by ComputorEdge Staff

A reader needs information on running Ubuntu with the Wine emulator; another reader seeks help on file recovery for Linux file systems; and a suggestion about highlighting different distros will become a new column feature.

Ubuntu with Wine?

Hi! I've installed Ubuntu (9.04, with all current upgrades) on an *old* laptop computer. I love it! After clicking OK on the install CD, I came back 20 or so minutes later and everything worked except the wireless Internet card. I plugged in a Cat-5 cable from the router and I was online. (Still no wireless; I couldn't find a driver for it.)

Anyway, there are a few programs (for Windows) I would like to install on this machine. They talk about running with "Wine" (*help.ubuntu.com/community/Wine*) *[link added by editor]*. I can find references to Wine online along with cryptic command lines. Can you comment??

Andy M.

Please give Andy your comments about Wine with Ubuntu. They will be attached here and included in a future column.

—Editors

Linux File Systems?

I recently deleted some files in an ext3 partition and had to go to great lengths to recover the files. The files were created and deleted within an hour, so the backup never had time to run.

I would like to see an article on file/directory recovery for mainstream Linux file systems (ext2, ext3, ext4, Reiser, XFS). Also I would be interested in a comparison of file recovery difficulties and available tools by file system. This will impact my decision to use a specific file system over another in the future.

Thank you,

Duane Rinehart

Please give Duane your comments about Linux file systems. They will be attached here and combined for the subject of a future column.

—Editors

Linux Distribution Suggestion

This may seem a silly suggestion, but perhaps you could get distros from creators, review them, and produce a set of tips on that distro, and put both the distro and tips up together. Actually this is the tip I provide to everyone who asks me about Linux. I always tell them to buy one of the magazines that come with a disc and use that. It allows the user to get the most up-to-date version that is being referred to in the articles.

David Lyle
Thornton, CO

David, this is an excellent suggestion! In fact it seems it would be worthwhile to highlight different distributions at various times. This week, since Andy mentioned one of the most popular distributions, ComputorEdge *is asking for reviews, tips and tricks related to the Ubuntu distribution of Linux. What are Ubuntu's strengths and weaknesses? Which Web sites offer the best Ubuntu information? What are the secrets that everyone should know, but might not know how or where to find? Send your comments to Ubuntu Linux Comments, Tips, and Tricks (*ceeditor@computoredge.com*). They will appear in a future column dedicated to Ubuntu. Each week we will highlight a different distribution until the supply is exhausted.*

—Editors

* * *

Give Us Your Linux Tips and/or Questions

*If you have an opinion on these or other Linux topics, then please let us know. Also, if you have another Linux tip that works for you, or a favorite Linux software application, and would like to pass it along (or have a question), please drop us a line at Linux Lessons (*ceeditor@computoredge.com*).*

This is a column for Linux and Unix-like operating system users. The goal is to give Linux users an opportunity to share tips, tricks and ideas with both fellow users and the *ComputorEdge* Linux newbies. Each week in this column, we will highlight the thoughts you submit to us. This is your column. As long as a submission is dealing with the Linux/Unix-like world, we want to share it.

The tips and tricks may be short or long, and can include graphics. If there is a little technique or program that you use on a regular basis, then we want to hear about it. You may also pose questions for other Linux users to answer. E-mail your ideas or questions to Linux Lessons (*ceeditor@computoredge.com*). Be sure to put the words "Linux Lessons" in the subject line so it won't get lost in junk mail. We depend upon you to make this column a success.

Jack Dunning
ComputorEdge

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*.

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ComputorTutor Does VB.Net 2010

"More on VB.Net 2010 Applications" by Rob Spahitz

Last week we began creating a simple application that lets you store "sticky" notes on your computer. This week we continue that project.

Last week we began creating a simple application that lets you store "sticky" notes on your computer. This week we continue that project.

CHALLENGE (due 9/18/2009):

Given this week's discussion on Web cameras, what do you do with your pictures after you take them? Did you find any good applications that let you work with those pictures? Let me know what they are. What features would you like to see added? Maybe we can create a VB.Net application to handle some of those ideas, like building a Web page to show off the pictures or something to help you crop them.

Sticky Notes

Last week's app (application) created a very simple window that let you enter some text in a box. That's all very well and good, but that's what Notepad is for. What good is our app? It doesn't have menus, you can't change fonts, and you can't even save the message. Well, not yet!

So let's work on these one at a time. First, if you saved last week's project, it's probably located in your folder "My Documents/Visual Studio 10/Projects/Sticky." Within there, you should have a Sticky.sln file and a Sticky folder that contains the rest of the project. If you don't have that, you can grab mine from *www.dogopoly.com/ce*.

Meanwhile, if you select that one and try to run the application on a machine without VB.Net 2010 (such as for those doing this in VB.Net 2008), you might get the message in Figure 1.

Figure 1. DotNet Framework Required.

So let's quickly resolve that. Jump out to *www.microsoft.com* and search for "Dot Net Framework 4." I found "Microsoft .NET Framework 4 Beta 1" (*www.microsoft.com/downloads/details.aspx?FamilyID=ee2118cc-51cd-46ad-ab17-af6fff7538c9&displaylang=en*). As long as you have at least Windows XP with Service Pack 3, you should be able to install this by clicking on the button near the bottom of the page, as seen in Figure 2.

Figure 2. DotNet Framework Download.

Make sure to use the "...x86.exe" version unless you have a 64-bit system. If you're not sure, you probably don't have the 64-bit version.

Click on the Download button and get the file. Save it to an appropriate place, such as the My Downloads folder. After it completes in a few minutes, launch it and install it. You may have to accept the warnings about this being an exe file. And if you don't trust this file (since it's still beta), you'll have to follow along with last week's article in VB.Net 2008.

If all went well with the installation (a few dozen more minutes to complete it), you should be able to run the Sticky app. For now, you may want to deliver that .exe file to friends if you want them to try out your VB.Net 2010 app. Note: It may require an Internet connection. Also, it will ask you to restart at the end, but that shouldn't be necessary.

Menus

Back to our app, what do we want in our menus? How about a simple save feature, a load feature, print, exit, the ability to change the font style and size, foreground and background color, and maybe throw in an About window?

OK, fair enough. And we can add more later if we like. They should probably be organized according to the standards that people expect: File, Edit, Options (or maybe Format) and Help. We'll figure out what goes where as we work.

Now open the app and show frmSticky if not already showing (double-click on it in the Solution Explorer window in the top-right corner if needed.) Now go into your toolbox and locate the Menus & Toolbars group and drag the MenuStrip to the middle of the form. As we saw in a previous article, this simply adds an item into the Object tray below the form and also adds a menu-like structure into the form. Unfortunately, it is underneath the textbox we previously added, so drag the top of the textbox down to make it fit better. Mine worked best at Top=24 and Height=242.

Now you can type into the menu. In the first box enter &File (where the ampersand will assign the F as a shortcut key). Then go across and enter &Edit, &Options and &Help. Then click back on File and enter below that &Open, &Save, &Print and E&xit as seen in Figure 3.

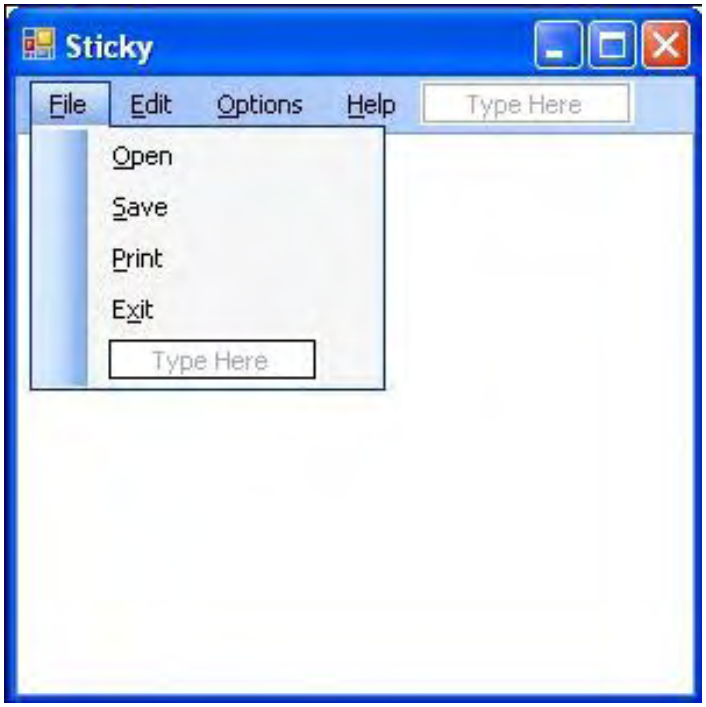

Figure 3. File Menu.

Continuing on, we'll skip the Edit menu for now and proceed to Options. Here add &Font..., &Background Color, and Foreground &Color. Why did I put the accelerator on the "C" for foreground color? Simply because "F" was used for font, so rather than use it twice, it's better to use a different letter when you can.

Wrapping things up, move on to the Help column. At this point, the only one we'll add is &About.

With these in place, we just need to name the menu items, then program them. I'll simply suggest going into the Properties window and locating each, and put "mnu" in front of the Text (minus spaces and ampersands) and use that as the name. So rather than the default name BackgroundColorToolStripMenuItem, we can use mnuBackgroundColor. Although this will take a little bit of time to update, it will make the code more readable.

If you run the app now, you'll see the menus, but they do nothing.

Menu Actions

Having menus that do nothing is no fun. Let's start programming some of the items. Probably the easiest is Exit, so find that in the menu and double-click on the word to open code for that menu item. Another way to do that is to go to the Properties window, select the item, change to the lightning bolt (events) and double-click on the Click property.

Enter the following code in the blank line there above the "End Sub": "me.close". When you leave the line, it will reformat it by capitalizing parts and adding parentheses to the end. This shows that it recognized the entry as a method ready to go. The subroutine should now look like this:

```
    Private Sub mnuExit_Click(ByVal sender As System.Object,
                              ByVal e As System.EventArgs) Handles mnuExit.Click
        Me.Close()
    End Sub
```

[Editor's Note: The first two lines of code should be one continuous line.]

Since Open and Save are file functions, we'll save those for next week. And Print was partially covered a few weeks ago, and Options has some special needs, so we'll get to those next week too.

Meanwhile, how about the About? This sounds hard, but is actually very easy. Let's go add another file and link this menu item to it. In the Project menu, select Add Windows Form. Under Windows Forms (or Common Items), you'll find an About Form template as seen in Figure 4. Select that, change the name at the bottom of the window to frmAbout and click the Add button. Note that the vb extension is optional here and it will be added automatically.

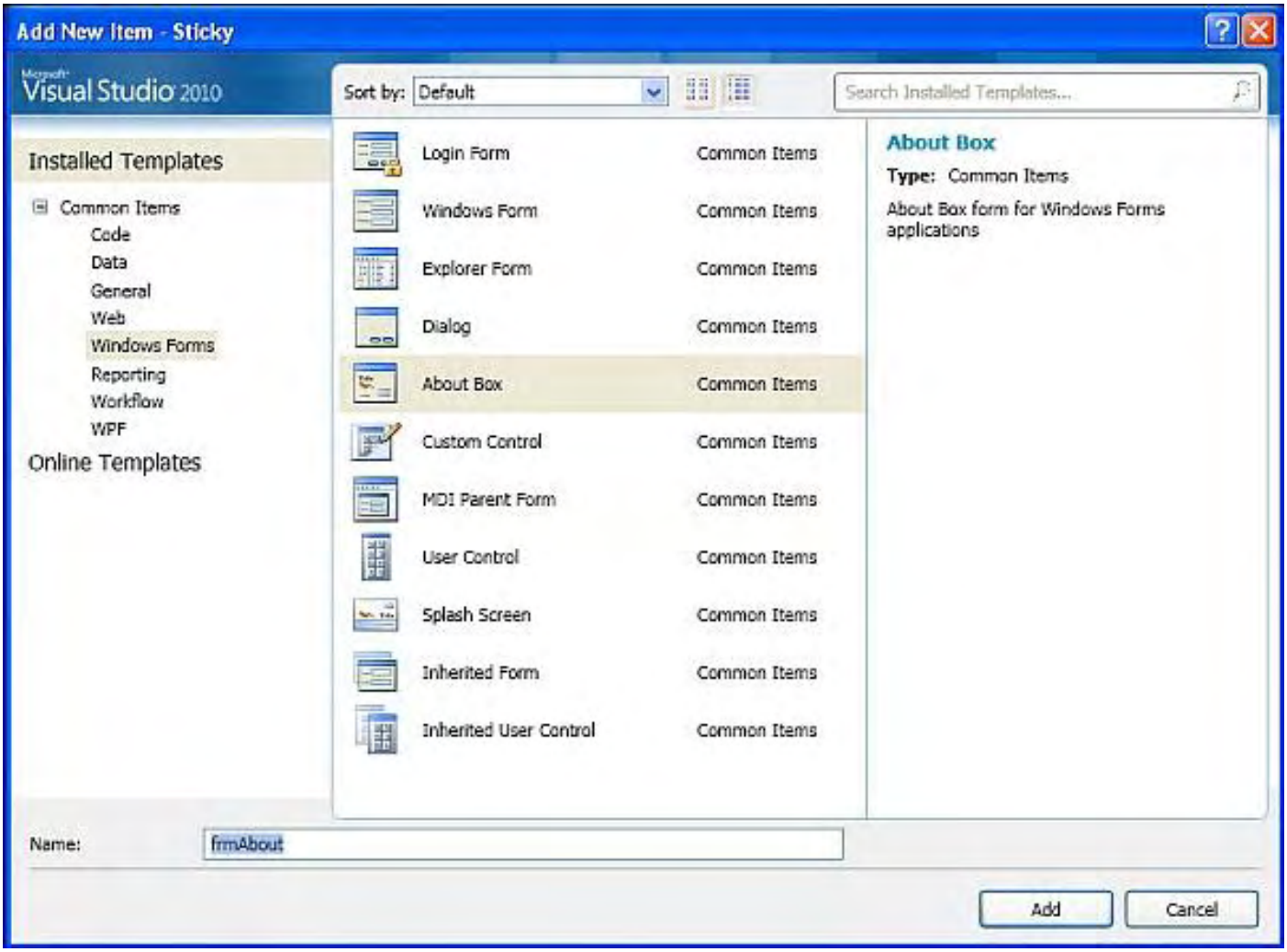

Figure 4. About Form.

You'll now have a copy of the AboutBox Form template ready for customization. Change the Text property of the form to About. The rest can be done in the configuration file. Double-click on the "My Project" item in the Solution Explore window, and its options will appear as seen in Figure 5.

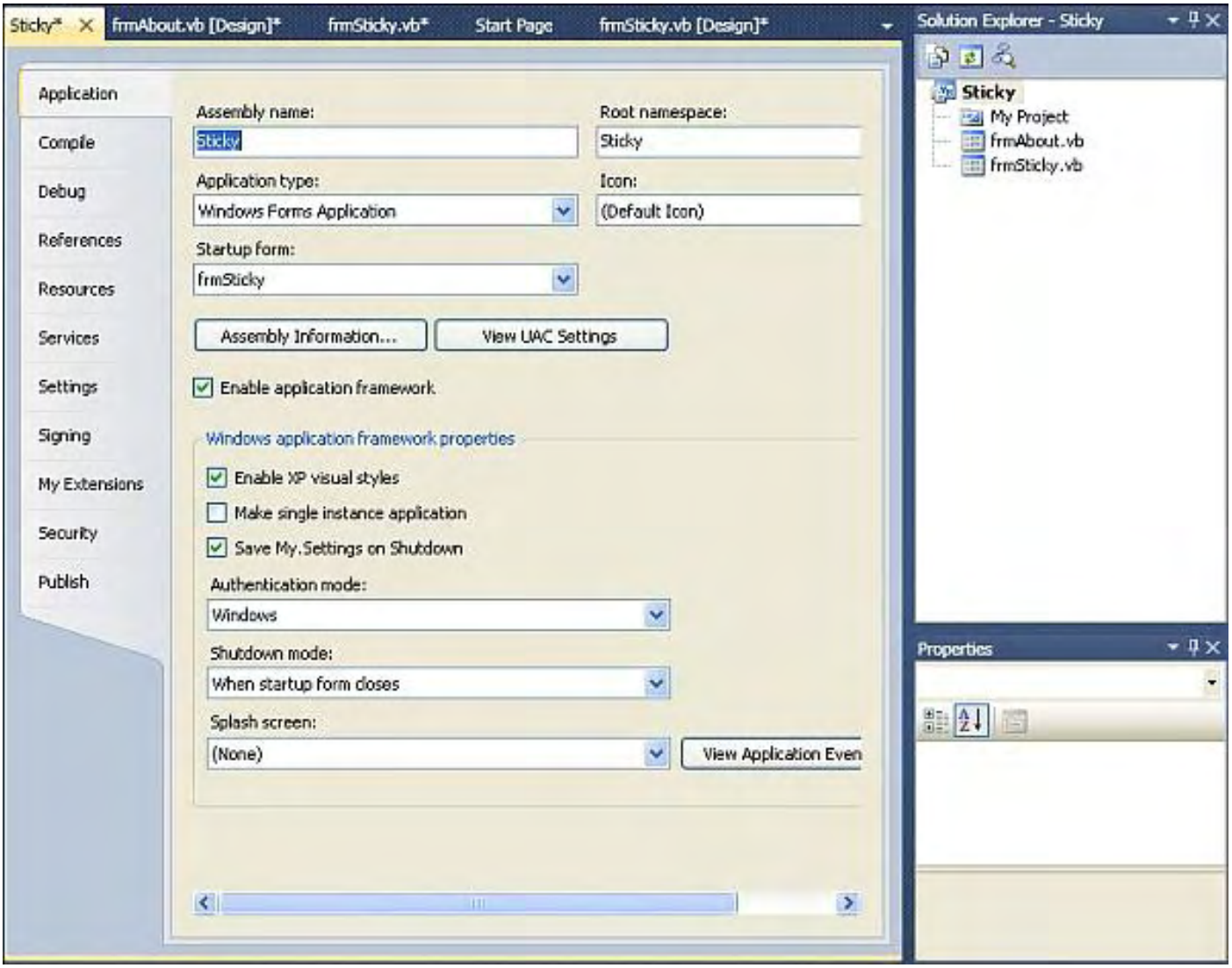

Figure 5. Project Options.

Now click on the Assembly Information button. You'll see something like the information shown in Figure 6.

Figure 6. Assembly Info.

As necessary, update this information. Description and Version should probably be updated. I'll change the Assembly version and File version to 1, 1, 0, 0 since we had a different version last week. Click the OK button when you're done.

Now let's get out the app to show this form, and we'll call it a wrap for the week. Go back to frmSticky Design and double-click on the About item in the Help menu. Add the following code:

```
frmabout.showdialog
```

Again, if you type correctly, it should capitalize and put parentheses.

Run the app, select the About menu, and you should see all of the updates, as seen in Figure 7.

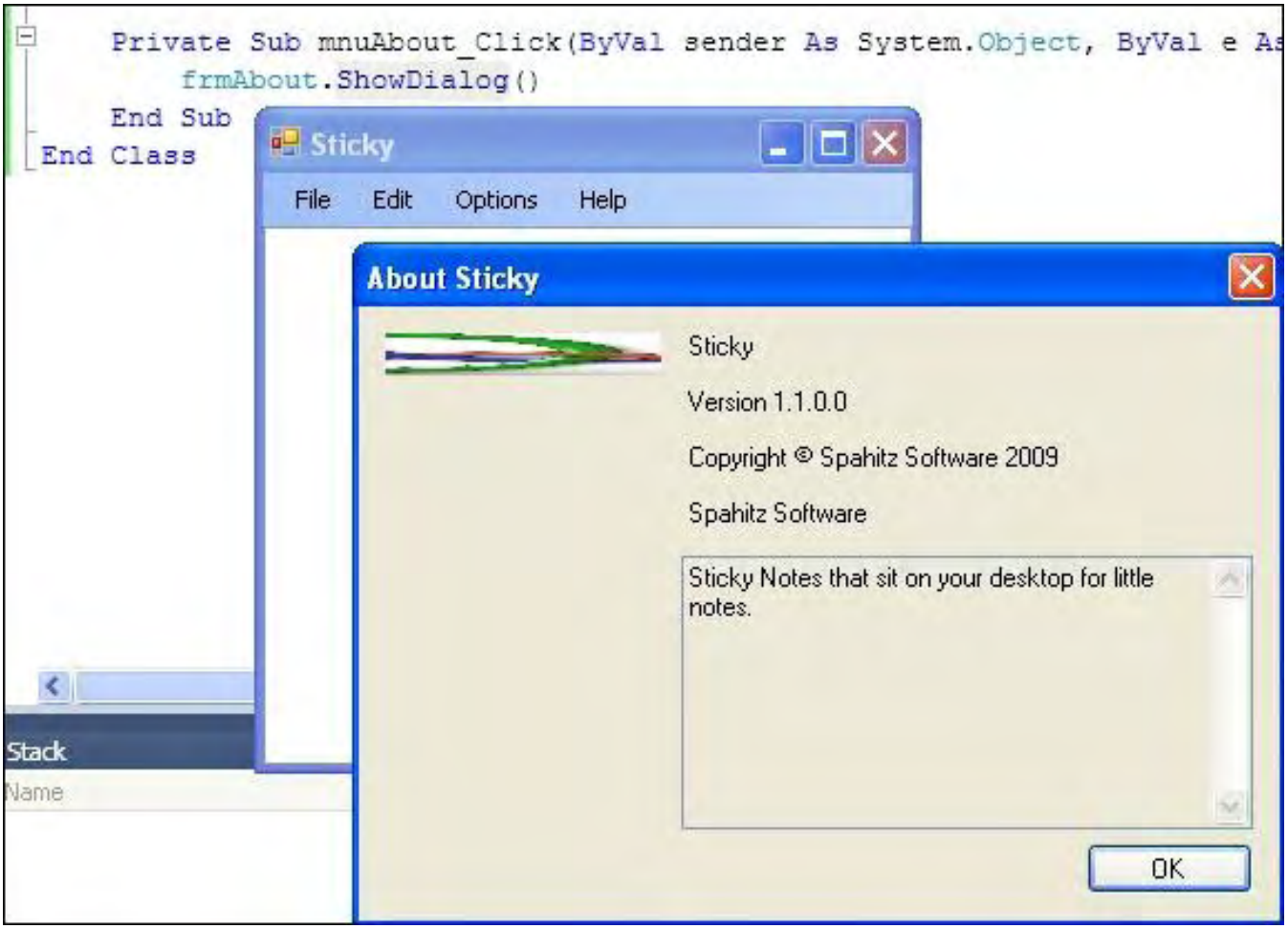

Figure 7. App About Form.

Next week we'll explore File, Font and Color management. Meanwhile, send your challenge messages and comments, and we'll explore more next week.

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*.

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Worldwide News & Product Reviews

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

Top Five Ways to Stay Safe with an IP Cam—The perfect accessory to any safety measure; Ten Commandments for Managing People—Important managerial tips for dealing with your most valuable asset: employees; Mastering Photographic Composition, Creativity, and Personal Style—A look at the new book by Alain Briot.

Top Five Ways to Stay Safe with an IP Cam

Plustek PR rep Kaitlin Henry tells us, "IP Cams are small, highly useful network cameras with their own IP address and built-in Web server that enable them to connect directly to the user's network, yet can be remotely accessed from any standard Internet browser. The perfect accessory to any safety measure, here are the "Top Five Ways to Stay Safe with an IP Cam:"

1. Nanny-cam your home. Your child's safety is #1 and there's no better way to feel at ease than with an IP Cam keeping watch 24/7 in real-time.

2. Keep an eye on entrances and exits at work and in the home. Never feel nervous about a late-night knock on the door again. With an IP Cam at every entrance or exit, it's like an advanced peep-hole you can always peek at so you know who's at your door.

3. Not only watch, but listen to conversations. No matter where an IP Cam is set up, people can be held accountable for their actions *and* their words.

4. Easily broadcast activities in real time over the Internet. Know exactly when and where people in your home and/or office are at all times by watching it wherever you are from any computer with the Internet. Watch as it happens or keep it recorded to play back later.

5. Look for a camera that allows you to watch up to several live feeds at once keeping not only your home, but your mind, safe and sound.

Plustek Security IPcam P2000R and IPCam P1000A.

Kaitlin notes that Plustek (*www.plustek.com*) has announced three new IP Cams priced at under $150.

Ten Commandments for Managing People

Andy Marken, president of Marken Communications, sends us these excellent important managerial tips:

The most valuable asset any organization has today is not its facilities. It's not the inventory in the warehouse or on the production line. It's not the healthy bottom line the company achieved last year. (Although right now that would be sweet!) It's people. It's especially true in the PC/CE/Communications marketing arena where quality and quantity are in such short supply. It's an asset that is difficult to find, difficult to retain and difficult to manage. But if you manage the asset properly it can produce exceptional results for your company—and for you.

Following are some simple guidelines you can follow to manage people more effectively, more easily and with better results. Think of them as your 10 commandments to better management:

1. Don't get into a rut thinking there's only one right way to do a job. Judge by results rather than how the task was accomplished

2. Don't expect everyone to be the same. Don't look for clones of yourself because it can only limit the organization's—and your—growth potential.

Aggressively look for people who have the values you respect most, but don't expect them to be the same as yours. Surrounding yourself with people who think and perform like you may be a boost to the ego but diversity, and even chaos, can produce a more well-rounded organization and a multi-dimensional, multi-facet firm people want to associate with.

3. Don't give a lot of criticism.

Very few people take criticism well. If the only inputs they receive from you are critical they soon stop trying to excel. Expect people to do well. When they do, praise them for their efforts and their performance. Soon you'll have them producing results even beyond their own level of expectation.

4. Don't isolate yourself.

You're the manager. You can't be effective at the job behind closed doors. You can't do it by hiding behind voice mail, memos or e-mail. Make yourself available to your people. Be accessible when they want your ideas, input and thoughts.

5. Don't wait until the project is completed to give your feedback.

It doesn't mean you have to constantly look over the individual's shoulder or check on what the team is doing, but check in periodically. Get a snapshot update. Make certain the individual(s) is on the same wavelength as the company or organization and its goals/objectives.

6. Don't expect your staff to perform poorly.

Expect people to be equal to the task. Expect them to perform in an outstanding manner and to produce the target results. You'll be surprised what happens when you believe they are competent. Most of the time trusting in their ability to deliver will produce the desired results.

7. Don't forget to tell staff members about your expectations, priorities and deadlines.

There are very few clairvoyants in the world. People don't know if you don't communicate. Spell out the entire task. Setting goals, priorities and deadlines in your mind is not the same as telling people.

8. Don't do performance appraisals only once a year.

In most organizations an annual appraisal is required by the firm's HR guidelines. Forget the guidelines. Evaluate performance informally on a regular basis. Talk to employees about what they're doing, the problems they are experiencing, areas they need to focus on improving. Managing people is a lot like driving a car. You don't back out of your garage and do nothing until you pull into your office parking lot. You get from point A to point B successfully and safely by making a continuing series of minor adjustments based on an evaluation of the situation at hand. The same is true of managing people.

9. Don't be an autocratic leader.

In yesterday's assembly lines performance was mediocre, at best, because people were told to punch in, do a specific job and punch out at the end of the day. Very quickly they settled into that mode, producing very little value to the organization. When people were told to make the job their own, the changes in attitude and results were spectacular. Ask employees for their input. Ask them for their suggestions. Find out their concerns and difficulties. You'll be pleasantly surprised that most people want to do not just a good job, but a great job.

10. Don't push people to their limit. Don't expect them to function well over a long period without ample resources.

People can give 150 percent when necessary and produce outstanding results. But even the best and the most dedicated individual—yourself included—can't do it on a consistent day-in, day-out basis. After extended periods the mind shuts down…the body shuts down. People also don't perform well in a vacuum. They need information and input. Sometimes they need extra hands and minds. Give them the extra time, extra information, extra people they need to do the job properly.

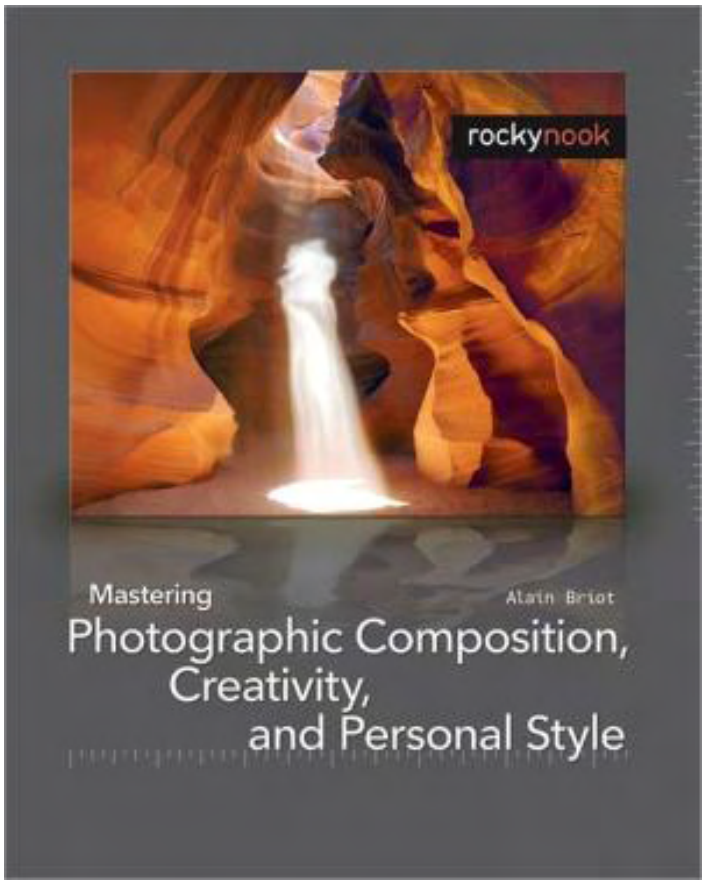
Andy concludes, "Today we're operating in what the federal government calls a dire employment mode. Generation Xers and Yers are encouraged to—and do—change jobs frequently. Frequent job changes are no

longer a negative on a resume as long as they show a steady upward progression or show an expansion of the individual's areas of expertise.

"Following the 10 commandments of managing won't ensure that you'll get all the best people and retain them. It does mean, though, that you'll have a better shot at developing a solid team of winners who will produce for your organization regardless of how long they stay with you."

Mastering Photographic Composition, Creativity, and Personal Style

*Mastering Photographic Composition, Creativity, and Personal Style*i# (by Alain Briot, $44.95 list, Rocky Nook (*oreilly.com/catalog/9781933952222/*), ISBN: 1-933952-22-9) follows Briot's successful *Mastering Landscape Photography.* In the new book, Briot uses his own personal experiences as an artist, teacher and photographer to show readers ways of looking at photography they may never have considered.



That's because he thinks of photography as a fine art, which it is. He believes it can be used to convey personal feelings. Briot makes it clear that a good photographer must be in touch with both his or her creative and technical sides. He says that if only one of these is addressed, the pictures will probably not be very good.

Topics include (from the publisher):
• How to compose with color, with black-and-white, and with light
• Why you need to consider your audience while composing a photograph
• Recreate the emotions you felt when you captured your photographs
• How the elements of color—hue, contrast, and saturation—work in your images
• How to control the elements that have a visual effect in your photographs
• How to draw upon your personal way of seeing and then share your vision
• How to diagnose image maladies and apply the proper remedies

• How to define a color palette for a specific photograph
• How to use compositional elements to develop a personal style

I like Briot's way of looking at fine art photography. To me, he strikes just the right balance between the aesthetic and the technical. I always felt like he was aware of both aspects, no matter what the problem or situation, and I really like the tools and methods he provides. With this book I am a better photographer and I understand more about what being a photographer means.

Review contributed by Allain Pogless

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*.

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ComputorQuick Reviews

News and Reviews from Readers and Staff

ComputorQuick Reviews

"Digital Camera Internals" by ComputorEdge Staff

Some digital camera tips from a super-informed consumer; a reader is experiencing problems with Skype; and a call for social-networking experiences for next week's issue.

Digital Camera Tips

A few weeks back, Scott sent me an e-mail that included digital camera tips from Alan, a mutual acquaintance. Scott was suggesting that Alan, who is now theoretically retired, might be able to do some writing for ComputorEdge. *I was suitably impressed by Alan's depth of understanding and the clarity of his writing. However, it turns out that Alan spends most of his time proofing and editing books about the tax code. (Go figure.) On the bright side, Alan did give me permission to publish his e-mail to Scott. —Jack Dunning*

Hi Scott —

As far as I'm concerned, Canon is sending out a mixed message about the importance of megapixel size in their new non-DSLR *[Digital Single-Lens Reflex]* cameras (SX20 and G11 for example). For years now most of the camera manufacturers have kept increasing the megapixels on their cameras, while leaving the same sensor sizes, which appeals to the buying public but not the "real photographer" public, since it mainly gives a purchaser "bragging rights," but not better picture quality.

The SX10 and the SX1 both have 10 MP on a 1/2.3-inch sensor (CCD and CMOS respectively). The new SX20 increased the MP to 12.1, but uses the same size sensor. Which in effect makes each pixel smaller on the sensor, which can add more noise and has a tendency to degrade the picture quality, since the noise reduction used by the camera tends to smear many of the fine details. Bad choice Canon!

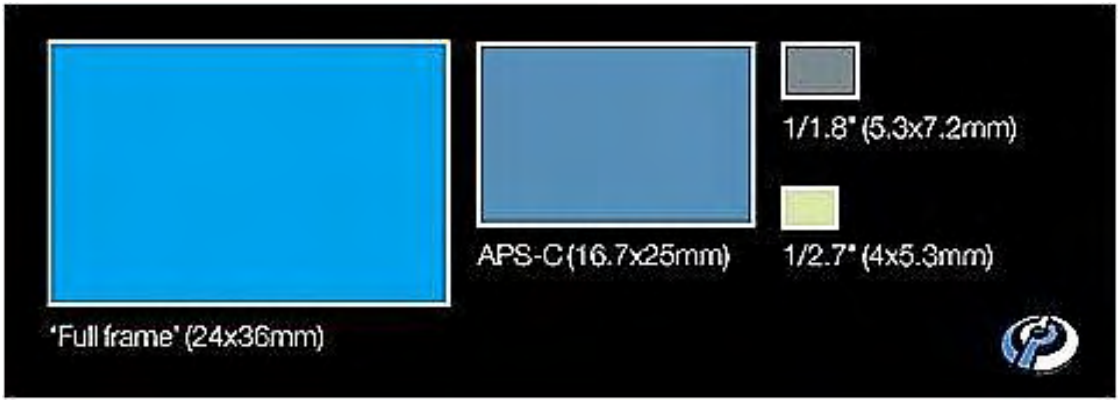
The old G10 has 14.7 MP on a 1/1.7 inch CCD sensor, but now their new G11 has the megapixels reduced to 10MP put on the same size sensor. Which in effect makes each pixel larger and increases its ability to capture more light and more detail, and in theory produces less noise. Good choice Canon!

So what I'm afraid of is that Canon may increase the megapixels on the SX2 (if there is one) to probably 12.1 like the SX20, but put them on the same size sensor as presently used in the SX1.

It's my understanding that in order to do 1080P videos they have to be done on a CMOS sensor (like the SX1 and the new Canon 5DmkII), not a CCD sensor like the new SX20, which can do 720P only.

I'm attaching a photo showing four different sensor sizes; the upper-right one is almost the size of the G11 and the bottom-right one is almost the size of the SX1, SX10 and SX20. The full frame one on the left represents

the Canon 5DmkII and the Nikon D3 for example, and the middle one represents cameras like the Canon Rebel, Canon 50D, Nikon D300, etc.



Now—if you go to the SX1 Vimeo site (*vimeo.com/groups/canonsx/videos*) and click on the Videos tab, you can check out a bunch of SX1 videos. If you click on "HD" on the right side of the video screen, you can watch them in HD. Also, if you join Vimeo (it's free!) you can download many of the original video files (check on the bottom right of the pages for the link). Unfortunately, all the videos are compressed by Vimeo, so it's sometimes better to download the original files to better evaluate their quality. The Forums tab will provide a lot of stuff from Forum members

I watched this video from Kilimats, a moderator of the SX1 group, and was so impressed that I ordered the Hague Mini-Motion Cam (*vimeo.com/3861104*) (MMC) from England for about $150 and love it.

And here's a link to the Hague Web site (*/www.b-hague.co.uk/hague_mini_motion_cam_steadicam_type_camcorder_stabilizer.htm*). Along with the MMC I also ordered their balance correction plate just in case it might be needed for the SX1 or maybe another camera. Their demo videos on that page give more information about the MMC.

My Verdict

I love my SX1. I don't know what Canon could possibly do with a new SX2 that would influence me to want to get one. What's the saying? "If it ain't broke, don't fix it." Well, that's how I feel. I also prefer to be able to do 1080P videos rather than be limited to 720P. I think you would be very pleased to have the SX1 at that lower price at buy.dig, but be sure your memory cards are at least Class 6 for the best video taking.

Let me know what you decide to do.

Alan

Skype Problem

When I Skype friends, I get their video perfectly on my screen (all facial movements), but my photo on their screens is frozen from start to finish. Is my camera defective or what? It's a Logitech, and was working fine on both ends previously.

Larry O'Neill

Next Week: Social Networks

Next week, ComputorEdge *will be talking about social networks. Tell us about your experiences with Facebook, MySpace and others. How do you use them and what are your concerns? Your comments will appear right here in ComputorQuick reviews.*

We Want Your Opinions About Hardware, Software and Web Sites

Over the years, *ComputorEdge* has had great input from our readers. In particular, people have submitted short reviews of equipment, software and Web sites that they really like. In some cases readers have offered tips (such as avoiding flakes on Craigslist). ComputorQuick Reviews is our column dedicated to highlighting those things that you most like and want to recommend to others. The problem is that if this column doesn't appear, it becomes forgotten and less likely to receive input from you.

We have decided to include this feature in every issue as a reminder that this is your magazine—even if we don't have any new reader reviews. If you would like to see the type of reviews that we have run in the past, then check out ComputorQuick Reviews (*webserver.computoredge.com/sitemap.mvc?feature=Columns&columnedcode=persrev&column=ComputorQuick%20Reviews*) in the *ComputorEdge* Site Map. You will find that they are quite varied. We would like to see more. Consider this column a gentle prod saying that we would like to hear from you.

You can send us an e-mail at ComputorQuick Reviews Submissions (*ceeditor@computoredge.com*).

The purpose of this column is to give our readers an opportunity to express their opinions about products and services that they have found particularly useful. If you have had experience with hardware, software or a Web site that made you say, "This is really great! I want to tell everyone about it," then this is a good place to do it. While we do want to post warnings, we are not interested in slamming the obscure bad products, because there are too many of them. We would like to hear about those things that you would recommend to your best friend. The only caution is to please use proper capitalization (do not use all caps) and complete sentences. If it takes us too long to edit the piece, it may be a long time before it's published on this site.

*Please send your personal reviews to ComputorQuick Reviews Submissions (*ceeditor@computoredge.com*).*

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*.

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EdgeWord: A Note from the Publisher

"Behind the Scenes of Webcam Setup" by Jack Dunning

I knew that I wanted to set up a Webcam so that I could view it over the Internet. I had the computer and the camera, but I was concerned about getting bogged down in the process.

Some weeks, such as this last one, when I look at the topic of for the *ComputorEdge* issue, I have no idea what I'm going to do. I look for something that interests me, because it's much easier to write when I have enthusiasm for the topic. I usually start digging around the Web to see what's there. I'll hit a few editorial dead ends, which could turn into terminal boredom, but keep moving on until something piques my interest. That's what happened this week.

I knew that I wanted to set up a Webcam so that I could view it over the Internet. I had the computer and the camera, but I was concerned about getting bogged down in the process. Anyone who has spent any amount of time working with computers knows that the littlest problem can consume vast chunks of time until it completely runs out. On this occasion I was fortunate, since I found Windows Media Encoder almost immediately.

I started with my old Windows XP machine, which I had converted into a Vista 32-bit system a few years ago. I was using the Logitech QuickCam Pro 9000, which I had picked up for an article last year. Putting the Internet Webcam system together went so well that I was ecstatic. I knew that if I could do it, most people (who read *ComputorEdge*) could do it. All I needed to do was communicate in writing how to make it happen—often the most difficult part.

While most of the information in this week's "Easy Internet Webcam Setup for Windows" is directed toward Windows computers, work such as this leaks into the world of routers—which is useful for any type of computer. Networks are not really that complicated as long as you understand how IP addresses work. That's why I spent the time on networks in last week's and this week's Windows Tips and Tricks columns. Again, most of the information is not exclusive to Windows.

To further check out my Webcam setups, I started the same process with my HP laptop. As noted in the article, I never could get the built-in camera to act as an Internet camera. However, the Logitech camera worked find. I didn't even need to load the drivers. I just plugged the Pro 9000 into the laptop, default Windows drivers were loaded, and the camera was ready to use. I probably didn't have access to any of the camera's special features, but I didn't need them for this task.

I left the Webcam plugged into the laptop overnight because I was testing the stability of the setup. The converted XP did not have the power to keep up with the video encoding without crashing after about 12 minutes. However, the newer laptop (one year old) was having no problem. It ran continuously for hours. I left it up overnight, feeding the Vista desktop .

In the morning, the feed that I was reading with Windows Media Player on the old Vista desktop had stopped. Checking the laptop, I found that during the night all of the Logitech programs and drivers had downloaded and installed. Naturally, the feed stopped when the computer rebooted. This didn't annoy me, even though I had no plans to download any of this software. Once it was a *fait accompli*, there was no reason for me to be concerned. I have Windows Update set to "Install updates automatically." I didn't realize that non-Microsoft products would be included in a Windows Update process. (That shows what I know.) I guess I've been lucky. I've never had an automatic update cause me a problem—other than rebooting the computer.

One service I discovered in the process of preparing for this article was video calling via Logitech Vid (*www.logitech.com/index.cfm/349/5787?WT.mc_id=usym_redir_/get_vid_global&strf=Universal_Symlink*). An online Internet service, Vid is available free to anyone who either owns a Logitech Webcam or becomes an online friend in Vid of someone who uses a Logitech Webcam. It's not a bad marketing concept for Logitech.

The strong point of Logitech Vid is its simplicity. Whereas Skype can be confusing to the uninitiated, after installation Vid is essentially a one-button operation. You add a friend by entering their e-mail address. If they are not in the database, you have the option of sending an invitation for the person to join Vid. Once the invitation is accepted, and the other party has downloaded and installed the software, you are notified.

View of a Logitech Vid video phone call.

The picture did look better than Skype, but there were more problems with a low sound volume than I had ever noticed with Skype. The setup tools (camera, speakers, microphone) are not accessible during a call. That's not much of a problem since disconnecting and reconnecting is so easy, although you don't have a live connection to gauge the proper volume level.

The other learning point of this article-writing process involved a cheap Webcam I picked up just to check its adequacy. It was also a Logitech Webcam, but only had 640x480 resolution with a low pixel rate. After plugging it in, I decided that it was a complete waste of money—even if you get it free. The quality was worse than the built-in Webcam in my laptop. (I believe that the cheapo Logitech was 0.3 megapixels compared to 1.2 megapixels for the laptop Webcam.) It can be difficult to uncover the pixel rating for cheap cameras, but it's worth knowing.

All in all, it was a pretty satisfying process. I felt like I had addressed an issue that many people may want to understand. I don't see the approach I used as the ultimate way to set up an Internet camera—far from it. The best of all worlds is probably using professional software and a wireless IP Webcam that will connect directly into the network while not requiring a host computer. Maybe I'll do that next year.

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*

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Editor's Letters: Tips and Thoughts from Readers

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

"Sysinternals No Longer a Secret," "BgInfo Utility," "Registry Cleaner Debate," "Webcam in Europe," "Snow Leopard"

Sysinternals No Longer a Secret

[The following letters are in regard to Jack Dunning's August 28 article, "Secret (Free) Tools for Windows."]

As an "oldster," but still somewhat of a novice, here's the question. I have downloaded the suite and unzipped it. Do I have to use it all, or can I choose the components to use? If the latter, do I just open the particular component I want by clicking on that one folder?

Just to clarify, do we click on a folder each time we want to use one of the components, or do they run somewhere all the time?

-Sandy, San Diego

I found that it is best to run the programs via Windows Explorer by double-clicking on the file name. Sometimes they need to "run as administrator."

-*Jack Dunning,*ComputorEdge

I read this article with great interest and am at this very moment downloading the suite. I have been using a Sysinternals component for a year or two that I'm totally sold on, and that's PageDefrag, which defrags your pagefile.sys on bootup (the only time that can be done). I had no idea that PageDefrag was part of a whole suite. Can't wait to do some poking around in it.

-Werner Maurer, Rosarito, Baja Calif.

BgInfo Utility

[The BgInfo utility is a] nice utility, except I have not found a way to remove the text from the screen. I've warm-booted without any success. Do not like to cold boot my machine.

-Wm Tiep, Toledo, OH

To remove the info from the screen, rerun the program BgInfo.exe, highlight all the parameters in the box (Ctrl +A), Delete, and click Apply.

-*Jack Dunning,*ComputorEdge

Registry Cleaner Debate

[The following letters are in regard to Digital Dave's August 28 column, where Dave addressed a question about Registry cleaners.]

Before editing: Make a Registry backup first. Then, if there are unwanted surprises, you can recover.

-Cam Hamilton, Portland, Oregon

I don't agree with your comment that most people do not need to use Registry cleaners. Many programs, even after being uninstalled, leave entries in the Registry unless you use a program like Revo Uninstaller (*www.revouninstaller.com/*). That uninstaller also looks in the Registry for left-behind entries, and sometimes there are many. The Registry can be overloaded with invalid or unneeded entries. CCleaner does a fair job, but its claim to fame is not as a Registry cleaner, but as a general PC cleaner.

-Walter Rosenfeld, Encinitas, CA

Do not bother with [Registry-cleaning software]. It it unlikely to help; it can cause harm.

There are no end-user benefits from running Registry cleaners. Unnecessary entries in the Registry do no harm. This should not be a regular maintenance chore. If done, it most certainly should not be automated.

I hold to the singular distinction I made in the beginning: There are times that a fast Registry editor with search is needed to fix a single issue under *expert* hands. There is no justification for the regular use of automated Registry cleaning tools; they are of dubious merit as the "fix" for even one-off problems that need solving.

Bill Castner
www.whatthetech.com/2007/11/25/do-i-need-a-registry-cleaner

[Some resources to check out on the Registry-cleaning topic]:

Why your registry doesn't need cleaning
Date: November 29, 2007
Author: Mike Mullins
blogs.techrepublic.com.com/security/?p=370

* * *

Why I don't use registry cleaners
Published April 19, 2005, by Ed Bott
www.edbott.com/weblog/archives/000643.html

-Les Irvin, Carlsbad, CA

While it might be true that having a bloated Registry does no harm (meaning that your system will still function even with obsolete entries), there are some reasons why it's nice (though not necessary) to get rid of the bloat. One of the main reasons I use a cleaner is because every time Windows boots, it has to read the entire Registry and buffer many of the Registry entries in memory (so it can refer to them while running). Bloat makes for a slower boot, which is perfectly fine for many people (and if you're one of them, you probably don't need a cleaner).

The first time I ran mine (CCleaner), it found some dead entries that I never created. I think these were left over from the HDD that the manufacturer used to place "copies" of the OS on my new system (because they didn't clean up their own Registry before copying). I removed dead links to software that I've never even heard of, much less installed. I also removed all the trial copies that the manufacturer added just in case I somehow lost my mind and wanted to install Norton or McAfee.

Normally, I manually edit my Registry. But have you ever tried tracing through multiple layers of CLSIDs? Too bad Microsoft didn't impose some standards on people who add entries to the Registry. But then, Microsoft itself is perhaps the worst offender there.

-Roger Crowley, Poway, CA

Webcam in Europe

Last month when my son went to Europe, we were able to iChat back and forth with no problem. He even took his Mac Pro out in front to show us his brother-in-law's home. We also corresponded via Skype. For some reason, the picture was even better. Apparently, your mileage may vary. We were both pleased with the resulting pictures.The built-in Webcams seem to be improving all the time.

Thanks for all the articles (and ads). Keep up the good work!

-Bob D., Vista, CA

Snow Leopard

[Regarding Wally Wang's August 29 Wally Wang's Apple Farm column:] Once again, Wally Wang's Apple Farm article on Snow Leopard is very timely and informative.

Thank you,

-Joyce Etherton, Lakewood, CO

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