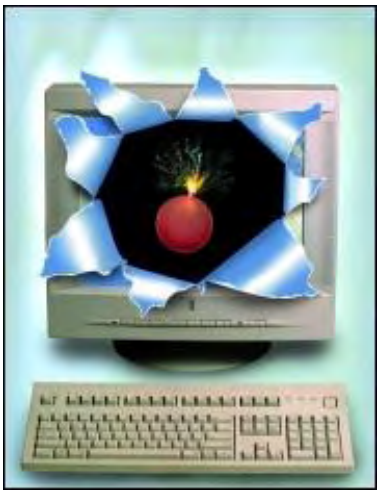
ComputorEdge™ Online — 11/13/09



This issue:
Backup Strategies—Don't Wait for the Bomb!

Tools and techniques for protecting your data from the dreaded, but inevitable, hard drive crash.

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Linux Lessons: Installing Ubuntu by ComputorEdge Staff

Step 1: Getting Ready for Ubuntu

Ubuntu is touted as one of the easiest Linux distributions to use. Here is the first part in a series that will show you its step-by-step installation process. Also, more on removing the GRUB boot loader; and a reader sings the praises of Karmic-Koala Ubuntu 9.10.

Rob, The ComputorTutor Does VB.Net 2010 by Rob Spahitz

Custom Controls

Last time, we continued exploring Visual Basic with databases. This week, we explore the idea of custom controls in VB.

ComputorQuick Reviews by ComputorEdge Staff

Computer Product Opinions from ComputorEdge Readers and Staff

If a motherboard with bad caps is worth saving, check out BadCaps.net, as this reader's experience was positive. A reader offers his method of safeguarding data—online; another reader shares an experience with a program for making backups to an external hard drive.

Spam of the Week: Internal Revenue Service (IRS) by ComputorEdge Staff

The latest in annoying and dangerous e-mail currently making the rounds.

An e-mail purportedly from the IRS with "Notice of Underreported Income" in the subject line can strike terror in one's heart. Fortunately, this e-mail is only a phishing scam.

DEPARTMENTS:

EdgeWord: A Review of Windows Data Backup Tools by Jack Dunning

Choose the approach that will work best for your situation.

In Windows, there are a number of ways to back up your data. Here is a summary of different backup methods and links to more detailed explanations.

Editor's Letters: Tips and Thoughts from Readers by ComputorEdge Staff

Computer and Internet tips, plus comments on the articles and columns.

"Warning for Simple Table Creation," "Free MP3 Resources," "Digital Cameras," "Destroying Hard Drive Data," "Windows Tips and Tricks: A Windows 7 Review"

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Digital Dave

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

A reader needs a recovery tool for a corrupted SD card; is anyone still manufacturing laptops without touchpads?; a recommendation is sought for a professional-grade anti-malware too.

Dear Digital Dave,

You have probably seen this one before. I have an SD card from a digital video recorder that is corrupt. I can find millions of recovery tools, but which ones are safe (legitimate tools vs. Trojans, viruses)? Of course I need it ASAP.

Marcus
Alabama

Dear Marcus,

The best way to avoid unsafe software is to get it from a reputable place. Do not merely search the Web, because the scams have a way of getting at the top of the list, making it very difficult to distinguish the good from the bad. When I'm looking for software—especially free software—I go to Download.com (*download.cnet.com*), which is part of the CNET Web site.

As much as possible, CNET tests the software to make sure it is clean. They also do editor reviews for some of the programs, plus there are reader reviews for virtually everything on the site. The number of downloads will tell you how much a program is used—the more, the better. If you see good reviews and a high number of downloads, then the software is most likely safe.

It's relatively easy to find the type of software you want. In your case you may search for data recovery (*download.cnet.com/1770-20_4-0.html?query=data+recovery&searchtype=downloads&filter=licenseName=Free|&filterName=licenseName=Free|*) software and select the free filter.

A few that may do the job for you are Recuva 1.32.444 (*download.cnet.com/Recuva/3000-2242_4-10753287.html?tag=mncol*), TestDisk & PhotoRec 6.10 (*download.cnet.com/TestDisk-PhotoRec/3000-2248_4-10511775.html?tag=mncol*), and Undelete Plus 2.98 (*download.cnet.com/Undelete-Plus/3000-2242_4-143754.html?tag=mncol*). I read reviews that have recommended them.

Digital Dave

Dear Digital Dave,

I'd like to get a laptop to travel with, but I hate the touchpad they all come with. It doesn't feel natural to me (I prefer a trackball), and having to reach past it to the keyboard is a strain. Earlier laptops of mine, before about 2002, didn't have a touchpad, and the keyboard was more comfortable, too. Is anyone still manufacturing laptops without touchpads?

Kim
San Diego

Dear Kim,

I agree with many of your sentiments. It is difficult to find a laptop without a touchpad. I did locate the Fujitsu LifeBook U820 Mini-Notebook, which has a touchscreen rather than a touchpad, but it only has a 5.6-inch screen—no room for a touchpad. Other readers may be able to recommend additional touchpad-less laptop computers.

The problem is that an all-in-one package such as a laptop needs to be optimized for the general market. It seems that most people expect a touchpad to be included. Plus, there is so much extra space on the keyboard area that the manufacturers feel they should put something there—maybe it should be a cup holder.

When I look at laptops, I note whether the computer has a hardware switch (on/off) for the touchpad. I keep the pad disabled most of the time and use an external mouse. This prevents the accidents that can occur when my thumb inadvertently hits the pad when it's turned on. If I need to use the pad (sitting in an airport), I can quickly activate it. You can turn off the pad with software settings, but that's more of a hassle. I've seen that most HP laptops have a touchpad switch.

You may need to get an external trackball that's small enough to carry with you. There are a number of them available—some that you hold in your hand. They are not very expensive.

Digital Dave

Dear Digital Dave,

I am an IT person for a company in Michigan. I have been doing this type of work for some time now; however, when my boss recently asked me, "Is there a virus, spyware, Trojan, malware removal tool for professionals?" I did not know.

I use free stuff, such as Disk Warrior for Macs, but as for PC software, I don't know. Is there a company that makes that type of tool for us geeks?

Bob McPherson
Howell, MI

Dear Bob,

Virtually all of the companies that produce free antivirus software also produce software for professionals and companies. This is how they make money. The free version, while being suitable for most individuals, is an introduction to the company and its products. Without the higher-end market for the antivirus software companies, there would be little free software.

There are three free antivirus programs that have received excellent reviews. They are Avast! Home Edition (*www.avast.com/eng/download-avast-home.html*), AVG Anti-Virus Free Edition (*free.avg.com/download-avg-anti-virus-free-edition?cmpid=fr_bn_free_670*), and Avira AntiVir Personal Edition (*www.free-av.com/en/products/1/avira_antivir_personal__free_antivirus.html*). I would think that the professional versions of any of these would do the job for you.

Microsoft has just released Microsoft Security Essentials (*www.microsoft.com/Security_Essentials/*). This is a free antivirus/adware/malware tool for which I have seen nothing but praise. I installed it and it has a small footprint; does fast, accurate and unobtrusive scans; and doesn't try to upsell you on anything. So far, and based on other recommendations, I think it's probably the current best choice. It's not bundled with Windows (probably for anti-competition reasons), but it's easy to find (click the link above).

Digital Dave

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Backup Strategies for Hard Drives

“It's time to think about the unthinkable.” by Michael J. Ross

> The health of your data is like the health of your body—prevention is the best cure. In the world of hard drives, that prevention takes the form of backing up all of your important data.

Many years ago, there was a television special that focused on earthquake risks and safeguards, and it was ably hosted by a fireman who was also an expert in the field of earthquake preparedness. He had a friendly appearance, a pleasant disposition, and a good sense of humor—the ideal qualities for a party guest. In fact, he often was invited to parties—but never invited back. Can you imagine why? It's because people naturally would ask him what he did professionally, and he would briefly explain the dangers of earthquakes and the importance of securing your home. That was the problem. The host and/or hostess didn't want to be reminded that they had heard his well-meant warnings months earlier, had recognized their own lack of preparation at the time, and yet still had done nothing about those dangers since the previous party.

People oftentimes behave similarly when it comes to computer security and preservation of their personal data against potential loss. Some of them naively believe that hard drives and other computer media never fail. Or they think that because theirs has yet to fail, there is nothing to worry about. (Perhaps they think that they will "cross that bridge" when they get to it. That will be difficult when the bridge has burned down.) Or—and this is even less excusable—they are well aware of hard drive mortality, but prefer living in denial, hoping that nothing will go wrong.

If you much prefer learning life's lessons the hard way, then you may as well stop reading right now, because, like the fireman mentioned earlier, I'm going to encourage you to think about the unthinkable: complete and instantaneous data loss, with no prior warning (perhaps with the exception of this article).

Hard Drives Die

That's not to say that your hard drive necessarily will die. But it is a nontrivial possibility, especially if the drive has been in frequent use for many years, or has inadvertently been subjected to impact or high temperatures, or came from a fault-prone batch of hard drives with higher-than-normal defect rates. Some of these factors you may be aware of or have control over, while others you don't.

Data loss can also result from theft of your computer. The risk of this is increasing all the time, as more people switch from desktops to laptops, and begin toting those laptops around in restaurants, college libraries, coffee shops and other public places frequented by thieves. Another source of data loss is human accident, such as when a nephew, without your knowledge, decides to experiment with the FORMAT command. Even experienced computer professionals can receive a visit from the Data Reaper: I was testing a highly touted partition-resizing tool a few years ago, and it failed spectacularly. Fortunately, all that data was restorable from multiple backups.

Regardless of how the data is lost, these computer catastrophes usually occur at what seem to be the most inopportune moments—such as after some important documents, music, or data have been saved to the computer, and prior to the computer owner getting serious about doing backups. That's why it is critical to prepare in advance. Another advantage to prior preparation is the peace of mind you gain, because you won't be worrying about the potential of something going terribly wrong with all the information you've been storing over the years.

Save Your Data and Sanity

The health of your data is like the health of your body—prevention is the best cure. In the world of hard drives, that prevention takes the form of backing up all of the important data from the drive to some reliable repository. Depending upon how much data you need to back up, such a repository could consist of nothing more than a USB flash drive, or a small stack of optical discs, a second hard drive, or an online data-storage service.

Consider the case of individuals who largely use their computers for accessing the Web, or who have a fair amount of personal information, but most of it is stored online, in Web-based e-mail accounts and perhaps additionally in online productivity services, such as Google Docs. For people with minimal local data, a simple USB flash drive (a.k.a. thumb drive) should probably be more than sufficient—especially now that the data capacity of those drives has increased dramatically, currently topping out at 8GB.

Another option is rewritable CDs (CD-RWs), since just about every PC nowadays has a built-in optical drive that can write to CDs, and oftentimes DVDs, in the case of later models. Prior to the advent of USB flash drives, these optical discs tended to be a popular and reliable backup medium, and they are quite inexpensive, easy to store, with excellent data retention.

Some of the older media used for backing up data—such as diskettes and tape drives—can still be found in use here and there, but have mainly fallen out of favor, having been supplanted by rewritable optical discs and flash memory, to say nothing of much cheaper hard drives. When choosing your backup media, pay attention to industry trends to see which type of media may be the first to disappear into technological oblivion.

For maximum reliability and ease of use, you can utilize a second hard drive—either internal (for desktops) or external (for laptops and desktops). This is the best option if you have a large amount of data, such as 8GB or more. Copying data from one hard drive to another is much faster than copying it to a USB flash drive—especially if you have SATA hard drives, and not the older IDE drives. Backup speed would probably not be an issue if you intend to start the backup process to run at night or some other time when you are away from your computer. But if you prefer backing everything up and then shutting down your machine before retiring for the night, drive-to-drive is the way to go.

If you have a lot of data and for some reason you don't want to make use of a second drive, then consider signing up for one of the many Web-based backup services (i.e., saving in "the cloud"), which allow you to upload all of your data securely to their servers, which themselves are regularly backed up. This approach has the convenience of less hardware cluttering up your work area. It may be the only approach if you are traveling frequently, but are still able to access the Internet through high-speed connections wherever you are. The downsides are the monthly service fee, the possibility of data theft from the service's computers, and the much slower transfer time, since your files have to be uploaded over the wire, rather than copied to a local device.

Backing Up Is Easy to Do

Data preservation shares another trait with personal health: While the key to physical flexibility and strength is the consistency of your workouts, frequent backups are far smarter than just the occasional one. That's because once that hard drive goes, all you will have left is everything saved on the most recent backup, and you will have lost all of the work you saved since then.

If you modify files frequently, and at least occasionally need older versions of those files, then you should perform rotating backups, which means that instead of overwriting the same single backup repository each time, you have multiple repositories.

For instance, you could have three thumb drives instead of one, and rotate through them for your daily backups, so you would be able to access the version of a document two or three days earlier, and not just yesterday's. For any data for which there is a possibility that you might want to access older versions at some point in the future, then it is highly advisable to maintain backups from different days, weeks and even months.

Ideally, you should have multiple backups, on different types of media (e.g., hard drives and thumb drives). At the very least, your most critical files should be backed up onto a second medium immune from the same physical danger threatening your primary media. For instance, if you do daily backups to a second hard drive, at least have everything important saved on a large USB drive, in case both hard drives are damaged by a natural disaster.

Furthermore, your backups should be stored in separate locations. Having everything saved on a second internal hard drive, and nowhere else, won't do you any good if you were to lose the entire computer to theft or household fire. For any data stored off-site, be sure to use a strong encryption program, so thieves cannot gain access to your confidential data.

Hard drive backups are like fire insurance and earthquake preparedness: You hope you never need them, but when you do, they are absolutely critical to recovering your data quickly and inexpensively.

Michael J. Ross is a Web developer (*www.ross.ws*), writer, and freelance editor. He creates Web sites that help entrepreneurs turn their ideas into profitable online businesses.

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Planning and Testing Your Backup Strategy

"Have a good plan in place in advance." by Tim McGuire

Dealing with backups is important, and having a good plan in place, maintaining that plan and periodically testing that plan will help ensure that your backup is solid.

This *IS* a Drill

Few computer users have to be convinced of the importance of backing up their data, even if vast numbers of people still admit that they don't. But having a solid backup isn't as simple as selecting your files and assuming they'll be there if you need them. A big part of backing up that is not so obvious is testing your backup. To truly test it, you must have a good plan in place in advance.

When I was in second grade, I really looked forward to fire drills, for a number of reasons. I had a crush on a girl who sat on the far side of the room, and if I was very clever about getting in the line out the door, I ended up standing right next to her (smooth!). Another benefit was that if we students played our cards right, we could delay classes by almost a half hour. But while I was busy furthering my own selfish interests, I was missing the real importance of the drills. The fire drills gave the administration the chance to test the routes, gauge the capacity of the hallways, and measure the speed of the evacuation. For the students, the repetition prepared us to automatically know what to do in the event of a real emergency. The testing and the learning were both based on one thing: a plan. Backing up (and successfully restoring from a backup) has a similar requirement. You must have a good plan in place, and you must test the effectiveness of that plan.

Most people do have at least a general plan in place, although it may not be documented. And for most people, that may be enough. But, depending on the type of data you are backing up, it can get more complicated. Some programs save settings in a different location, others have log files, others create libraries to save data, and these files could be in a particular folder or even a different drive. Part of the importance and value of the plan lies in making sure you are familiar with your data, and then documenting it, so you do not have to piece together this info later, after a problem.

After documenting the settings and file locations of your important programs, and their recovery requirements, you can use this as a checklist when setting up your backup, to make sure you have everything important included. After you have configured your backup job, it is valuable to print out the list of files and folders that are backed up, the details of the backup, and include this as an appendix in your plan. When you have the plan nailed down, I'd suggest storing a hard copy someplace safe, and also e-mailing a copy to yourself at an online e-mail account, where you can save it separate from all your other data.

Once the plan is established, most people will happily forget about their backup, assuming it is running and taking care of all their very important information. But how do you know? The good answer is that you don't, so now you go about testing your backup. The "drill" will cover several important aspects: It will test your backup method (reliability and integrity), it will test your familiarity with the data, and it will test the applications you use. Lastly, it will reinforce the need to keep the plan current.

Method

Pick a random file, any file. Try to restore in whatever software you use to backup. So many folks never do this until they are in a tough spot and are really trying to retrieve a file. That is already a pretty stressful situation, so being familiar with the process, and confident that it works, can really serve to diffuse some of that tension. In my experience, this is often when someone learns some very important limitations or even failings of their backup procedure. For example, one client learned that their inexpensive online backup solution requires 24 hours to generate a restore file and make it available via download. There is nothing wrong with that, if you can wait, but if you were up against a deadline and only discovered that while trying to restore, you can imagine it would be pretty disappointing.

So, knowing that this online provider follows this procedure is important, and there won't be expectations of something else during crunch time. Another customer thought they were doing solid backups, but in fact, they were never swapping their tapes. So day one got a great backup of the files. And day two overwrote that file backup with the database. And day three zapped that and stored the e-mail. The client didn't know it, but on any day she would only have been able to restore whatever had been backed up the previous evening. A test would expose this problem, and give you time to resolve it before you need

to rely on those backups.

Familiarity

This time, think of a single, important file to restore. Now go to the backup software and try to specifically restore that file. This is good practice; you are learning the software and testing your familiarity with where your files are stored. Again, with many clients, this is when they sheepishly realize that they've never actually set the backup to grab a particular folder, instead assuming it was part of the backup job. Better now than later!

Applications

Now, try restoring a file that you may not use directly (a picture or document is pretty normal and would be stored where you might expect it to be, but Outlook uses database files, for example, or your music library might have some hidden files you don't directly engage). Restore the files, and follow through by opening or using them. Too many backup applications put so much effort on making the backup side super easy, with one click to grab all of Outlook. But not all of them have a one-click restore.

Many will restore the files required, but it is up to you to configure, for example, an Outlook profile so you can even open the file that was restored. A real-life data-loss emergency is not when you want to learn that restoring your e-mail database also requires log files, or that your financial software requires a license file in order to open the restored company file, or that you are not sure where to put the restored files. Becoming more familiar with these scenarios in advance will save you a lot of stress, and possibly even some money (that you might spend on a consultant or recovery specialist), in the event of catastrophic data loss.

Maintenance

The last step is maintenance. Your backups need recurring attention. Contrary to what is sometimes advertised, "set it and forget it" is not a good idea when it comes to disaster recovery or computer security in general. Set a task in your calendar to remind you to do monthly backup drills. Included in the drill should be a task to update your plan. When you visit this plan each month, make a note of new folders or drives you've added, or new applications you've installed, and add them to the backup if that is appropriate.

Just like any skill, the more frequently you practice, the better you will be at it. Dealing with backups is very important the few times you'll ever need to do it. Having a good plan in place, maintaining that plan and periodically testing that plan will help ensure that your backup is solid and that you have the skills to make good use of it if the need arises.

Tim McGuire founded The Backup Plan, Inc. (*thebackupplan.com/*) in 2005 and writes on a variety of blogs as tmcguire47.

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Windows Tips and Tricks

Windows Tips and Tricks: Using the British Pound Symbol (£)

"Accessing Special Characters That Aren't on Your Keyboard" by Jack Dunning

Here is a trick that will quickly give you access to some of the most-needed special characters, almost regardless of what program you're using, without searching through long character tables.

This week's tip is about using screen (and print) characters that don't appear on your keyboard. Most of the time when we need a character that's not immediately available, we circumvent the problem by typing out the word. For example, if we need to denote British pounds (£), rather than entering the £ symbol directly (it's not on the keyboard), we tend to enter the words "British pounds" as a substitute.

If we are using a word processing program, then there is often a menu option for inserting a special character, such as £. This feature usually comes in the form of a long list of characters that can be inserted directly into the text with a double-click. However, these lists may contain hundreds of figures, making a search for the correct one tedious (see Figure 1). Plus, this procedure will not work when working in a text editor such as Notepad or the stripped-down word processor WordPad.

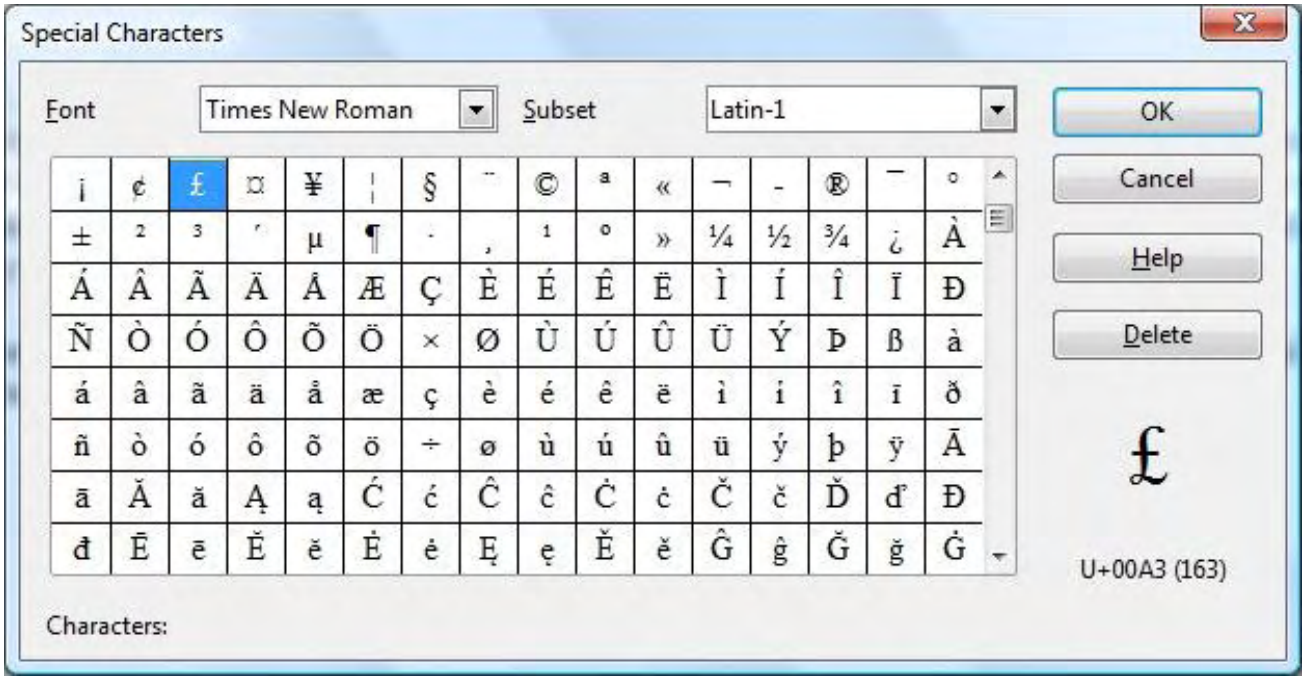


Figure 1. Inserting Special Characters in OpenOffice.org.

What's needed is a technique that will work in virtually any Windows program on any type of Windows computer. Fortunately, there is a trick that will quickly give you access to some of the most-needed special characters, almost regardless of what program you're using, without searching through long character tables.

ASCII and ANSI Characters

Each character on the keyboard is assigned a numeric value, so the computer can recognize and save it. When you strike a key, the associated number is embedded in memory for later saving with your data file. The standard figures are called ASCII

(American Standard Code for Information Interchange) characters. The keyboard layout falls within the first 128 of the values (0-127). While many of the characters are unprintable, you will recognize the vast majority (see Figure 2).

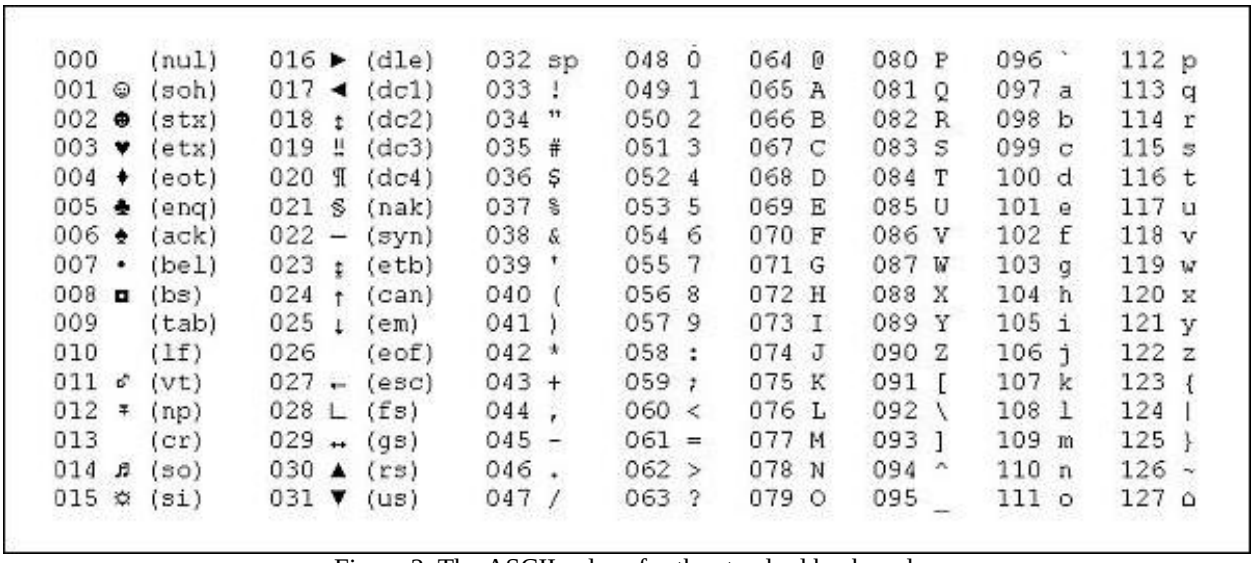


Figure 2. The ASCII values for the standard keyboard.

These values are entered into documents when the individual keys are struck. This is the purpose of the keyboard. However, we can also enter a letter or symbol by typing in its decimal value with the numeric keypad while holding down the Alt key. You can test this by clicking into any field that allows you to enter text (e.g., search windows, address bars, Notepad, WordPad, new e-mail), then push down and hold the Alt key. While the Alt key is depressed, enter the three digits for one of the characters (say 071) with the numeric key pad (Numlock on). When you release the Alt key, the character will appear (G). This can be done for any of the printable characters in the above chart. This is how we will enter the special characters that don't appear on the keyboard.

Extended ASCII Characters

The ASCII characters for decimal equivalents 128 through 255 are called the Extended ASCII Character Set. It includes numerous figures that may come in handy, but they don't appear on the keyboard (see Figure 3). When we need to insert one of these items in a document, we can use the above technique to enter it. Hold down the Alt key, enter the decimal equivalent of the desired character (156) on the numeric keyboard with Numlock on, and see the character (£) appear when the Alt key is released.

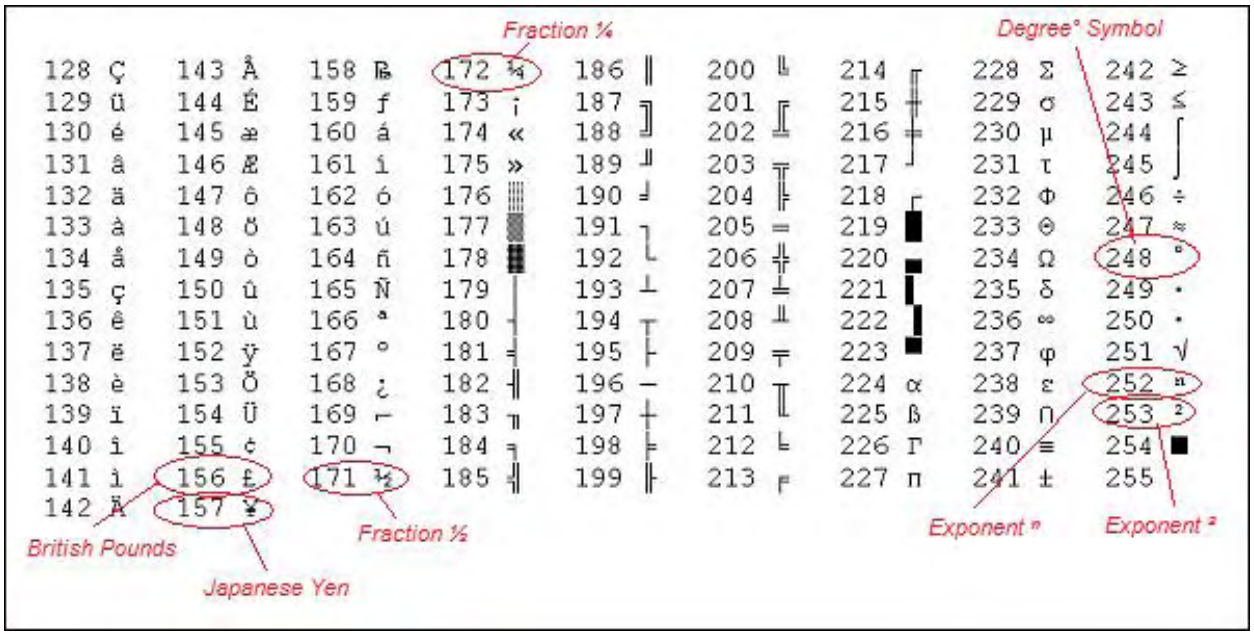


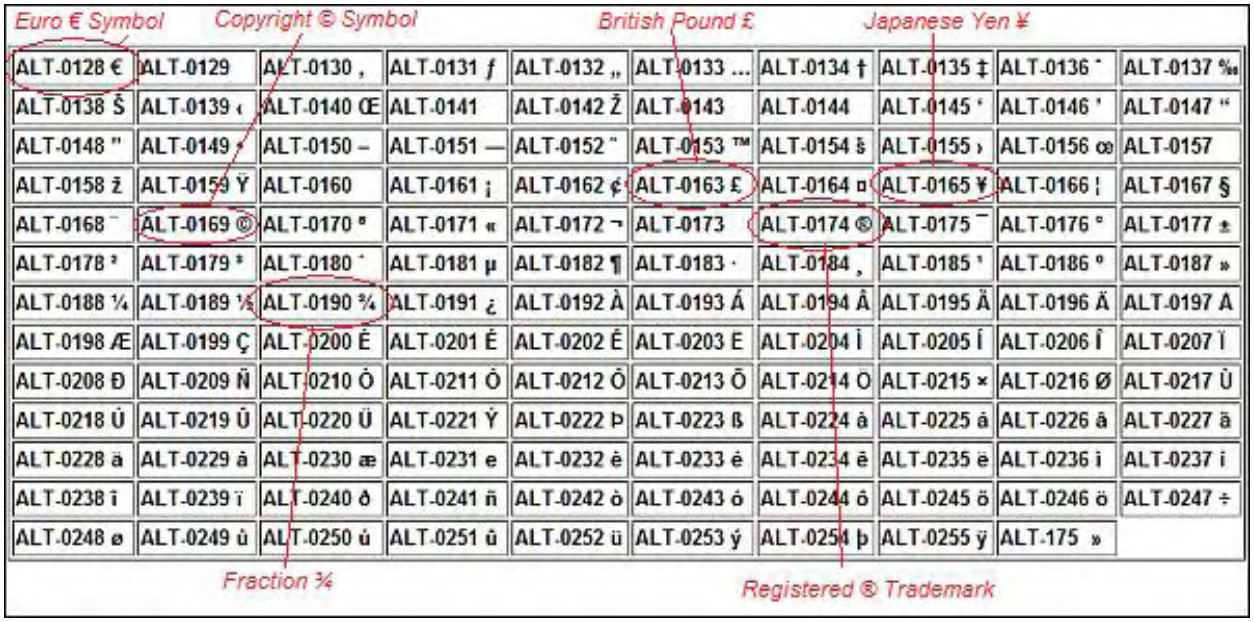
Figure 3. Extended ASCII Character Set.

The most useful characters in this set will likely work in all your Windows programs; however, there are a number of them that may not display properly, or at all, depending upon where you use them. Even then, if they do seem to work, they may not save properly. In some cases, it may take some experimenting to determine which ones work best.

As you can see, the number of truly useful figures is pretty limited. For example, while we can represent pounds (£) and yen (¥), there is no value for Euros (€) on the chart. For the € sign, it's necessary to look at ANSI (American National Standards Institute) characters.

The ANSI Character Set

ANSI characters are another set of values that are supported by Windows computers for reproducing special (and regular) characters. For the first 128 characters, ANSI is identical with ASCII, as shown in Figure 1 above. The remainder (128-255) vary significantly, as shown in Figure 4.



ALT-0128 €	ALT-0129	ALT-0130 ‚	ALT-0131 ƒ	ALT-0132 „	ALT-0133 …	ALT-0134 †	ALT-0135 ‡	ALT-0136 ˆ	ALT-0137 ‰
ALT-0138 Š	ALT-0139 ‹	ALT-0140 Œ	ALT-0141	ALT-0142 Ž	ALT-0143	ALT-0144	ALT-0145 '	ALT-0146 '	ALT-0147 "
ALT-0148 "	ALT-0149 •	ALT-0150 –	ALT-0151 —	ALT-0152 ˜	ALT-0153 ™	ALT-0154 š	ALT-0155 ›	ALT-0156 œ	ALT-0157
ALT-0158 ž	ALT-0159 Ÿ	ALT-0160	ALT-0161 ¡	ALT-0162 ¢	ALT-0163 £	ALT-0164 ¤	ALT-0165 ¥	ALT-0166 ¦	ALT-0167 §
ALT-0168 ¨	ALT-0169 ©	ALT-0170 ª	ALT-0171 «	ALT-0172 ¬	ALT-0173	ALT-0174 ®	ALT-0175 ¯	ALT-0176 °	ALT-0177 ±
ALT-0178 ²	ALT-0179 ³	ALT-0180 ´	ALT-0181 µ	ALT-0182 ¶	ALT-0183 ·	ALT-0184 ¸	ALT-0185 ¹	ALT-0186 º	ALT-0187 »
ALT-0188 ¼	ALT-0189 ½	ALT-0190 ¾	ALT-0191 ¿	ALT-0192 À	ALT-0193 Á	ALT-0194 Â	ALT-0195 Ã	ALT-0196 Ä	ALT-0197 A
ALT-0198 Æ	ALT-0199 Ç	ALT-0200 È	ALT-0201 É	ALT-0202 Ê	ALT-0203 E	ALT-0204 Ì	ALT-0205 Í	ALT-0206 Î	ALT-0207 Ï
ALT-0208 Ð	ALT-0209 Ñ	ALT-0210 Ò	ALT-0211 Ó	ALT-0212 Ô	ALT-0213 Õ	ALT-0214 Ö	ALT-0215 ×	ALT-0216 Ø	ALT-0217 Ù
ALT-0218 Ú	ALT-0219 Û	ALT-0220 Ü	ALT-0221 Ý	ALT-0222 Þ	ALT-0223 ß	ALT-0224 à	ALT-0225 á	ALT-0226 â	ALT-0227 ã
ALT-0228 ä	ALT-0229 å	ALT-0230 æ	ALT-0231 e	ALT-0232 è	ALT-0233 é	ALT-0234 ê	ALT-0235 ë	ALT-0236 ì	ALT-0237 í
ALT-0238 î	ALT-0239 ï	ALT-0240 ð	ALT-0241 ñ	ALT-0242 ò	ALT-0243 ó	ALT-0244 ô	ALT-0245 ö	ALT-0246 ö	ALT-0247 ÷
ALT-0248 ø	ALT-0249 ù	ALT-0250 ú	ALT-0251 û	ALT-0252 ü	ALT-0253 ý	ALT-0254 þ	ALT-0255 ÿ	ALT-175 »	

Figure 4. ANSI Character Set 128 through 255 showing the key combination for creating the character.

To access the ANSI characters, it is necessary to put a zero (0) in front of the decimal equivalent while holding down the Alt key. To create the £ symbol, the number 0163 would be keyed in on the numeric keypad (Numlock on) while the Alt key is depressed. The leading zero is necessary for all of the ANSI characters. Notice that there are a number of other special symbols available that don't appear in the extended ASCII set, plus the decimal values do not match when there is a corresponding symbol. The Euro (€) is the first symbol (0128) on the chart.

ASCII and ANSI charts that are easier to read can be quickly found on the Web by Googling the terms "ASCII charts" or "ANSI charts." If you find that you often need to use special characters, I recommend that you make your own chart of values for those that you use most. Keep it handy near your computer. If you use them enough, you will have them memorized.

Run "Character Map" (charmap)

If all of this is too confusing, then there is a Windows program call charmap ("Character Map") that will allow you to search through symbols for copying and pasting (Ctrl+V) into your document (see Figure 5). The advantage to this approach is that there are special characters that are available in charmap that don't appear in either the ASCII Extended or ANSI charts. To run the program, type "map" or "char" in the Start Search field of the Start menu, then select Character Map from the Start menu, or type "charmap" after selecting the Run command from the Start menu, and then OK.

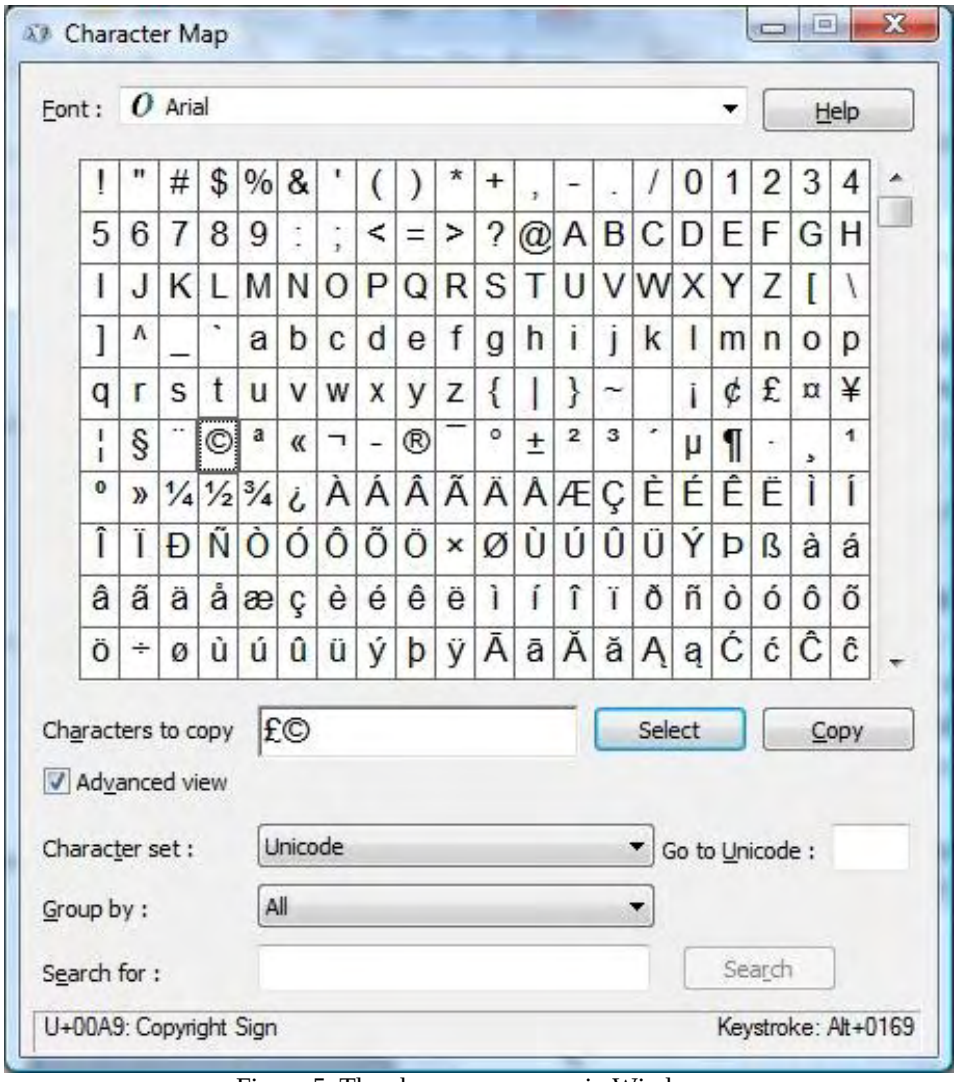


Figure 5. The charmap program in Windows.

Once you find the desired character, click Select, then Copy. Pick the window with the program where you want to place the special character, and select Paste (or Ctrl V).

Now whenever you need to enter a Euro sign (€) or British pound symbol (£), rather than the dollar sign ($) which appears on the keyboard, you have multiple ways to get it done.

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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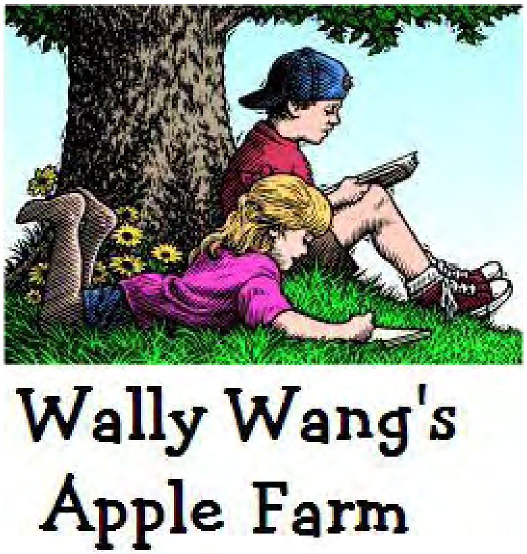

Wally Wang's Apple Farm

"The Simplest Backup Solution" by Wally Wang

Backing up files isn't an inherently fun task, but it's an important one, so make sure you have both an external hard disk and an online storage site to store your files. Also, a look at the Runtime Revolution programming tool, and a tip on booting Snow Leopard in 64-bit mode.

Using any computer without keeping backups of your crucial files is like walking across a tightrope without a safety net on a rope that's slowly unraveling. It's only a matter of time before disaster strikes, so you better start backing up your files now before it's too late.

With a Macintosh, the simplest backup solution is to get any ordinary external USB hard drive, plug it into your Mac, and run Time Machine, the free backup program that comes with every Macintosh.

When you need to retrieve a file from the past, open Time Machine, choose a date in the past when you're certain your file existed, then click on the file you want, and click the Restore button.

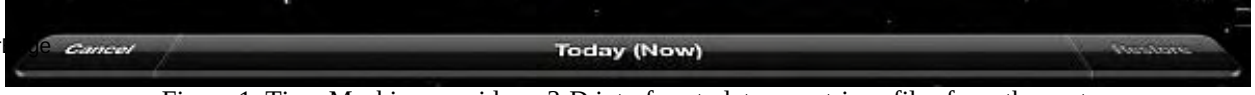

Figure 1. Time Machine provides a 3-D interface to let you retrieve files from the past.

For an even simpler, but more expensive solution, just get Apple's Time Capsule, which is a combination Wi-Fi router and external hard disk. Time Capsule is particularly suited for laptop Macs since you can back up your files automatically every hour, wirelessly.

Although Time Machine may make backups easy to create and even easier to retrieve files from, any external hard disk will be useless if your home or business office catches on fire and wipes out both your Macintosh and your external hard disk at the same time.

For that reason, the absolute safest way to back up your files is through an off-site backup. Now if a disaster wipes out your computer and your backup files stored on an external hard disk, your important files still exist somewhere else. Just get a new computer, retrieve your backup files, and you'll be able to start working again with just a little inconvenience for your trouble.

Fortunately, there are plenty of Internet sites that offer storage space. To entice you to try their services, most of these storage sites offer a free account with limited storage space. If you want more space, you'll have to pay a monthly fee. The more you pay, the more storage space you'll get.

One of the most generous off-site storage sites is ADrive (*www.adrive.com*), which offers a free 50GB storage. Other sites include Mozy (*mozy.com*) with free 2GB storage, 4Shared (*www.4shared.com*) with 5GB storage, and iDrive (*www.idrive.com*) with free 2GB storage.

Figure 2. ADrive provides free 50GB of storage.

If you try one of these services, you can see whether you like the way the site works. If you try multiple services, you can scatter multiple files across multiple sites for free and get a little more storage space than if you had relied on a single free account.

For the truly paranoid, back up your most important files periodically to CD/DVD, such as every night or every week. Then store these CD/DVDs somewhere away from your computer. This will also insure that you'll keep your crucial files separate in case a disaster should strike your computer.

Backing up files isn't an inherently fun task, but it's an important one, so make sure you have both an external hard disk and an online storage site to store your files. With your files saved in multiple locations, your data should be safe until you fail to back up the right files.

Runtime Revolution

Programming can be fun (and also frustrating). Coming from a Visual Basic background, it's natural and easy to switch to a rival BASIC compiler such as REALbasic (*www.realbasic.com*). While REALbasic is very similar to Visual Basic, it also inherits the problems of traditional programming languages.

To get anything done in traditional programming languages, you have to write a lot of code. Most programming languages provide simple commands for rounding numbers or loading files, but if you want to do something more complicated, you'll have to write multiple lines of code just to accomplish the simplest tasks. The more lines of code you need to write, the longer it will take to create a program and the more potential for error.

That's why I've switched to Runtime Revolution (*www.runrev.com*), a curious programming language tool derived from Apple's defunct HyperCard. Runtime Revolution uses a high-level language dubbed revTalk (formerly known as Transcript). With revTalk, you can use less code to create more functionality in your program.

For example, how many lines of code would your favorite language need to modify the font size of text displayed on the screen? Here's how many lines of code are needed to accomplish this task in Runtime Revolution:

```
set the textsize of field "Label Field" to the thumbposition of scrollbar "Scrollbar"
```

This code tells the computer that whenever the user drags a slider left or right on a slider control (called a scroll bar in Runtime Revolution), change the size of the text in a box called "Label Field" to correspond to the value displayed by the slider.

Drag the slider to the left so it points to the number 14 and the text shrinks to a font size of 14. Drag the slider to the right to point to the number 42, and the text expands to a font size of 42.

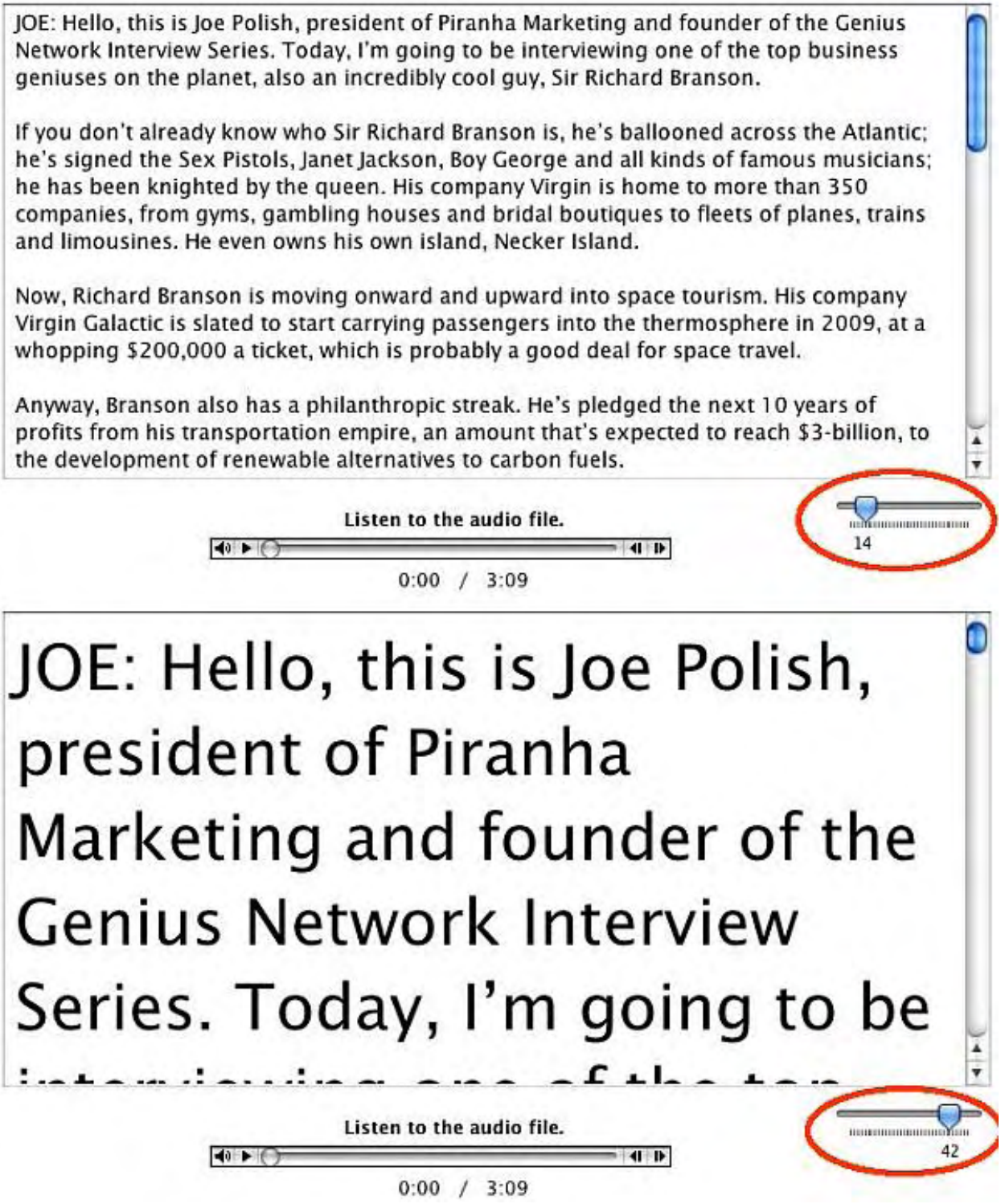

Figure 3. Dragging the slider lets you adjust the size of text with just one line of code.

Using one line of code to do something as seemingly complicated as changing the font size of text might seem incredible, but with Runtime Revolution, such high-level tasks are trivial.

Now, how much code would your favorite programming language need to search for text displayed on the screen? Here's how to do it in Runtime Revolution:

```
find text of field "Search Field" in field "Label Field"
```

Basically, this line of code tells the computer to start searching for any text that the user typed in a text box called "Search

Field" and look for this text in another box called "Label Field."

Can your favorite programming language give you fool-proof text-searching and font-resizing capabilities in just two lines of code? By providing commands that solve high-level problems, Runtime Revolution lets you focus on making your program work rather than forcing you to write, test, and debug multiple lines of code just to accomplish a single, much simpler task that you'll have to combine with other simple tasks to finally get the result you really want.

If you prefer doing things the hard way, then stick to what you know, take five times longer to accomplish any given task, and then go back and check (and check again) your code to fully debug it and make sure it works.

Or write a handful of code and create a fully functional program that works with minimal debugging. Given the choice between less wasted time and more functionality (Runtime Revolution), or more wasted time and less functionality (traditional programming languages like C++ or BASIC), why would you choose the latter?

[Wally wrote a three-part series on programming in Runtime Revolution for ComputorEdge *last July:*

• *"Part I: Programming in Runtime Revolution"*
• *Part II "Creating a User Interface in Runtime Revolution."*
• *Part III "Coding in Transcript"]*

* * *

Snow Leopard (Mac OS X 10.6) is a 64-bit operating system, but it boots into 32-bit mode for maximum compatibility with all the existing drivers needed to use printers, scanners and similar computer accessories. Of course, most users don't care about technical terms like 32-bit and 64-bit because they mean nothing to the average person. What the average person wants to know is, "Will my computer work?"

Technically, booting Snow Leopard into 64-bit mode should make it faster, but only if your software is designed to work with 64 bits. Since most people don't know whether their favorite program is 32 or 64-bits, Snow Leopard lets you run both 32-bit and 64-bit programs.

However, for those technical purists who want a pure 64-bit operating system, here's what you can do. The next time you start up your Mac, hold down the 6 and 4 keys. This will cause Snow Leopard to boot up in 64-bit mode.

Once you're running in 64-bit mode, check to make sure all your programs and accessories work. If so, then you can safely use Snow Leopard in 64-bit mode. If you run into problems in 64-bit mode, just reboot and go back to 32-bit mode.

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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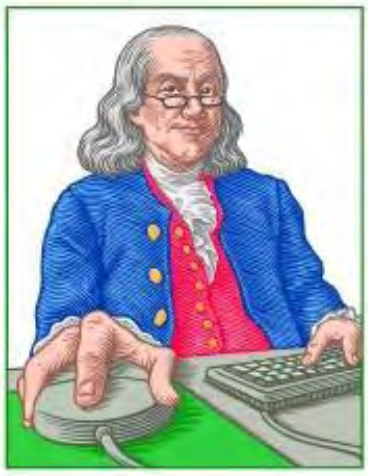

Linux Lessons: Installing Ubuntu

"Step 1: Getting Ready for Ubuntu" by ComputorEdge Staff

Ubuntu is touted as one of the easiest Linux distributions to use. Here is the first part in a series that will show you its step-by-step installation process. Also, more on removing the GRUB boot loader; and a reader sings the praises of Karmic-Koala Ubuntu 9.10.

This is the first part in a series by Pete Choppin on installing Ubuntu.

For those who may not be familiar with Linux or who have been thinking of trying it but are not sure where to begin, in the coming weeks I will be going through a step-by-step installation of one of the most popular Linux distributions—Ubuntu.

If you are interested in the Ubuntu distribution and how it all came about, you should probably check out the official Ubuntu Web site (*www.ubuntu.com/*).

Rather than focus on what Ubuntu is, I am going to go right into the installation and use of the software. I will say that Ubuntu is touted as one of the easiest—if not *the*—Linux distributions to use. It is recommended for those new to Linux, due to how little is required for configuration once it is installed.

Downloading Linux

The first step to setting up Ubuntu, or any Linux distribution, is downloading it from the Internet. Ubuntu is available for download from the Ubuntu Web site download page (*www.ubuntu.com/getubuntu/download*).

Where to Install Linux

This may seem like an odd question, but it is something you might need to consider. As I was preparing this article and working out how I would get it all set up, it occurred to me that I would need a few things. For one, I need a computer. I am currently fresh out of extra PCs just lying around. Another problem, which doesn't really relate—but my solution takes care of it as well as the PC problem—is that I have no way to take screenshots of the installation that I will be putting in the article.

So to solve both of these problems, I decided to install Ubuntu in a virtual environment. This is done by using a software program called VMware. What VMware does is take a part of your hard drive and create a virtual computer from it. In that virtual computer environment, you can set up an entire operating system that functions exactly like a physical computer. So if you are short on extra computers and have nowhere to install Ubuntu, a virtual environment is one option. VMware is a commercial product, but there are some free ones out there too—including VMware Player (*www.vmware.com/products/player/*) and Windows Virtual PC (*www.microsoft.com/windows/virtual-pc/*) from Microsoft for Business, Professional and Ultimate editions of Windows.

Creating the Ubuntu CD

Once you have downloaded the Ubuntu image and have a place to install it, you are ready to begin installing, right? Well, not quite. You will have to get that image of Ubuntu onto a CD, so you will need to use some kind of CD-burning software. Nero Burning ROM works well, but if you do not have access to this, try CDBurnerXP (*cdburnerxp.se/*). Just be sure to use the image-burning options on the software. You don't want to simply burn your image onto the CD, you want to take the ISO image and create a setup disc from the ISO. This is done by selecting the "Record a disk from a disk image" option or similar function in your software. The Ubuntu Web site (*www.ubuntu.com/getubuntu/download*) also provides help for this.

That's it for this week. If you want to go ahead with the install, you are welcome to, but I will be writing the Step 2 of the of the Ubuntu install series for next week's Linux Lessons. That article will get into the initial setup and how to partition your hard drive properly for Linux.

If you have any specific questions about the Linux installation, or how or where to install Linux, feel free to submit them any time.

See you next week...

Pete Choppin, My Bio (*webserver.computoredge.com/editorial/prg/authorbio.mvc?contribid=CHOP*)

* * *

How Do I Remove GRUB?

I was running a dual-boot system about a year ago, and I needed to uninstall Ubuntu Linux from my boot machine. I don't remember the reason. When I uninstalled Linux, the GRUB boot loader was left and I couldn't remove it.

I have been running Vista since then. I have a different machine now and want to do a dual boot again, but I don't want to have GRUB left if I do an uninstall again. The plan is to install Ubuntu 9.10. If it doesn't work and I uninstall Ubuntu, I don't want GRUB to be left. Is there any fairly simple way of doing this?

Bill
Crystal Lake, Illinois

In response to Bill in Crystal Springs, IL, I have had the same problem of eliminating the Grub loader when necessary. For Vista and Windows 7, there is a program called bootrec.exe on the distribution disc, which can be run from the repair command prompt. This is similar to the old "fdisk /mbr". The details are here (*support.microsoft.com/kb/927392*).

Stephen Erway

* * *

Karmic-Koala (Ubuntu 9.10) Works

There are hackers (geeks) and users, in between are tweakers, like me. A natural curiosity makes me try new things. I have loaded Ubuntu several times. The loading is not the problem; using it is a problem.

One time I had to buy a printer driver from a German company for $35. Other times similar hangups happened. I just loaded Karmic-Koala (*wiki.ubuntu.com/KarmicKoala*) (Ubuntu 9.10), and it is the first version which worked without a hitch. Wirelessly connected, the printer was recognized and set up, e-mail worked, etc. During printer setup it failed the first time, but the printout told me I had MAC filtering on, preventing connection. The MAC address was given on the printout and when added to the filter, connected immediately.

This version is to Linux what Windows 7 is to the Windows community. I haven't found anything that doesn't work. On a five-year-old laptop, the Win 7 screen is pinched down, but on 9.10 it is full size. Maybe Linux will now capture many more of the Windows crowd. You can't beat free.

Wayne Peck

* * *

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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Rob, The ComputorTutor Does VB.Net 2010

"Custom Controls" by Rob Spahitz

Last time, we continued exploring Visual Basic with databases. This week, we explore the idea of custom controls in VB.

Last time, we continued exploring Visual Basic with databases. Although there are many things we can do with databases, much of this was already covered as form design issues in my Access tutorials earlier this year. This week we explore the idea of custom controls in VB.

Note: These columns are written using VB.Net 2010. However, most of the features will work just fine with VB.Net 2008 or even earlier versions. To see how to install VB.Net 2010, check my July 31, 2009 column, and to retrieve project files, check my server at *www.dogopoly.com/ce*.

My ToolBox

As you work with object-oriented programming languages, you'll quickly find that GUI (Graphical User Interface) design makes form creation a breeze. You start with a form, drop a few labels, text boxes and buttons on it, do some minor programming, and you have a very functional prototype ready for presentation to a bunch of Capital Investment specialists. Of course, prototypes are merely a visual presentation of what the finished product will look like. Somewhere you need to add additional functionality (like serious calculations, database connectivity, and fancy animations). Along the way, you may realize that the simplicity of adding ToolBox items to a form is a pleasure but also a limitation. To really polish a finished product, you will probably need to create your own tools, either as a collection of existing tools or as entirely custom tools.

Let's start with a very simple idea. Most of you are probably familiar with the ComboBox (often called the DropDown ListBox.) It's called a ComboBox because it is a combination of other controls. Specifically, it combines a TextBox, a ListBox and a Button control into a single control that gives you the functionality of the three pieces inside one unit. If this control did not exist and you wanted to ask a user to specify some text, you would probably present a TextBox. However, if the text could only match a predefined set of choices (like a list of States), you'd have to do a bit of validation (probably against a database table) either during data entry or after the data entry is completed.

For example, to validate during data entry, you could check every letter upon entry and make sure that there is a state that begins with those letters. If you do this, there are several ways you can handle incorrect information. You could ignore invalid keystrokes; you could immediately notify the user with a MessageBox, label, sound or other warning; or you could mark the error so you can tell the user later.

Case in point: Suppose you're trying to validate data entry in a TextBox against one of the 50 United States. Upon entry of "c" you would check the database and see that there are three valid choices (California, Colorado and Connecticut), so you simply move on. If the text is followed by "o" you would find that there are two valid choices, and you'd move on. If this were followed by "m" you would realize that there are no valid choices that start with "com." If you immediately notify the user in a way that forces a response (such as a MessageBox saying "That is not a valid State name"), your user could immediately fix the problem. However, many people make minor mistakes while typing and often immediately notice the mistakes (like pressing an "m" key instead of the adjacent "n" key). By notifying the user about a mistake that was already spotted, your user will become frustrated. Even if it were not immediately spotted, your message would interrupt the user's flow of data entry, causing an annoyance.

Further, if you gave a non-interruptive message (like a beep), the user may just start to get annoyed about these messages. There's a lot of psychology behind this. It's sort of like telling someone "you're wrong," "you're wrong," "you're wrong." Eventually, many people get a complex from this. A better approach is to minimize the number of such messages or, ideally, create a situation where the user cannot make a mistake! If you do validation only once per field (or even only once per screen), users become much more tolerant of their own mistakes and are less likely to blame the developer for making a bad

program.

Anyway, an alternate solution to the above problem is to use a different control. Rather than a TextBox that requires entry, you could offer a ListBox that has all the choices already available. Not only will the user never enter an invalid choice (although a "wrong" choice could still be picked), but the user will also see all of the choices up front, reducing the chance of misspelling a choice by mistake or lack of knowledge.

So the ListBox is a much better alternative than a TextBox. Why not use it all the time? Well, two reasons. One is that it takes a lot of space to make it work well. Typically you want to make it large enough to show at least three choices. In the case of 50 states, probably at least five and maybe 10 choices would be better. That means you're taking up the equivalent of about five or 10 TextBoxes worth of space. Sometimes that's not a problem, but typically, you have lots of things going on in a screen and that space is precious.

The other reason is that sometimes you list only a few key choices in the ListBox and offer the user a chance to add additional choices. This could be the case if you offered a list of countries. You'd probably show the 20 or 30 countries that you think will be used most often, but allow for others to be typed; further, with the world changing as it does, there may be new choices that arrive after you deliver your database, and you'd like your users to be able to enter additional choices without your need to send a new database of options every time there's a world change.

What's the solution? Well, a combination of a TextBox and a ListBox would be a better answer than either one separately. It gives the flexibility and compactness of a TextBox while still offering the simplicity and completeness of a ListBox. The next question would be how to design such a combination control to make it work. Obviously, the makers of the ComboBox chose to give you something that looks like a TextBox with a button on the right edge that allows you to show a ListBox until you select a choice, then transfer the choice into the TextBox. It's a rather elegant solution that most of us now take for granted as a useful way to enter data. This is called a conglomerate control, since it uses other controls to get the job done. Without this, you'll have to do all the work yourself.

Labeled TextBox

So let's go create our own. First, let's work out some specifications. One common problem in many GUI development projects is that you place controls on a form, and then move them around until you get them just right. This is not a problem, except that often collections of controls are designed to work together. Specifically, most TextBoxes have corresponding labels to indicate what the TextBox data should look like. If you saw a screen of five TextBoxes, you'd have no idea what to enter. If you saw adjacent labels like Name, Street, City, State and Zip Code, you'd have a good idea what to enter into the boxes.

As a developer, you'd want to organize your TextBoxes for user-friendliness. For example, maybe place the Name box, then the Street box below it, followed by the other three boxes in order. If you later realized that the spacing between the boxes wasn't quite right, you not only have to move the boxes, but also the corresponding labels. If you like things to look professional, you need to be careful that the alignment of the labels to the boxes is identical on each collection. VB offers some features to do alignment, but that still becomes a tedious task when you have to do it for each label-box combination. Also, if you're careful, you can select multiple controls and move them as a single unit. However, if your mouse slips or you accidentally grab an extra control, you end up having to either re-do or fix things. As developers, we've often accepted this as the "cost of doing business." However, there is a better way. Custom controls!

Let's make a control that combines a Label and TextBox. Open Visual Basic and make a new project called MyControl. What we will do is start with a standard Windows Forms Application and build up on it. That will give us a form where we can place and test the Custom Control. So far this is nothing special.

Next, we need to add a User Control to the project. Go to menu Project/Add User Control, and you should get a dialog box we've seen before. However, instead of something like a new Windows Form, we get the User Control pre-selected, as seen in Figure 1.

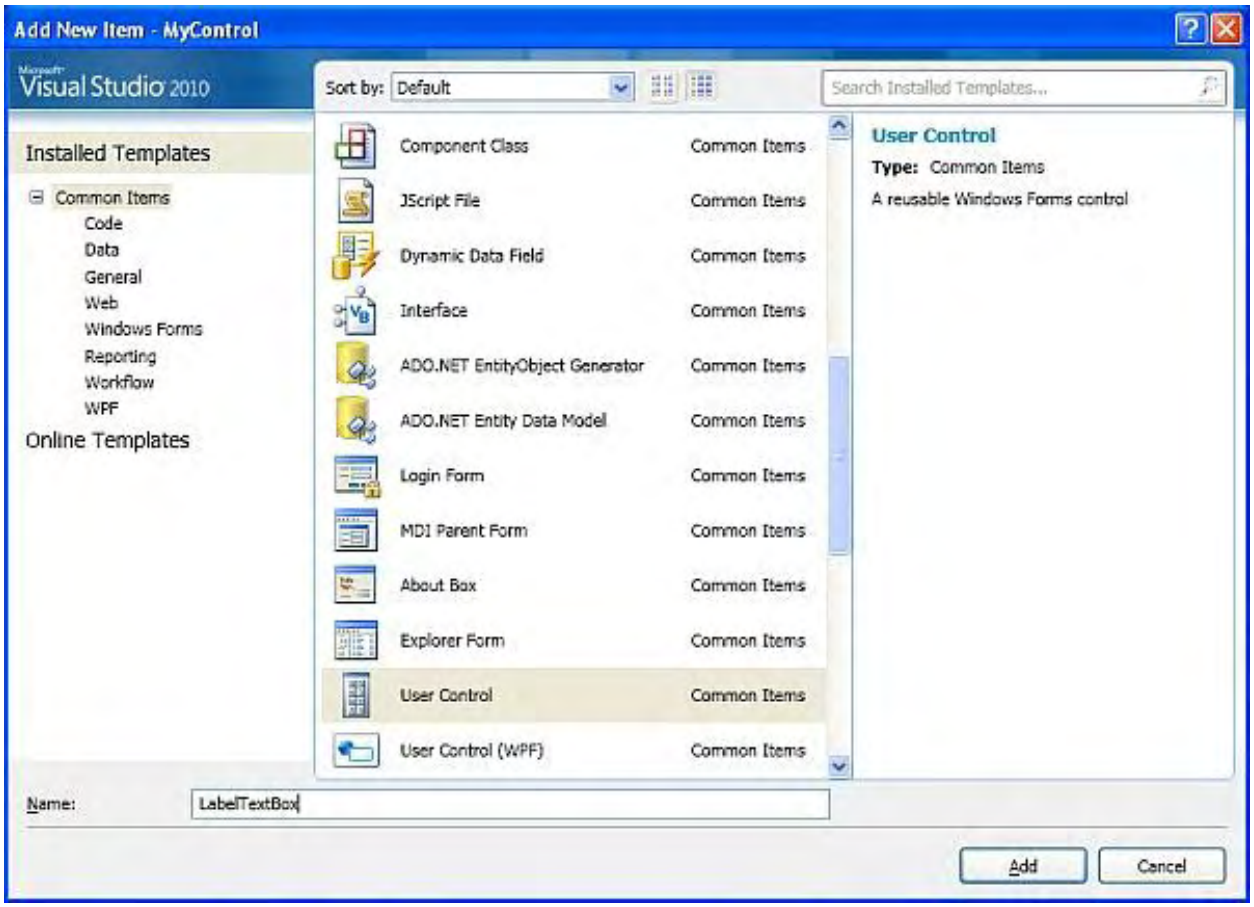

Figure 1. Adding a User Control to a Project.

Change the default name from UserControl1.vb to LabelTextBox. Note that the extension (.vb) is optional and will automatically get added if omitted.

When you click on the Add button, a new item is added to your project, and you see something that looks like a form without borders, as seen in Figure 2.

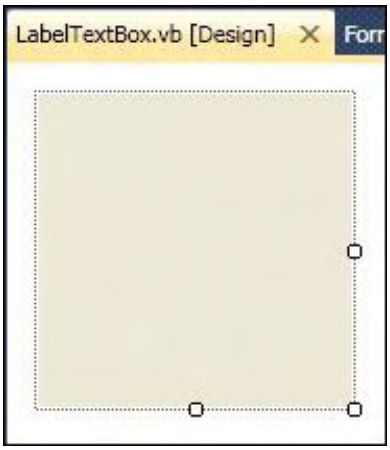

Figure 2. Blank User Control.

As it turns out, a VB User Control is almost identical to a form in how you set it up. However, how you use it can be quite different. So at this point, we want to add a Label and a TextBox. But before you add them, first you must understand the difference between a User Control and a Form. Although both are containers, a form is usually used to present a nice collection of controls to a user, organized in a way that feels comfortable. Conversely, a User Control is something that should look and act like a ToolBox item.

When you look at items in your toolbox, you notice that they are typically very small when you add them to a form. For

example, a default-sized TextBox takes up only 100 pixels across and 20 pixels down. However, the default User Control is 150 by 150. We'll fix that. If we don't, then when we add the User Control to a form, it will be the default size unless the user of the control (initially us) makes it smaller.

Now, when you add other controls to a User Control, they will appear in the same relative location when you put this new control onto a form. That means that if we add a TextBox to the middle of this control, it will be surrounded by space when added to a form. If you look at most Controls in your Toolbox, very few have any extra spacing around them. Further, if they resize, the entire area of the control gets resized. As an example, if you make a ComboBox wider or narrower, the button on the right always stays on the right no matter how wide you make it. We'll need to do the same in our control.

To avoid the "padding" in our control, let's put the pieces as compactly as possible into the space provided. To start, add a Label control to the top-left corner of our User Control and a TextBox to the upper-right corner of the User Control, then drag the left edge of the TextBox so that it starts at the right edge (width) of the label. You should see something like Figure 3. (I selected both controls so you can see about where they are.) In my case, the label was 39 pixels wide and the TextBox started at position 49, so I had to widen it 10 pixels to the left. Either way, make sure that the right edge of the TextBox is on the right edge of the User Control.

Figure 3. Label and TextBox in a User Control.

The next thing to do is to change the height of the User Control so that it matches the height of the tallest item (or the item that projects lowest). In this case, the TextBox is 20 pixels high, so I adjusted the size of the User Control to match, as seen in Figure 4.

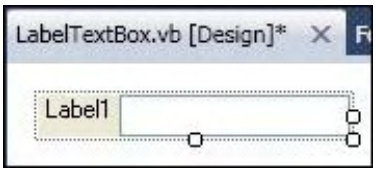

Figure 4. Resized User Control.

Now, because the user may decide to resize our control, we need to also resize ours at the same time. Select the TextBox and change the Anchor property so that it is anchored on all four sides (Top, Bottom, Left, Right). This will allow it to stretch if the User Control is stretched. Likewise, Anchor the label, but don't anchor the right side, since we want it to remain next to the left edge of the TextBox.

Almost done, but first a note. Since the TextBox is now designed to allow you to change only the Height if the Multiline property is True, we should either enable this or lock the User Control so the user cannot change the Height (with the MaximumSize Height property). However, this can automatically change when the user changes the Font or Font Size, so that requires extra effort. For now, I'll ignore this issue and leave it up to the reader to experiment with it.

New ToolBox Item

Finally, our User Control is ready. Oh wait! Don't we need to add code? Well, yes and no. It will actually work as is, but there will be some deficiencies, as we'll see. Adding some code will make it a much more "developer-friendly" control.

One more thing. While we're "developing" a User Control, it is not ready for use on a form and you won't see it in the ToolBox (or at least not the version being worked on). To make it available, we simply switch to the Form and perform a Build from the menus. After doing so, you see a new group in your Toolbox labeled MyControl Components (named after the project that contains the User Control). Inside, you see the control you just made, as seen in Figure 5.

Figure 5. New User Control in Toolbox.

Now, drag the User Control (well, really the LabelTextBox we just made) onto the form just like you would any other control. If you widen it or narrow it, the TextBox portion of the control should resize with it. And if you want to move the Label and the TextBox together, it merely requires one click-and-drag motion. Furthermore, at this point, the two pieces are integrated and you cannot use them separately (at least not without going back to the User Control's design area). A sample of several on the form is shown in Figure 6, including one that has the Height changed where the TextBox did not resize because of the issue mentioned above.

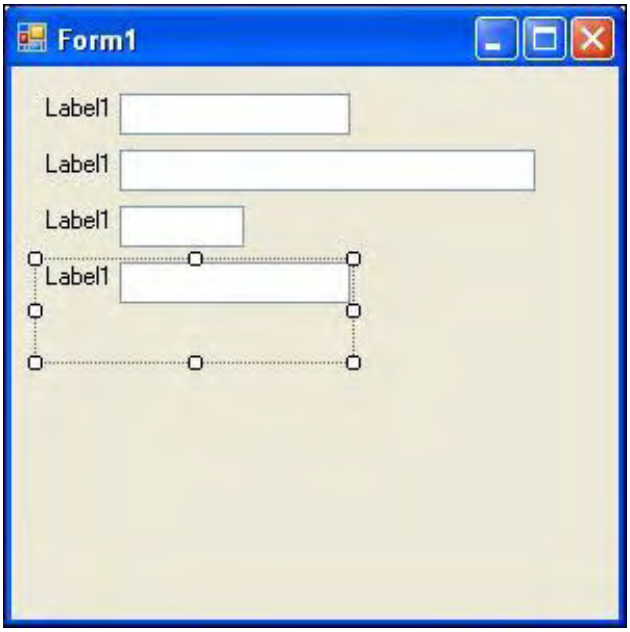

Figure 6. Form with several LabelTextBoxes.

Try running the form and notice that you can't tell that there is a User Control anywhere on the form, and the TextBoxes are fully functional.

Next week, we'll make a User Control with custom graphics and learn how to let the properties of this control interact with the

form.

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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ComputorQuick Reviews

News and Reviews from Readers and Staff

ComputorQuick Reviews

"Computer Product Opinions from ComputorEdge Readers and Staff" by ComputorEdge Staff

If a motherboard with bad caps is worth saving, check out BadCaps.net, as this reader's experience was positive. A reader offers his method of safeguarding data—online; another reader shares an experience with a program for making backups to an external hard drive.

Recapping Motherboards

Your readers may benefit from a recent experience of mine. During the hottest weather we experienced, my computer froze several times while performing lengthy operations. I theorized that the culprit might be the power supply, but when I opened the cabinet, I discovered one of the electrolytic capacitors on the motherboard was swollen and leaking.

Since this was a far more likely culprit than the power supply and since I wanted to try to save this motherboard, I conducted an exhaustive search on the Internet for someone who specializes in replacing the capacitors on motherboards and discovered BadCaps.net (*www.badcaps.net/*). Since his fee was reasonable, I decided to use his service. After pulling the motherboard to send it to him, I discovered two more swollen caps on it, one of which was leaking.

While I waited for my motherboard to return, I cleaned out the heat sink, which had become clogged with lint accumulated over years of operation. This accumulation of lint blocking airflow through the heat sink could have contributed to or been the cause of the freezes I was experiencing. Regardless, the caps needed to be replaced as sooner or later these failing caps would have caused the motherboard to fail.

After I received back my motherboard, I inspected some of BadCaps.net's solder joints. They were excellent, indistinguishable from the originals, which were presumably wave soldered. I also received from him a test report printout indicating that the motherboard was functioning normally.

Since reassembling my computer, I have installed a utility which monitors several functions, including CPU temperature and I would advise everyone else to do the same. I would also recommend routinely checking all the electrolytic caps every time the cabinet of a computer is opened. If a motherboard with bad caps is worth saving, check out BadCaps.net.

Sincerely,

Mike Hoff
San Diego, CA

Backing Up Data

I use several methods for safeguarding data.

Believe it or not, my primary method is online. I use my own online method instead of the online storage services, though. I have several Web e-mail accounts that offer online storage as part of their service. So rather than pay an online storage service a monthly fee, I simply store my own files I want to back up on any one of these accounts.

• My personal ISP offers 10 gigabytes of storage. I do pay for the Internet service, but along with the Internet I have access to my e-mail through the Web browser. I can store up to 10 Gigabytes.

• Google Gmail offers over seven gigabytes of free storage.

• Windows Live Hotmail now uses something they call "ever-growing storage," which simply means they will continually allow you to store files as long as it does not get out of hand. Of course, they decide how much and how fast is acceptable storage limits.

• Yahoo! Mail has unlimited storage and includes an additional file-storage feature where you can upload up to 1GB of storage.

• AOL Mail also provides unlimited storage.

I also use an external USB hard drive. I will typically store large files such as videos or pictures on an external drive because these are difficult to upload to an online storage area.

Another backup I use is a file server. It is a computer I just have running in another room that our family computers can connect to. Our application software is on this computer, and I can install any of these applications from this computer at any time. We can also use this to share files from one computer to another, but not much anymore because e-mail and file transfer over messengers can do this so much easier and faster.

Pete Choppin, My Bio (*webserver.computoredge.com/editorial/prg/authorbio.mvc?contribid=CHOP*)

More Backup and Some Printing

I'm certainly not a geek, so I need all the assistance I can get from wherever I can get it. I found a great program for making backups to my external hard drive at Salty Brine Software (*www.saltybrine.com/*). Even as technologically challenged as I am, I was able to figure out how to set it up to back up all my documents, favorites, and desktop on a regular basis, and when I go to look at the backup files, they look just like what I see on my hard drive. Hooray for Folder Clone Pro!

Another company I'd like to recommend for print jobs is The Printing Training (*www.theprintingtrain.com//*). If you put out a colorful Christmas letter, you'll will be delightfully surprised by their prices, not to mention their professional and quick service!

Jan Mayer
Murrieta, CA

* * *

Next Week: Holiday Shopping.

Next week, ComputorEdge *will be looking at holiday shopping. What's at the top of your list this year? Is there something new that has caught your attention? Your comments will appear right here in ComputorQuick Reviews. Send your thoughts to ComputorQuick Things I Want This Year (*ceeditor@computoredge.com*).*

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.

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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Spam of the Week: Internal Revenue Service (IRS)

"The latest in annoying and dangerous e-mail currently making the rounds." by ComputorEdge Staff

An e-mail purportedly from the IRS with "Notice of Underreported Income" in the subject line can strike terror in one's heart. Fortunately, this e-mail is only a phishing scam.

As far as I know, the IRS doesn't send e-mail notices. I don't think that they have e-mail addresses for the vast majority of people. However, an e-mail purportedly from "Internal Revenue Service <reports@mail.irs.gov>" with "Notice of Underreported Income" in the subject line can still strike terror into one's heart. Fortunately, this e-mail is only a phishing scam, albeit a dangerous one.

We saw this spam attack earlier in the year, and it's now starting to rear its ugly head again. The spam may look similar to either Figure 1, with a bogus link, or Figure 2, with a dangerous attachment.

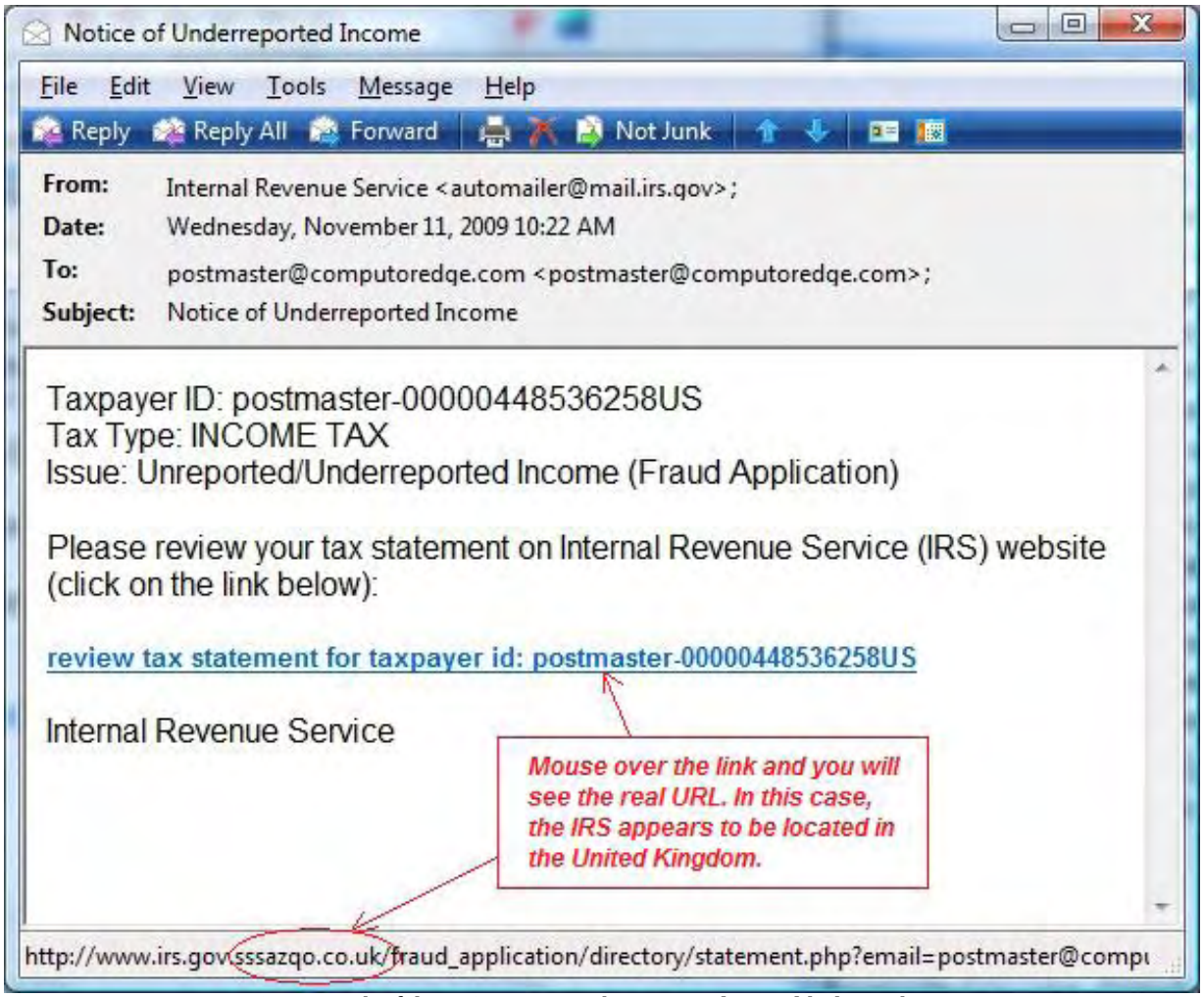

Figure 1. The fake IRS spam may have a misdirected link, as shown.

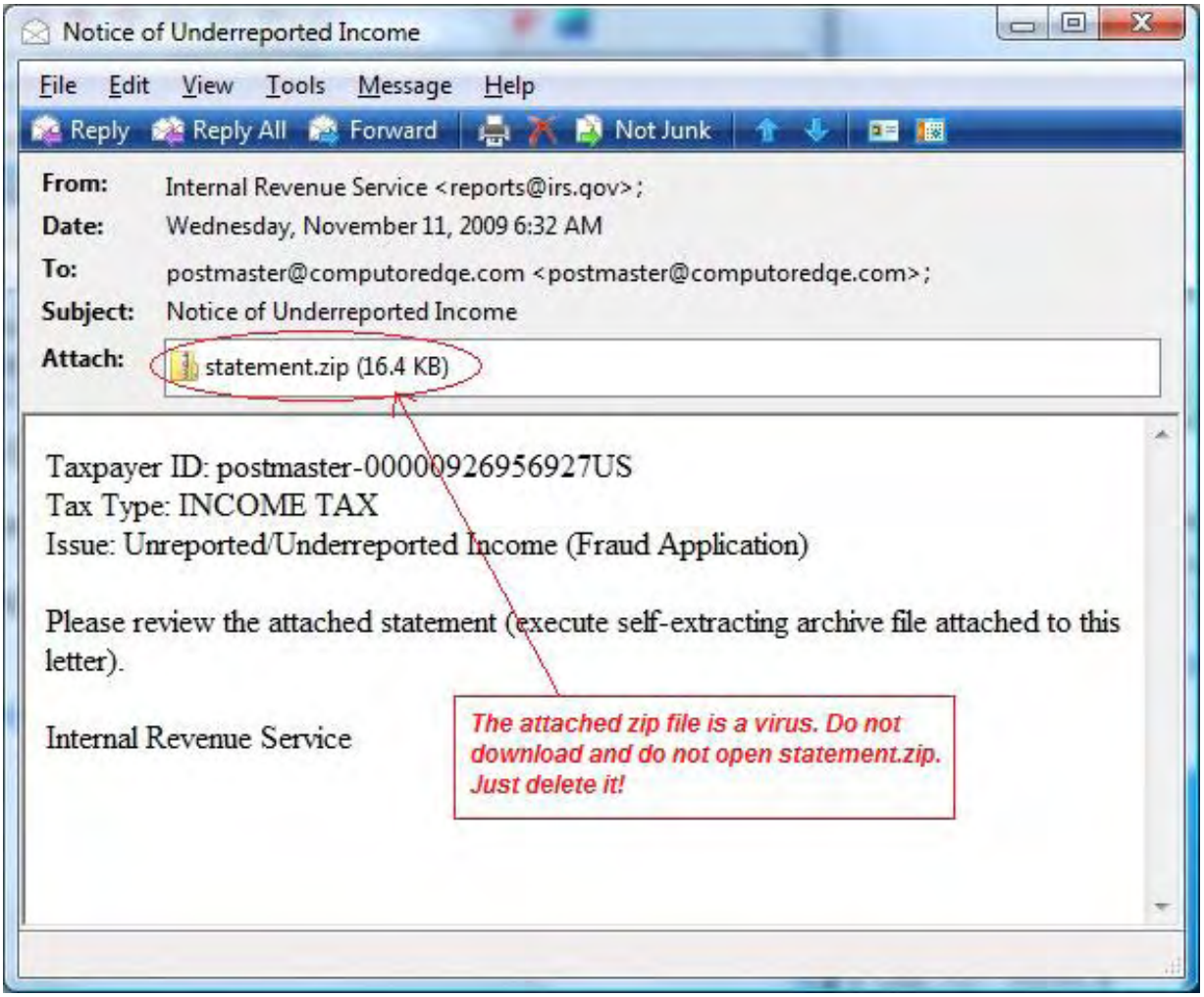

Figure 1. The fake IRS spam may have a zipped attachment, as shown. Do not download the file!

Apparently the link or zip file will give you the Zbot Trojan (a.k.a. Zeus Bot Trojan), which goes after your personal information. Do not click the link or download the zip file.

If you don't get any of these spams, it is either a testament to your spam-blocking antivirus software or your e-mail account is too new to be on a spammer's list. Check your Junk Mail to see if they're after you.

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 Review of Windows Data Backup Tools

"Choose the approach that will work best for your situation." by Jack Dunning

In Windows, there are a number of ways to back up your data. Here is a summary of different backup methods and links to more detailed explanations.

In Windows, there are a number of ways to back up your data. The simplest method is to select the files and folders in Windows Explorer with your mouse and drag them over to the new external drive, optical disc, or flash drive. However, if you need to do this regularly, or with numerous files, it can become tedious.

What follows is a summary of different backup methods and links to more detailed explanations. Many of the explanations used Windows Vista in the example, but they also apply to Windows 7—although some of the features may look a little different in Win 7. These techniques apply to Windows XP as noted.

Windows Backup and Restore

The best Windows backup tool, which works in all versions of Windows (XP, Vista, Win 7), is Backup and Restore. This program can be scheduled to do regular incremental (only new and changed files are copied) backup to an external hard drive. In the Business or Professional and above versions of Windows, it will also back up to a network drive. With the Backup and Restore program, you can designate a particular type of file to be copied or have all files on the drive copied. For more details, see Windows Tips and Tricks dated November 11, 2008.

Windows Easy Transfer

Though not a preferred backup method, Windows Easy Transfer is another feature of Windows that may be used to help keep your data safe. (In Windows XP, it's called Files and Settings Transfer Wizard.) The purpose of Windows Easy Transfer is to move all of your data and settings from an old computer to a new one. However, since you can make a complete copy of everything, you can use it to make a backup copy. For more information, see Windows Tips and Tricks dated December 12, 2008.

For many of the Windows backup features to work properly, the hard drive will need to be in the NTFS format. Most new external drives and flash drives come in the FAT32 format. You can reformat the drive, but to convert rather than format a FAT32 file-system drive to the NTFS format without losing programs and files, see Windows Tips and Tricks dated December 5, 2008.

Windows Sync Center

If you have a Windows Vista Business (or above) computer or a Windows 7 Professional (or above) system, then you can use that computer to back up other machines on the network (or over the Internet) with Windows Sync Center. The Sync Center will make real-time backups of synced files and folders while the computers are connected. Sync Center allows you work on either computer. Plus, it lets you schedule automatic backups. When offline, the copies are available on the Sync Center computer—later re-syncing when the connection is reestablished. For more details on how to set up the Sync Center, see Windows Tips and Tricks dated June 20, 2008.

Windows Briefcase

While Windows Sync Center will do remote backup only in certain versions of Windows, Briefcase is a sync program found in all versions of Windows since Win 95. Designed for using the same files on two different computers (maybe via a flash drive), Briefcase can be synced with the original files upon command. It could be a convenient method of backup, especially if you need to carry the files with you to another computer. For more on Briefcase, see Windows Tips and Tricks dated April 17, 2009.

Brute-Force Scheduled Backup

For an approach to backup that is a little more flexible (on any Windows computer), you can write your own scripts and use Windows Task Scheduler for automatic function. The Edgeword dated September 19, 2008 explores creating simple backups using scripts and the Windows Scheduler utility.

In my daily work on my primary computer, a laptop, I use Windows Backup and Restore to make incremental backups of all my more important work, photos and files to an external USB hard drive. A Windows Vista Professional desktop computer uses Sync Center to continuously back up all ComputorEdge *work on the laptop. This syncing system did save me when I had a hard drive fail on an older XP laptop in 2008. (For more on the experience, see Edgeword dated September 5, 2008.) My preference is definitely for multiple backup systems, with the primary being an external USB drive using Windows Backup and Restore.*

Each Windows tool mentioned here has a specific purpose. However, individually they can be used for backup in different circumstances. Some are for automatic regular backup, while others are on-command features that may copy a few or all of your files for archiving. Choose the approach that will work best for your situation.

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

"Warning for Simple Table Creation," "Free MP3 Resources," "Digital Cameras," "Destroying Hard Drive Data," "Windows Tips and Tricks: A Windows 7 Review"

Warning for Simple Table Creation

[Regarding the October 23 Rob, The ComputorTutor Does VB.Net 2010 column:]

As a long-time Oracle DBA, let me just pass along a warning about using the techniques shown in simple examples in "real" code. There have been numerous discussions in the database design world about using ID (autonumber in Access) fields in tables.

Since an autonumber guarantees a unique primary key (PK) each time, there is a possibility of creating duplicate Person records. If my code doesn't check for duplicate entries, I could add duplicate records for Jane Doe a zillion times—and all zillion records will appear in the database. Sometimes, it is legitimate to have more than one person named Jane Doe. Other times it is a mistake created by an end user who clicked the Add button too many times.

With just the first/last name as the only columns in the table, it would be virtually impossible for anyone to determine whether the database contains duplicate records or multiple people with the same name. In the real world, developers should always provide enough fields in a table for someone to detect the duplicates or same names.

I realize your example is just to teach a principle, but developers need to be aware of the repercussions of extrapolating the simple example into a full-fledged database app. As a DBA, I cannot tell you how many times I have been asked to delete duplicate records from a database because the ID field allowed someone to add those duplicates. It's up to the developer to ask the user when they click Add and some of the fields (other than the ID) match other records.

Just mentioning this as a caution you might include in your discussion.

-Roger Crowley, Poway, CA

Free MP3 Resources

[Regarding Dawn Clement's October 2 article, "Finding Free (Legal) MP3 Downloads":]

Nice article. It is worth pointing out that there are hundreds of Net labels that are out there, putting out all sorts of music that is free for download. A Google search will certainly set any reader off in the right direction!

Best,

-Dean, Leiden, Netherlands
*Rack & Ruin records (*www.rackandruinrecords.com*)*

Digital Cameras

[Regarding the October 23 Editors Letters: Tips and Thoughts from Readers column:]

To Kathee from Dallas:

Our children bought a Nikon D70s (used) for my last birthday. [It has] a 55mm to 200 mm zoom. I bought an 18mm to 105mm that I use 99 percent of the time. It's 6 MP and has loads of bells and whistles. Will take up to a 4 meg CF mem card. You could spend a lifetime learning it all.

-William B. Tiep, Toledo

As a veteran Canon and Nikon film camera user, I would advise Kathee to be sure to look long and hard at the gamut of offerings from electronic companies.

-Cicero Walker, Colorado Springs, CO

Destroying Hard Drive Data

[Regarding the October 23 ComputorQuick Tips column:]

The physical *media must be destroyed.* Period! *Destroying just the PCB or letting in contaminated air still allows the data to be recovered. I used to make usable drives by replacing the PCBs in the old 30MB drives.*

The federal government TLA agencies used to have a special DD-19 and DD-29 case designed with a 45 cal pistol welded to the top pointing at the platters inside. That *was how the security was maintained at our federal agencies that used Cray supercomputers.*

(No, I won't divulge who were our purchasers.)

-Art, Evergreen

With regards to his [Pete's] *Method 1—Breaking the green circuit board does nothing to the data stored on the disks themselves, and replacing that broken board with a good one would most likely allow sectors to be read once again. This is not to suggest that his method won't work—pounding on the drive anywhere with a hammer will pretty much screw up the ability of the disks to spin under the heads. He's just completely wrong about the cause and effect.*

Better advice: If you have a hammer, pound on the aluminum cover side and crush the disks directly, making it impossible to retrieve any data bits.

With regards to his Method 2—There will never be a "whoosh" as the "vacuum seal" is broken. Disk drives don't operate in a vacuum. In fact, a vacuum would make them fail because they depend on a cushion of air to prevent the read head from making actual physical contact with the disk. And platters are never made of glass, but instead are aluminum with thin films of magnetic material sputtered on them.

-Jim Luschen

Jim,

You are correct when you say that destroying the circuit board of the drive does nothing to the stored data. It was not my intent to infer that Method 1 was designed to destroy the data. In fact I did point out that data could be retrieved, but only at the high cost of using professional data-recovery services. I would use Method 1 when there is no sensitive data on the drive, but you really just don't want the drive to be used again.

You are also right that there is not a vacuum seal on the hard drive. I have done some further research on this and have found, rather, that hard drives are kept at an equilibrium air pressure. The sound you hear when you open the drive is possibly air passing through that small hole on the back of the drive. Thank you for pointing this out. I should have looked further into hard drive construction before I said that.

Here is a nice article (*computer.howstuffworks.com/hard-disk.htm*) that explains the inner workings of hard drives and also provides very detailed screenshots. They do not show how to dismantle a hard drive, but using their screenshots and the instructions in these ComputorQuick Tips, the average user can safely and securely dispose of their old hard drives with little cost, which is the point of my tips this week.

You are correct that traditionally, hard drives have been manufactured with aluminum made platters; however, many manufacturers have gone to newer materials using glass and glass composites like ceramics. These are then coated with a thin magnetic film. This newer material is supposed to allow for the more advanced designs and higher demands of the faster hard drives. The traditional aluminum material was not designed for today's faster drives and are too uneven. They don't allow for

the uniformity that the newer materials can provide. I did look this up here (*www.hard-drive-help.com/technology.html*) and here (*www.pcguide.com/ref/hdd/op/mediaMaterials-c.html*).

I recommend extreme caution when removing the platters. Always wear eye protection, as the platters can shatter and the material can fly into your eyes.

-Pete Choppin

Windows Tips and Tricks: A Windows 7 Review

Opening the shipping carton.

I have just purchased my first Win 7 computer and am getting ready to set it up. It is an economy model that will replace the older of my two XP/Ubuntu partitioned computers in my office. I may add Ubuntu to the new computer as a virtual machine application. Your articles in this issue are very encouraging and informative. I successfully avoided Vista and have never even tried it out, and am now a bit apprehensive about the whole thing.

Thanks for the help!

-Cicero Walker, Colorado Springs, CO

Mr. Dunning,

Read your article on Win 7 in the 10/23 issue and was startled to read that 7 had no e-mail client. I currently employ several XP Pro computers in a network, all of which depend on Outlook Express. There are hundreds of addresses involved, with collateral info on most, plus numerous e-mail folders with important msgs. All of this is backed up, but it would be a monumental task to transfer it all to another e-mail client. It's hard to believe MS has no path for OE. If this is true, it looks like any new hardware we buy will require XP. I think MS grossly underestimates the size of the installed XP base. Wonder how IT shops based on XP in the big corporations will be handling this. My employer won't even let us go to IE8 because it doesn't support current operations. Any comment?

Best,

-Joe Silverman

There is an e-mail client, Windows Live Mail, available from Microsoft as a free download that will import all of the Outlook Express messages and contacts (contacts will need to be exported into another file first). I address the topic of e-mail clients and Win 7 in next Friday's column.

Regardless of which way you go, you will still need to move all of your messages and contacts. Windows Live Mail does have an Internet capability that could make it easier to share contact information.

-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.*

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