ComputorEdge™ Online — 12/25/09

This issue:
A Look at the Next Year in Computing

A few predictions about what may (or may not) happen with computers and the Internet in the next year.

Table of Contents:

Wally Wang's Apple Farm: The Future by Wally Wang

The Year of the Tablet

Whether you buy one from Apple or some other manufacturer, tablets are going to be here next year whether you're ready or not, and they'll change the e-book reader market. Also, look for a new version of iWork by the middle of next year; the iPhone's exclusivity deal with AT&T ends in 2010; musings on what new category Apple could pursue next; tips on anonymous Web surfing; and a tip on using TextEdit, which can save files in various Microsoft Word formats.

Linux Lessons: Fedora, Part 2 by Pete Choppin

The Fedora Installation

Last week, we introduced you to Fedora. This week we will begin the installation of Fedora and demonstrate the partition process.

Spam of the Week by ComputorEdge Staff

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

This week, the spammers are phishing for Visa card holders. That can't be more than a billion people!

DEPARTMENTS:

EdgeWord: A Note from the Publisher by Jack Dunning

ComputorEdge wishes you a happy holiday and a prosperous new decade.

Technology is the essence of hope. No matter how bad the economy, how screwed up the politicians, how depressing the state of society, there is a new technological future just around the corner.

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

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

"Cheap-But-Good MP3 Player?," "Where's the Memory?," "Welcome XP Feature," "Identity Theft Protection"

Return to Table of Contents

Digital Dave

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

A reader is facing an endlessly rebooting computer; A reader wonders why broadband speed slows when more people are on the Web; A reader is not nuts about Live Mail and wants a more Outlook-like alternative for Win 7.

Dear Digital Dave,

I have an old-school AGP setup (I'm an older-school type of guy). Anyway, my computer started to reboot itself randomly. Usually it would reboot, be OK for a few hours and then it would just started rebooting more frequently.

Now, every time I turn it on, it never gets past the load screen without rebooting. It seems to be an endless cycle of reboots. I'm frustrated now, at my wits' end here. Can you point me in the right direction on how to fix this?

Anthony
San Diego, CA

Dear Anthony,

Based upon the increasing frequency of the problem, most likely your system (or a component) is starting to fail. At some point the computer may fail with parts needing replacement. But before you assume the worse, your system could be overheating, caused by a bad processor fan or even buildup of dust in your computer. You will need to open the computer to see that the fan is working and everything is clean. (If you are not comfortable with opening your machine, then you should take it to a qualified technician.) If you find a fan problem or buildup of dust, replace the fan and/or blow out the dust. (Be sure to always unplug the power from the computer before messing around inside.)

Another common source of this type of problem is a failing power supply. Sometimes all it takes is a new power supply to resolve this issue.

If none of these simple things work, take it in to get service or look into a new computer—whichever makes the most sense for your situation.

Digital Dave

Dear Digital Dave,

I have a Dell/Verizon Express/broadband card, which is convenient when away from home, but because I rely completely on this connection, it often lacks connection speed and dependability. For instance, when connected during a "high usage" time, streaming video is often interrupted, freezes or stops completely. But when watching streaming video later at night when most people are not on the Web, things run much more smoothly.

Would you please explain why the quality of the connection degrades significantly, apparently, when more people are using it? Is this happening on the "wire end" of the connection or the "through-the-air" connection, etc.? (Details would be great.)

Thanks for clearing this up.

Jerry Hughes
San Diego

Dear Jerry,

One of the best ways to view bandwidth is as if it were a water main. The bigger the pipe, the more water that can flow through it. When you sign up for Internet bandwidth with your service provider, they are promising you a pipe that will carry a certain volume (bandwidth). However, that pipe is being shared by many other people.

Normally, when a limited number of people are using the pipe, there is no noticeable slowdown. During periods of peak usage, the amount of water (data) that can flow through is limited by the demands. It can't allow more than the size of the pipe can handle. Your service could slow to a drip.

It doesn't matter where the bottleneck occurs between you and the target Internet site. For example, if a Web server has access to a very low bandwidth, then a low number of users can bring the server output down to a trickle. The fact that you have high-speed Internet available on your end will make no difference to the target Web server. On the other hand, the fastest servers with the most bandwidth won't help if you're signed up for a low bandwidth service. Whether it is a "wire end" or "through the air" connection matters only with respect to how much bandwidth (pipe size) is available with each. You are limited to the speed of the slowest (smallest pipe) connection.

Since you are using a wireless cellular broadband connection, you may be more susceptible to these choking problems when compared to cable modem connections only because cellular does not offer the same level of bandwidth as cable. However, if the cellular companies ever get their 4G networks up and running, the equation will change.

Some Internet service providers have been accused of bandwidth throttling. If they detect a user is "over using" (in their opinion) bandwidth, they reduce the size of the pipe for that user. This is a highly controversial technique and a subject of the "Net Neutrality" debate.

Dear Dave,

Just finished updating my computer with a big new hard drive and Windows 7. Horrors—no e-mail program! Found a chapter advising "Windows Live Essentials" to get 7's "Live Mail" that saves on my computer, not from the "cloud." But I hate *it.*

Yes I "grew up" to be an old codger long before XP and Vista's well-loved Outlook Express that showed all e-mails on one tight list. Live spreads them way, way, apart vertically, very light type, hard to see. Would appreciate suggestions; there are so many mail programs and each wants complicated installation on a different browser.

Burt G.
Aurora, CO

Dear Burt,

This has been one of the biggest complaints about Windows 7. So many people have used Outlook Express for so long that they don't want to change. Windows 7 forces users to make a choice since there is no e-mail program included.

For new users, the problem with Windows Live Mail (*download.live.com/wlmail*), the free download, is that it is designed to be account-oriented rather than Inbox-oriented. In this day, when many people have multiple e-mail addresses, they are often separated by function (work, personal, etc.). Therefore, each account receives its own listing and a new set of Inboxes. This does make a long, seemingly redundant list on the left-hand side of the screen. However, the desire to see all incoming mail in one place has been considered in Live Mail.

At the top of the left-hand navigation column, there is a section called "Quick Views." In this area it is possible to view and read all

incoming mail in a fashion similar to Outlook Express from any and all of the accounts simultaneously. A couple of the most useful headings are "Unread e-mail" and "Unread from contacts." When you select one of these categories, all the unread e-mail that fits the criteria will be displayed in a fashion similar to Outlook Express. The only catch is that once you read an e-mail, it will not be in the list the next time you return. However, "All inbox" will show the same type of list as OE without dropping any. The categories for "Quick Views" can be select by right-clicking on the "Quick Views" heading and clicking "Select quick views..." in the pop-up menu.

To add to the confusion, you may need to change the "Layout..." in the View menu to match the Outlook Express you normally used. (If you don't see the View menu at the top of the screen, hit the ALT key and the Classic Menu will appear—including the View menu.)

If the "Quick Views" feature doesn't serve your purposes, then there are a number of alternatives to Windows Live Mail. Thunderbird (*www.mozillamessaging.com/en-US/thunderbird/*) is a well-received e-mail program from Mozilla. You may find the look and feel of Thunderbird more familiar. Eudora (*www.eudora.com/email/features/windows/*) is another free e-mail client used to work in a fashion similar to Outlook Express, although I haven't used it in years. Opera Mail (*www.opera.com/mail/*) gets excellent reviews from its users. For more information check Wikipedia's comparison of e-mail clients (*en.wikipedia.org/wiki/Comparison_of_e-mail_clients*), although I find the list a little incomprehensible.

Digital Dave

Return to Table of Contents

A Peek(?) at 2010

"It's time to talk about what's in store for the next year." by Jack Dunning

Jack claims to be notoriously bad at predicting the future, but he offers a few thoughts about what's ahead in 2010 for the tech industry—including some predictions about what's not going to happen.

It's the time to talk about what's in store for the next year. While it's expected that I do it, I'm notoriously bad at predicting the future. I depend a lot upon luck, which, as it turns out, is more dependable than almost anything else. I do have a few thoughts about the future that I will convey. A couple of them are about what's *not* going to happen, and at least one is a development that has great promise, but it will take more than a year to become a common product on the market.

I'm not going to call 2010 the year of Windows 7 since I would be parroting most other people. It's true that Windows 7 will come into its own next year through upgrades and new computers, but we already know that. Windows 7 is an excellent product and will do just fine without me expounding more on the subject. I'll do enough of that in the coming year.

Netbooks Collapse

My first prediction is that we will see the collapse in the market of the latest rage in computers: netbooks. As an extremely portable, inexpensive computer, the netbook has seen explosive growth in 2009. (Cellular companies are giving them away with a contract.) People, seeing the low price as something in the range of the throwaway DVD players and printers, have been scooping them up. This has led to some awesome sales prediction. These will not come to pass.

The computer salesman told Jack that with these

The netbooks remind me of the old Texas Instruments TI-99/4A (*en.wikipedia.org/wiki/Texas_Instruments_TI-99/4A*), which was wildly popular in the early 1980s. It was a small, inexpensive, reasonably powerful (for the time) computer. By the end of the decade, many TI99/4As had become doorstops. There are a couple of issues that make the netbook fundamentally wrong.

First, the netbook sits in that small market space between the smartphone (iPhone, Androids, etc.) and the notebook/laptop computer. It is more powerful than the smartphone and more portable than the laptop. In the long run, that space will close up.

The computer salesman told Jack that with these special glasses he would be able to see the future of computers and the Internet.

The smartphones are improving at an alarming rate (2010 might be their year), and the competition in the market makes them very affordable. These tiny computers fit in your pocket. (Try doing that with a netbook.) You can (and do) hold a smartphone to your ear. Why carry around a netbook when a pocket-phone computer will do the job?

Maybe it's a little easier to use a netbook than a smartphone, but it's way easier to use a notebook computer with the bigger keyboard and screen than the netbook. The only advantage that the netbook has over the average laptop is size and weight. However, traveling with a laptop is like taking the power of your desktop computer with you. Yes, there is more lugging involved with the laptop, but unless you take your netbook jogging, the difference in portability between netbooks and notebooks comes into the equation only when you're running through an airport. Give the netbook the edge in mobility, but that won't be enough. The tremendous power of notebooks makes them worth a little extra weight.

The final blow to the netbook is that it's just too small. Maybe it works for kids with small hands, but it has been shown over and over again that when it comes to keyboards and videos displays, size matters. There will always be a niche for people with tiny hands, but that won't be enough to keep netbooks alive. Of course, manufacturers could always put larger keyboards and screens in the netbooks, but then they would be notebook computers, wouldn't they?

The Cloud-Computing Slog

Next year there will be an intense effort to replace the term "cloud computing" (computing over the Internet) with any other non-foggy expression. People are bored and annoyed with hearing those two words. This effort will fail, and we will be stuck with cloud computing.

This is not unlike my personal campaign to stop sports commentators from using the inaccurate term "athleticism" (1. an active interest in sports. 2. an obsessive participation in physical activity.) when they mean "athletic ability." Most of the people in the stands have as much as athleticism (definition 1) as anyone on the field. I will fail in my efforts to dissuade the people behind the microphones from using the word, but I'll continue to respect those who avoid the term and ridicule those who use it.

Internet computing (cloud computing) is a huge part of the future, but it won't become a dominant force in computing nearly as fast as predicted—and it may never be as all-pervasive as some "experts" would suggest. There are a few roadblocks to Internet computing becoming the end all and be all.

First, the Internet is just too slow. Even at the high bandwidths we see in T-1 lines, which are faster than most home and business connection, it pales in comparison with gigabit internal networks and the blazing speed of today's computers. Moving our work to the Internet puts a bottleneck in our systems called the Internet. While there are some very important reasons for keeping our data offsite and using Web applications, we don't want to do everything at an Internet snail's pace. In order to overcome this bottleneck problem, new fiber-optic cable or ultra-broadband wide area wireless access will need to be built. This is a huge task, and it will take many years.

Next, the Internet is not secure. While nobody will be interested in the vast majority of the boring things that you do with your computer, all it takes is one person on the inside, a mammoth online applications company to screw up, or deliberately subvert, the system. We are not comfortable with turning over our life to Microsoft or Google.

Internet computing is here to stay, but to reach the dreams of the future it will be a long, hard slog.

Organic Light-Emitting Diodes (OLED)

I want a video display or even a digital photo frame that uses OLED technology (*en.wikipedia.org/wiki/Organic_light-emitting_diode*). The advantage of OLED over regular LED, and most other digital screen technologies, is that it doesn't require backlighting; gives an excellent, bright picture from all angles; and doesn't need a dark room. (I first discussed OLED technology in the July 10 "Edgeword.") Plus, it has very low power requirements and, ultimately, should have very low fabrications costs. Currently, the main drawback is the degradation of the screen over time.

The first client for OLED technology is the smartphone, since it's easier to make the small screens. Plus, by the time a screen falls apart on a phone, the phone will have been long since replaced by the latest cellular phone plan. However, while you can find OLED

products, it's not quite ready for prime time. We are just starting to see some devices, but they are quite small or very expensive for what they do.

OLED digital photo viewers are available as a novelty product to be worn as a wrist watch (*www.amazon.com/TimeStyle-Digital-Display-Internal-Memory/dp/B001BONMUE*) or on a keychain. The price is about $50 and the screen size is 1.5 inches.

The Sony—XEL-1—11" OLED TV is going for about $2,000. Who wouldn't want it—if they have money to burn and they put it in somewhere close by?

Some Last Thoughts—Also Probably Wrong

As predicted last May by Jim Trageser in "Hot on the Web", Twitter will turn out to be a fad. Most people are already bored with it.

E-book readers will be another nail in the coffin for the print industry.

The tablet computer will meet with mixed reviews, since most people don't know how to use a pencil (stylus) anymore.

Happy New Year!

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

Return to Table of Contents

Xcelsius for Business Dashboards

"Creates interactivity between the end user and the data." by Michael J. Ross

> Xcelsius is a software application that generates dashboards using data from Microsoft Excel spreadsheets, XML-compliant databases, SOAP-based Web services, Flash variables, and their proprietary "server."

During the first few decades that businesses were making use of computers, the amount of data stored was a tiny fraction of what it is today, and yet it still was an overwhelming amount. Corporations had little choice but to store that data using whatever mechanisms were available at the time—initially flat files, and eventually relational databases. These mechanisms may have been adequate for storing the growing amount of data, and printing out reams of it, but they did not make it easy for the business managers to interpret the data and use it for seeing trends and making decisions for the future. In other words, business owners found it difficult to see the forest for the trees—regardless of how many trees were chopped down and turned into computer printouts.

In time, programmers became quite adept at writing reports that summarized that business information, and made early attempts at converting the numerical data into graphs and charts, which non-technical business people usually find much easier to interpret. This trend continued as corporate computing and data moved from centralized mainframes to desktop computers, and end users gained greater control over how their data was organized and represented, usually in spreadsheet programs such as Microsoft Excel. Then along came the Web, and consequently that data distribution went global, as far-flung corporate offices found that they needed to share data and graphical representations of it over the Internet.

Despite the tremendous amount of progress made in the burgeoning fields of information management, business decision-making, and business intelligence applications, organizations worldwide continue to struggle with how to best utilize multimedia for representing information that would otherwise be buried in databases and spreadsheets. Moreover, in this new era of dynamic Web pages, smartphones and video games, users have much greater expectations as to the attractiveness of anything multimedia and their ability to interact with it.

Dashboards and Data

When you hear the term "business dashboards," you might visualize the mahogany dashboards of corporate luxury cars; while the term "business objects" might invoke the image of lethargic company bigwigs slowly ossifying on the top floor of an office building. But actually the terms refer to far more useful things. The latter term is typically used in the context of computer programming—specifically, combining business (non-interface) data and functionality on that data, within reusable components. The former term is less well defined, but "business dashboard" is generally recognized to mean an interactive graphical representation of business data that allows the viewer to visually analyze how changes to one or more variables would affect the outcome. These are often referred to as "what-if scenarios," and can be utilized for spotting trends, predicting future changes, and generally getting an overview of complex information. For instance, a dashboard may show a pie chart of sales by region, and allow the user to move a slider backward and forward, through the calendar quarters, to reveal a developing trend.

Business Objects is also the name of a French company that developed Xcelsius (*www.sap.com/solutions/sapbusinessobjects/sme/xcelsius/*), a software application that generates dashboards using data from Microsoft Excel spreadsheets (Excel 2003, 2007, and XP), XML-compliant databases, SOAP-based Web services, Flash variables, and their proprietary "server." The company was bought by SAP in 2007, and was rebranded as SAP BusinessObjects. The product is available in three editions—Xcelsius Present, Engage and Engage Server—and we will be examining the second one. Its supported platforms are Windows XP, Vista and Server 2003. As befits a French product, it is available in 13 languages.

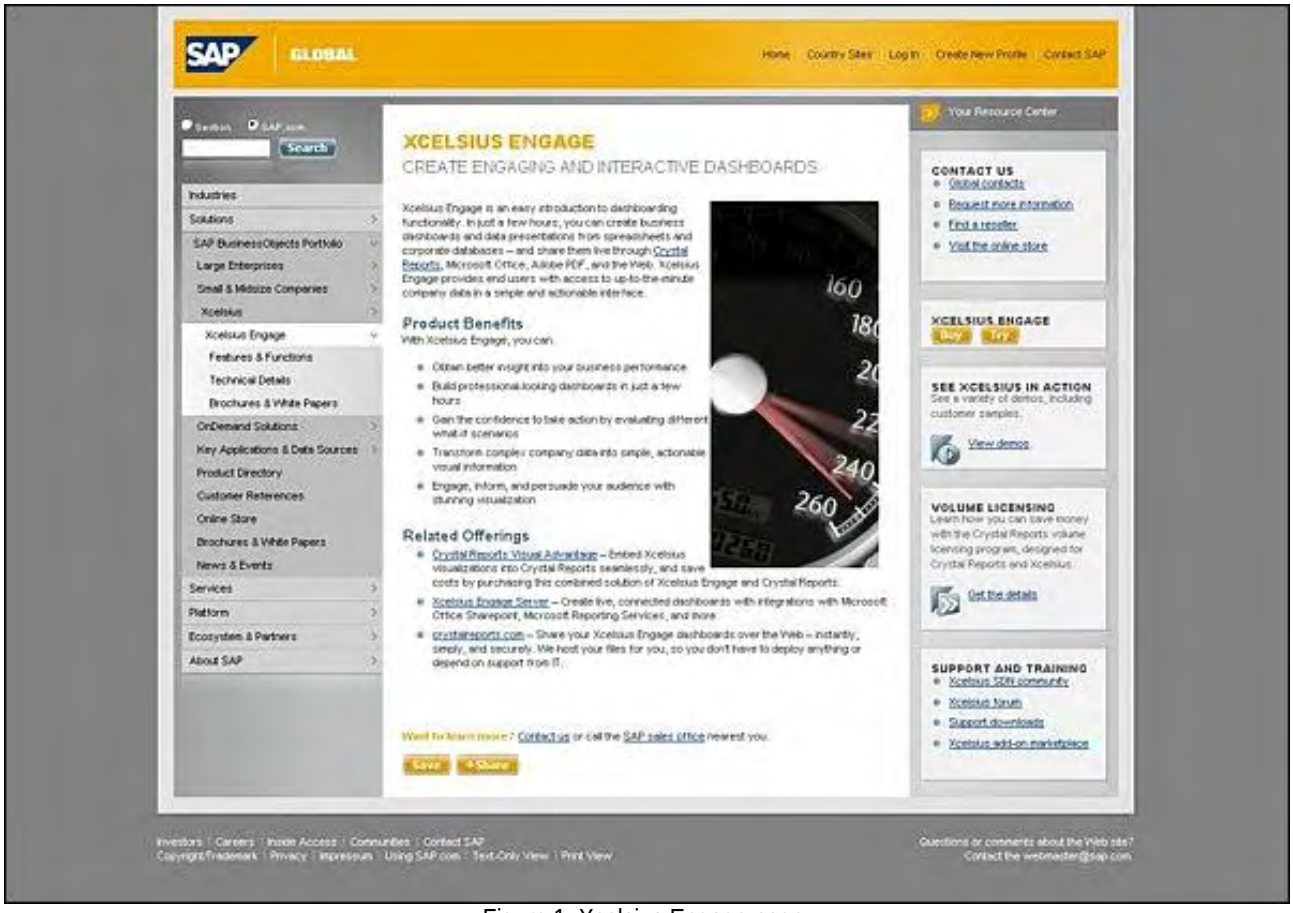


Figure 1. Xcelsius Engage page.

On the product comparison page (*www.sap.com/solutions/sapbusinessobjects/sme/xcelsius/productcomparison/*), we see that the Xcelsius Present edition contains only basic data-presentation components and the ability to export to Microsoft Office and Adobe PDF files. Consequently, that edition would be of limited use to the majority of organizations. Far more valuable is the Engage edition, which contains dashboard components, can export to Web pages and Flash video files, and can support a single live data connection to an XML database or Web service. Engage Server allows multiple such connections, as well as ODBC data sources, and several other features more appropriate for large enterprises.

Pretty Pictures

To get a clearer idea of what exactly are business dashboards—and their potential for representing information so that knowledge can be gleaned from it as quickly as possible—it would be helpful to look at some illustrative examples. The following screenshots—created using Xcelsius Engage and available on the Web site linked above—demonstrate how you can use dashboards not only for highly graphical reporting, but also to allow real-time visualization and analysis.

The first of the two examples on the demos page (*www.sap.com/solutions/sapbusinessobjects/sme/xcelsius/demos/*) represents a projected world sales model, designed to allow managers to "forecast their annual sales and marketing expense for various world regions by modifying the projected sales growth for each region. Executives can further analyze regional results by comparing their five-year annual sales trends to their top two competitors, and by viewing relative market presence for all regions."

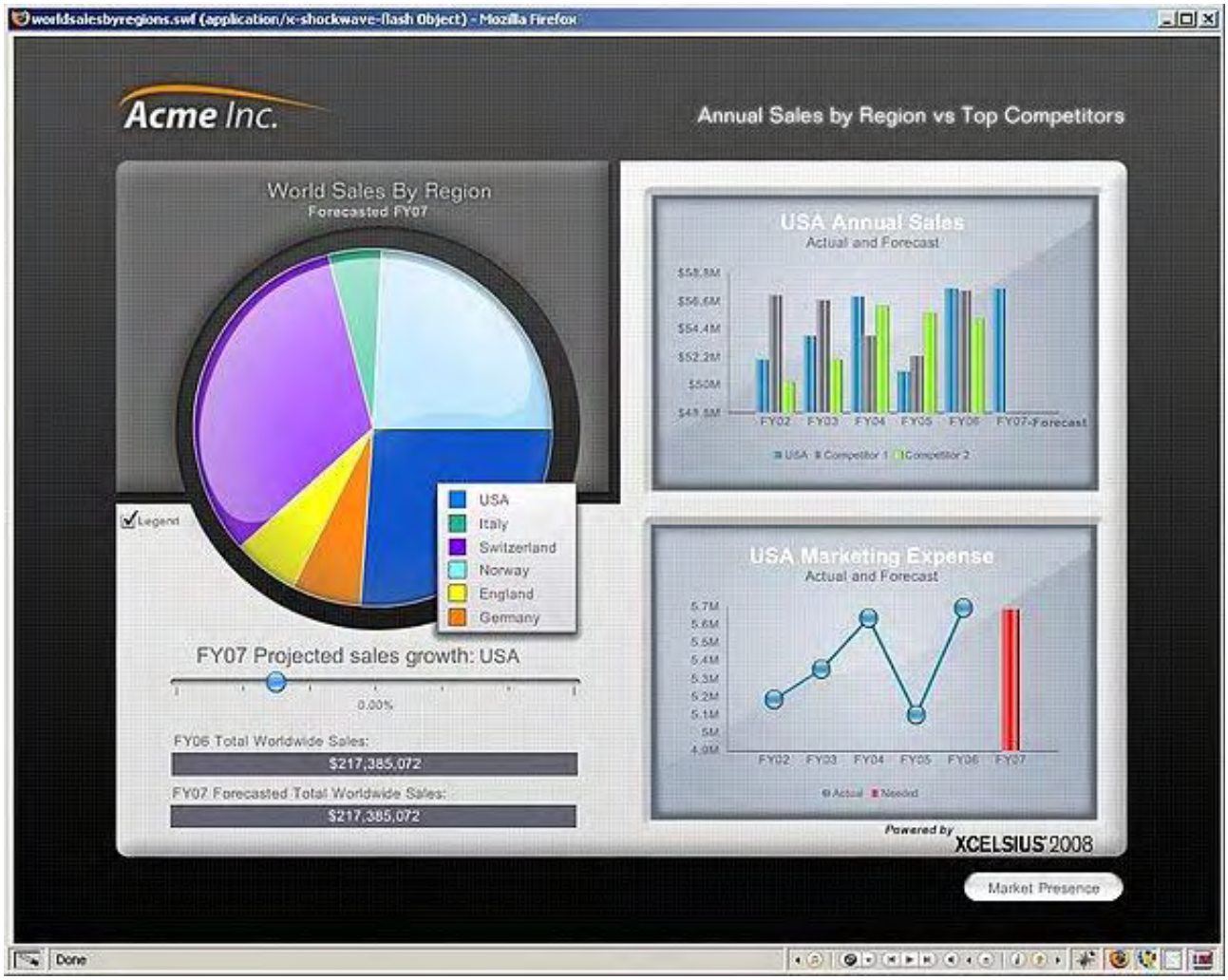


Figure 2. Projected world sales model.

Underneath the pie chart is a slider labeled "FY07 Projected sales growth: USA," which makes it possible for the user to interactively adjust the sales growth rate from the default of 10.50 percent, up to a very optimistic 30 percent, and down to a more realistic -10 percent. With each adjustment in one direction or another, the slices of the pie chart change size correspondingly, as do the values reflected in the bar and line charts to the right of it.

The second example is intended to facilitate competitive analysis across three business areas—cost structure, market share and growth trends. The three buttons at the top are like navigation tabs on a Web page, and display three completely unique dashboards, shown below. The first one shows the revenues for five different companies, plus the industry total, for 13 different income categories, selectable from the drop-down listbox. Clicking on one of the five radio buttons at the bottom of the dashboard filters the data to a particular quarter, or all combined.

Figure 3. Competitive comparison dashboard—income.

The market share dashboard below includes the same bi-quarter breakdown, and also illustrates how easy it is to produce colorful and attractive pie charts.

Figure 4. Competitive comparison dashboard—market share.

Our final example demonstrates line charts within a dashboard, as well as the ability to use checkboxes to enable and disable particular data sets. In this case, we have enabled the data for only three companies, in addition to the industry totals.

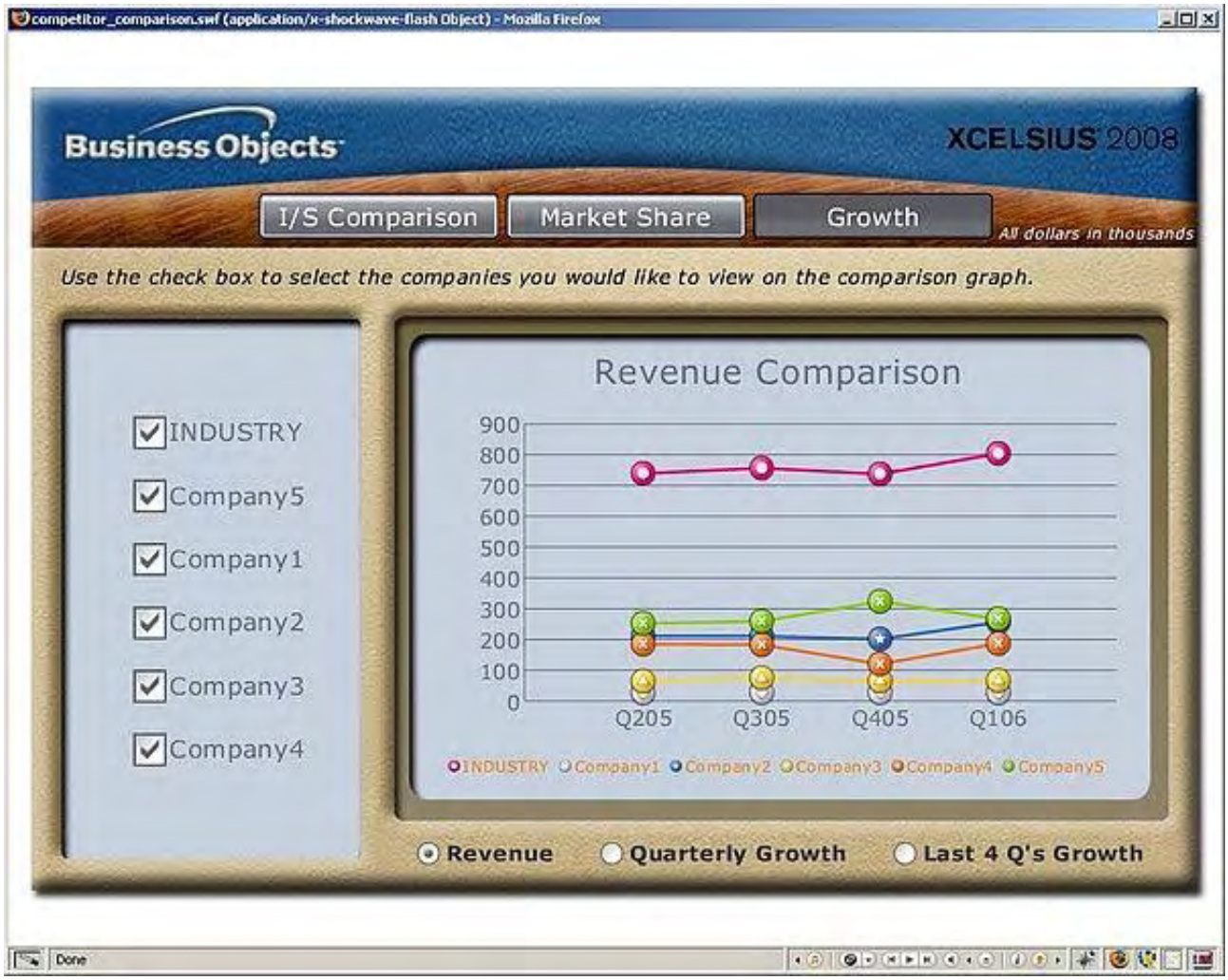


Figure 5. Competitive comparison dashboard—growth.

Naturally, you can create even more sophisticated dashboards than those provided above. These examples are intended only for showing what is possible.

Take It for a Test Drive

If you would like to try out Xcelsius Engage yourself, at no charge, then you can take advantage of their 30-day trial period. Simply click on the yellow "Try" button on any one of the Xcelsius Web pages linked above; fill out the contact information, including a valid e-mail address; and you will receive a link to download the latest version (5.0.0.99, as of this writing). When you receive the message from the company, download the installation file, launch it, and go through the self-explanatory steps to set up the program. As noted earlier, you will need to have some sort of data source installed, such as Excel XP.

Anytime that you run Xcelsius during the first 30 days, unless you have purchased and entered a license number, you will receive a warning message.

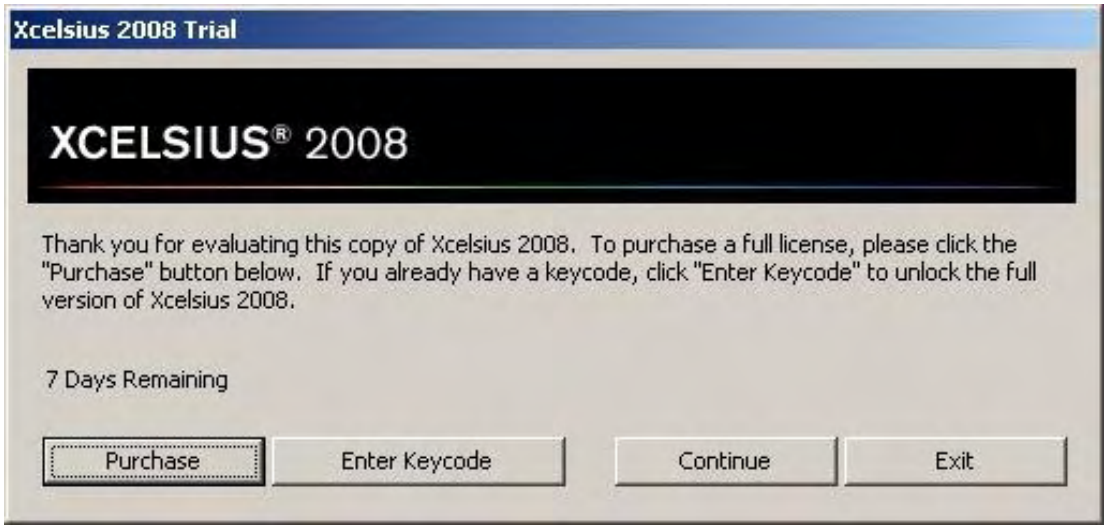


Figure 6. Xcelsius trial warning.

The Xcelsius Engage workspace is shown in the screenshot below.

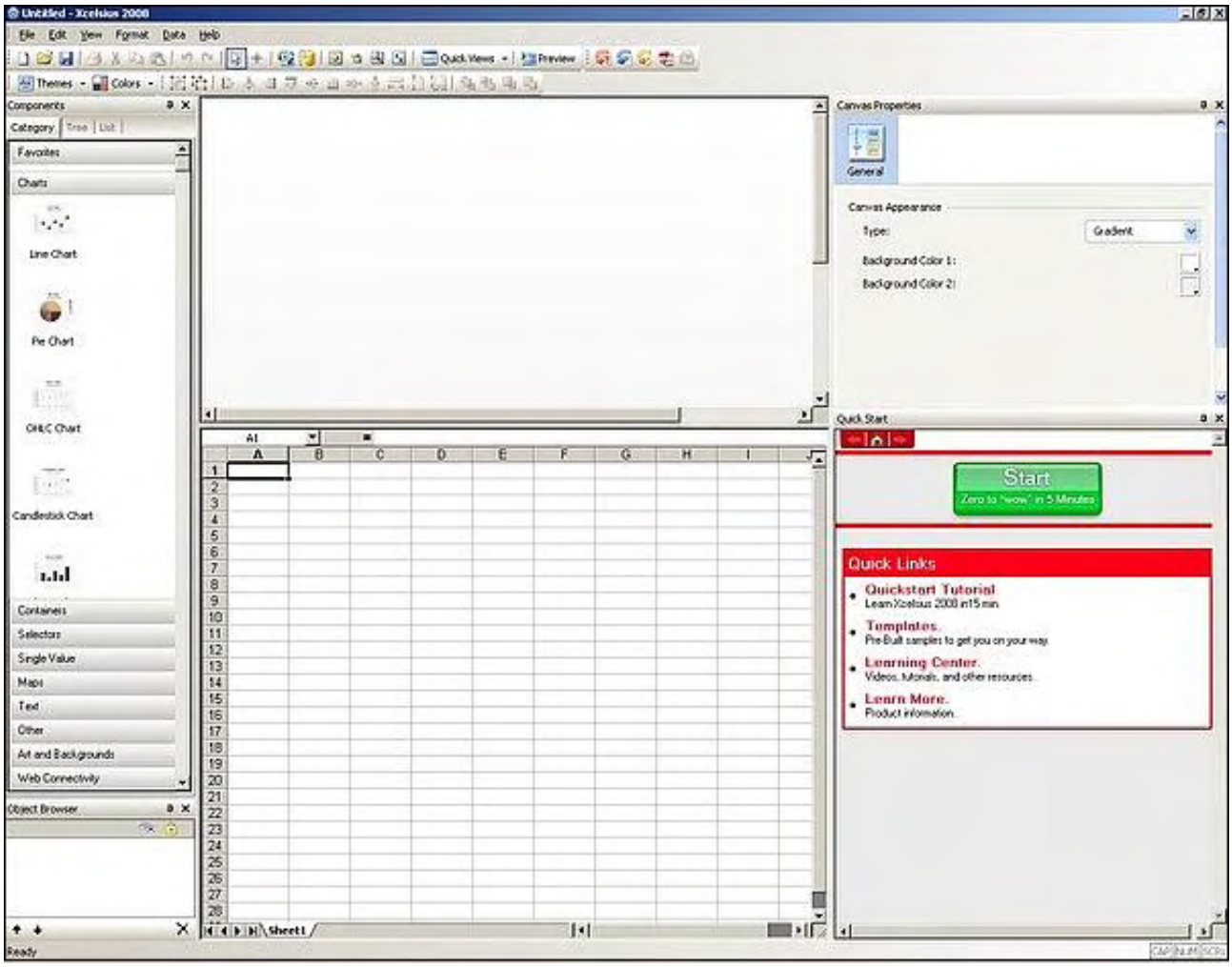


Figure 7. Xcelsius start.

Space limitations in this article do not allow us to get into the details of how to create your own dashboards. To learn how to do so, first read through the online help information, to become familiar with the different toolbars and panels within the workspace, as well as the terminology specific to dashboards and Xcelsius.

For additional assistance, you can explore the Xcelsius Community (*www.sdn.sap.com/irj/boc/xcelsius*) (part of the SAP

Community Network) and their Community Forums (*forums.sdn.sap.com/*). For add-on products, check their marketplace (*www.ondemand.com/information/xcelsius.asp*).

While we can never be certain as to the future of data-representation programs and other technologies, it is quite obvious that the trend is toward greater interactivity between the end user and the data, and a continued push for distributed data in computing over the Web, with less lock-in to desktop applications and proprietary data formats.

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.

Return to Table of Contents

Windows Tips and Tricks

Windows Tips and Tricks: Windows Character Map

“Windows Character Map Offers Fun with Fonts” by Jack Dunning

The On-screen Keyboard in Windows 7 will not display the special characters in fonts such as Webdings and Wingdings as it does in other versions of Windows. But don't worry: Windows Character Map allows you to select a font, view its style and characters, and cut and paste them into your document.

It has been pointed out that the On-screen Keyboard in Windows 7 will not display the special characters in fonts such as Webdings and Wingdings as it does in other versions of Windows. Although the Windows 7 version of the virtual keyboard has excellent features, if you're a Win 7 user, it kills my tip from a few weeks ago. Therefore, this week I will start to identify other methods for revealing the icons embedded in these special fonts. The tips don't directly identify the key associated with each character, but it's easy enough to cut-and-paste a character to figure out which key will provide the needed input.

Windows Character Map

Windows Character Map, which can be found in all current versions of Windows, deserves a little more attention. I first mentioned it a few weeks ago without going into depth. Windows Character Map can be found under All Programs/Accessories/System Tools (or "Run..." "charmap," or, in Vista and Win 7, type "map" into the Start Search field of the Start menu and select Character Map from the list). You will see a window similar to Figure 1.

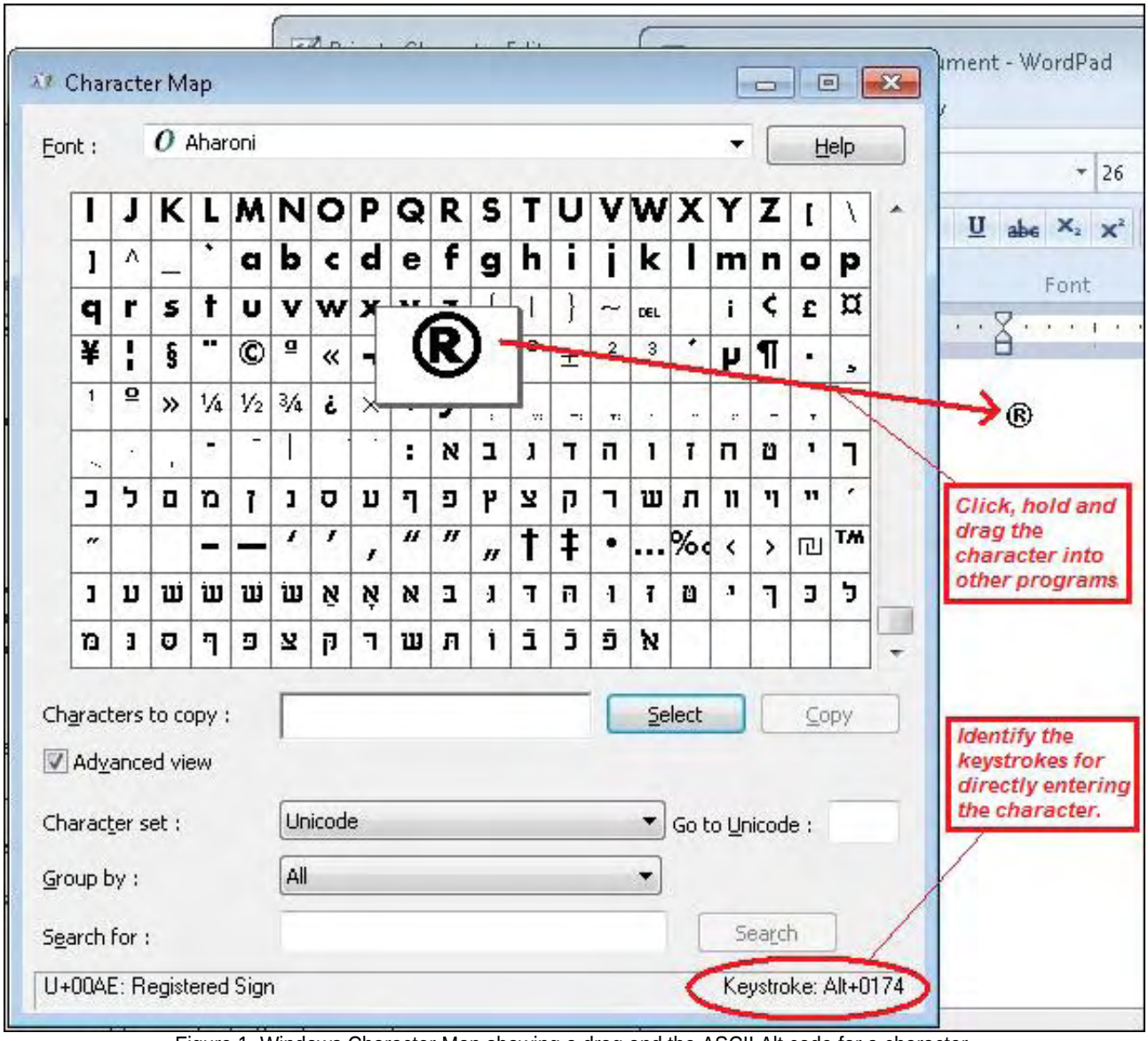


Figure 1. Windows Character Map showing a drag and the ASCII Alt code for a character.

To view a particular font, there is a drop-down menu at the top of the window that allows the selection of all the available fonts. When you select a font, the style and characters will appear in the window. If you check the Advance View box, more information will open up.

One of the strengths of Character Map is that you can directly drag the character into many other programs. (In the example in Figure 1 above, the registered trademark symbol has been dragged into a WordPad document.) This is easier than memorizing which codes to enter or even using the On-screen Keyboard to reveal the characters on the keyboard in XP or Vista. For one, the character enlarges itself when you click on it, making it easier to read.

It is also easy to cut-and-paste a group of characters. When you double-click a selected symbol, it will appear in the "Characters to copy" field below the character grid, or you can click the Select button when a symbol is highlighted to capture it in the same field. (You can also drag the characters into the copy field.) Once you have the desired group of symbols, clicking the Copy button will put the figures in the Clipboard. Then inserting them into a document merely requires a Paste (from the Edit menu or Control-V).

For those characters that do have a corresponding ASCII Alt code (hold down the Alt while entering the numbers, then release to embed the character), the numbers for the code appear in the lower right-hand corner of the Advance View window (circled in Figure 1 above). (Using these codes was discussed in the November 13 "Windows Tips and Tricks" column.) Most characters do not display a code in Windows Character Map.

Unfortunately, Character Map does not give the keyboard equivalent for the displayed font. This is no problem for most fonts, since the regular letters displayed will be the same as the associated keys. If you are using fonts such as Webdings and Wingdings (see Figure

2), then you will need to depend upon either dragging the character or cutting-and-pasting with the Copy button.

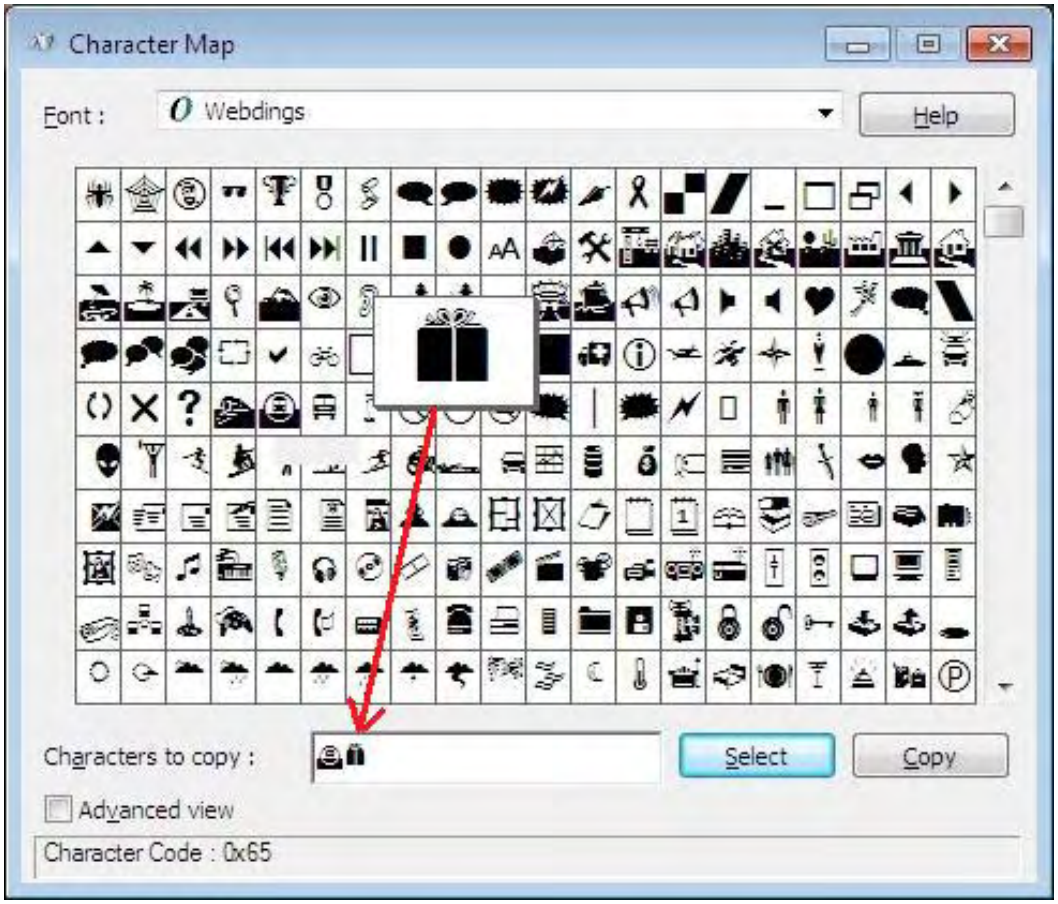


Figure 2. Windows Character Map with Webdings selected.

Fun Tip: *Create a cryptogram puzzle with Wingdings. (A cryptogram is an encoded message meant for entertainment. A message is written with characters randomly substituted for each letter. Then contestants try to break the code based upon their knowledge of the English language.) Create a message in any word processor. Change the font of the entire message to Wingdings. Print the encoded message for your party (for geeks) brain teaser. People will enjoy the challenge of solving a coded message for the special occasion. Admittedly, the code is not random, but unless people know the font, it will be just as good as random.*

In the past, I've never spent much time exploring what can be done with fonts, but as I dig deeper I keep finding new cool things in Windows. Next week, I will take a look at new features in Windows 7 that will help you even more with the fonts.

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*

Return to Table of Contents

Wally Wang's Apple Farm: The Future

"The Year of the Tablet" by Wally Wang

Whether you buy one from Apple or some other manufacturer, tablets are going to be here next year whether you're ready or not, and they'll change the e-book reader market. Also, look for a new version of iWork by the middle of next year; the iPhone's exclusivity deal with AT&T ends in 2010; musings on what new category Apple could pursue next; tips on anonymous Web surfing; and a tip on using TextEdit, which can save files in various Microsoft Word formats.

Next year will be the year of the tablet computer. That's when Apple is rumored to be readying a tablet device that will run the iPhone operating system, but could also be capable of running Mac OS X programs as well. The key to Apple's tablet will be its ability to function as a both an e-book reader and a regular computer with wireless capabilities. Think of an iPhone merged with a laptop Macintosh, and that's what the tablet device could resemble.

Figure 1. One of many rumored pictures of Apple's mythical tablet.

The e-book reader market has slowly started taking off, ever since Sony introduced one of the first e-book readers way back in 2006. Amazon later debuted its Kindle e-book reader, and Barnes & Noble followed that up with its Nook. As printed books continue getting

more expensive to print, e-books are the wave of the future. The problem is that nobody is quite sure what we'll be using to read them.

What's certain is that dedicated e-book readers have a niche just like dedicated MP3 players or dedicated digital cameras, but the real growth in the e-book reader market will likely come from a tablet device that can do more than just display e-books.

More importantly, any e-book reader needs a distribution structure behind it, making browsing and buying books as easy to do as searching for music on iTunes. Kindle may have Amazon's backing and the Nook may have Barnes & Noble's support, but Apple will likely leverage iTunes to find and download e-books for a tablet computer.

To prevent others from easily copying the tablet, expect Apple to use a custom-designed processor developed by PA Semi, the microprocessor company Apple purchased in 2008. What makes the Macintosh and the iPhone easy to copy, to a limited extent, is that it uses standard parts that other manufacturers can buy. If Apple uses a custom PA Semi processor in its tablet, no one else will be able to buy that same processor. As a result, they'll be forced to mimic Apple's features using other processors.

Whatever Apple reveals by its Worldwide Developer Conference (WWDC) in July of 2010, its tablet design will influence all other e-book readers and tablet computer manufacturers. They'll either mimic the best features of Apple's device or find the flaws in Apple's tablet device and overcome them.

Save your money for a tablet computer. Whether you buy one from Apple or some other manufacturer, they're going to be here next year whether you're ready or not. If you have a Kindle, Nook, or Sony e-Reader, it will probably look like an antique next to Apple's tablet.

An Updated Version of iWork?

Although Apple's office suite, iWork, gets much less attention than its hardware products, look for a new version of iWork by the middle of next year. Already, Keynote, the presentation program in iWork, is acknowledged as superior to PowerPoint, but Pages (iWork's word processor) and Numbers (iWork's spreadsheet) still lag behind Word and Excel respectively.

Expect more features to make Pages more competitive to Word and more mathematical and business functions added to make Numbers more comparable to Excel. The iWork suite is Apple's long-term project for weaning itself away from reliance on any Microsoft products, so iWork will only continue getting better until Microsoft responds with a new version of Microsoft Office sometime in 2011.

Microsoft seems to deliberately drag its feet in making Office for the Mac comparable to Office for Windows, which leaves Apple with a chance to convert people to iWork. With each new version, iWork gets closer to equaling Microsoft Office, and if Microsoft takes too much more time to update its program, iWork could eventually surpass it.

The iPhone on Other Networks?

In 2010, Apple's exclusivity deal with AT&T for the iPhone expires. That leaves AT&T in a dilemma because the iPhone attracted a surge of new customers, but since iPhone users tend to actually use the features of their cell phones more than other cell phone owners, iPhone users constantly complain about the quality of AT&T's network.

To its defense, probably no network could have withstood the sudden influx of iPhone users and their heavy Internet usage. Still, this exclusivity deal looks like it won't be renewed because in other parts of the world where Apple abandoned exclusivity deals, iPhone sales jumped dramatically.

As one of the largest cell phone networks in the country, Verizon could easily absorb a flood of new iPhone users. The only problem is that Verizon uses a different standard than most of the rest of the world. That means Apple would have to make an iPhone specifically to run on Verizon's network.

The more likely alternative will be seeing the iPhone appear on T-Mobile's network, since T-Mobile uses the same cell phone standard as AT&T. With at least one other cell phone network capable of carrying the iPhone, expect sales to continue to rise as people abandon their older phones for an iPhone.

What's Next for Apple?

The iPod took Apple away from its dependence on computer products, and the iPhone broadened Apple's reach as a cell phone

maker, too. After Apple releases a tablet device that offers e-book reading, what new category could Apple pursue next?

Apple plans to open a $1 billion data center in North Carolina to focus on cloud computing. This might be used for a cloud computing, online version of iWork (*www.iWork.com*). Since iWork can't compete directly against Microsoft Office as a desktop application, Apple might leverage cloud computing to redefine the playing field to make iWork appear superior to Microsoft Office. That would force Microsoft to play catch-up again, and give Apple the chance to keep redefining the future so everyone else will fall behind and be forced to catch up.

Apple's $1 billion data center might also be related to its recent purchase of Lala, a music-streaming company. The iTunes model of downloading songs can't last forever, so streaming music may be the next big shift and Apple will be ready for it.

Unlike other companies that seem to copy whatever Apple is doing, Apple takes a long-range approach to redefining the market. Lots of people don't like Apple, but few people can deny that Apple's products keep pushing the boundaries of what we expect our devices should do, whether it's a Macintosh, an iPod, an iPhone or a tablet computer.

Privacy While Browsing

Here's something most people don't realize. Every time you use a search engine, that search engine records your IP (Internet Protocol) address that uniquely identifies your computer. Search engines may also store your search criteria to gather data about people's surfing habits. Knowing this, the company can then target you with specific types of ads.

If you'd rather not let a search engine track your activities, use Ixquick (*www.ixquick.com*), which may be the only search engine around that won't record your IP address so you can surf anonymously.

Figure 2. The Ixquick search engine won't record your IP address.

To avoid having your search criteria stored in a database to analyze surfing habits of the general public, use Ask.com (*www.ask.com*) and turn on their AskEraser feature.

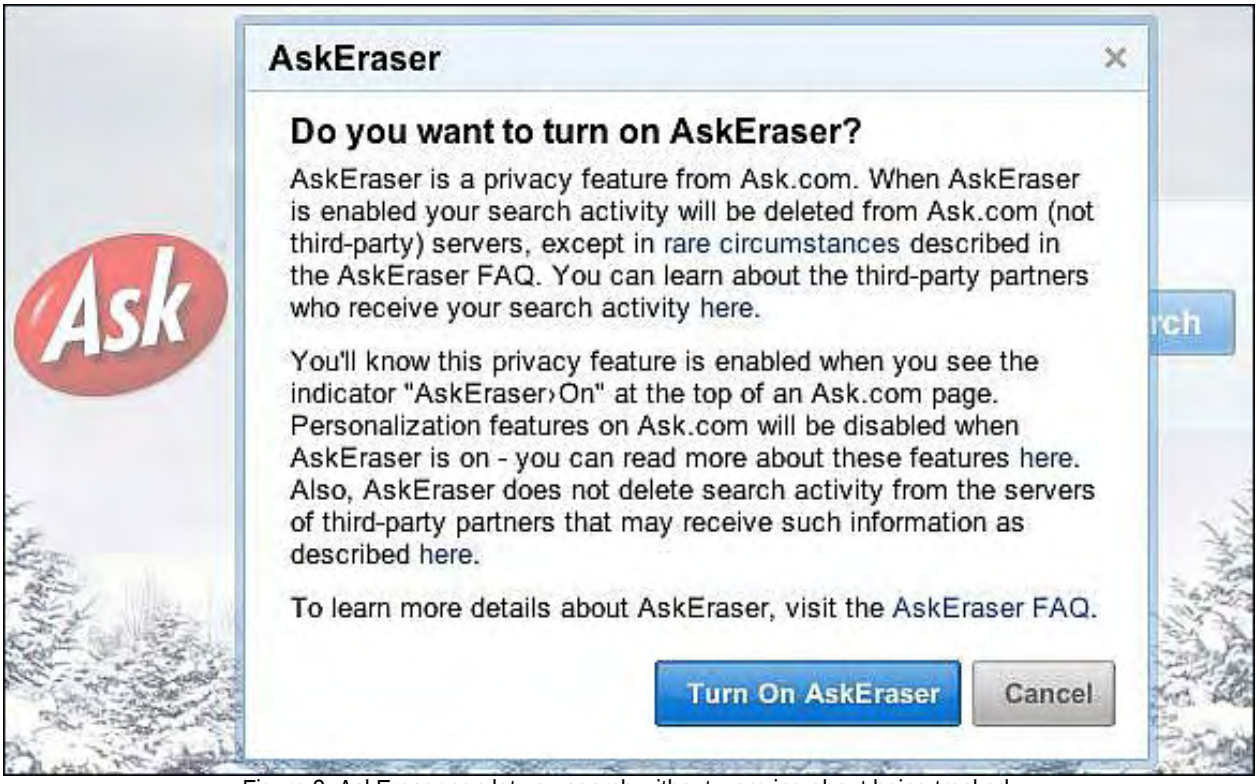


Figure 3. AskEraser can let you search without worrying about being tracked.

* * *

Most people think they need Microsoft Word to remain compatible with the rest of the world. The truth is that most people simply need to use Microsoft Word documents (identified by the .doc or .docx file extension).

If you don't want to get Microsoft Office and don't want to pay $79 for iWork, then you can use the free TextEdit program that comes with every Macintosh. TextEdit can open Microsoft Word documents and save to them as well.

Just as long as you aren't using fancy features in Microsoft Word, such as tables, table of contents, or mail merge, TextEdit can open, edit and save simple documents such as letters, résumés, or reports. Best of all, TextEdit is free with every Macintosh.

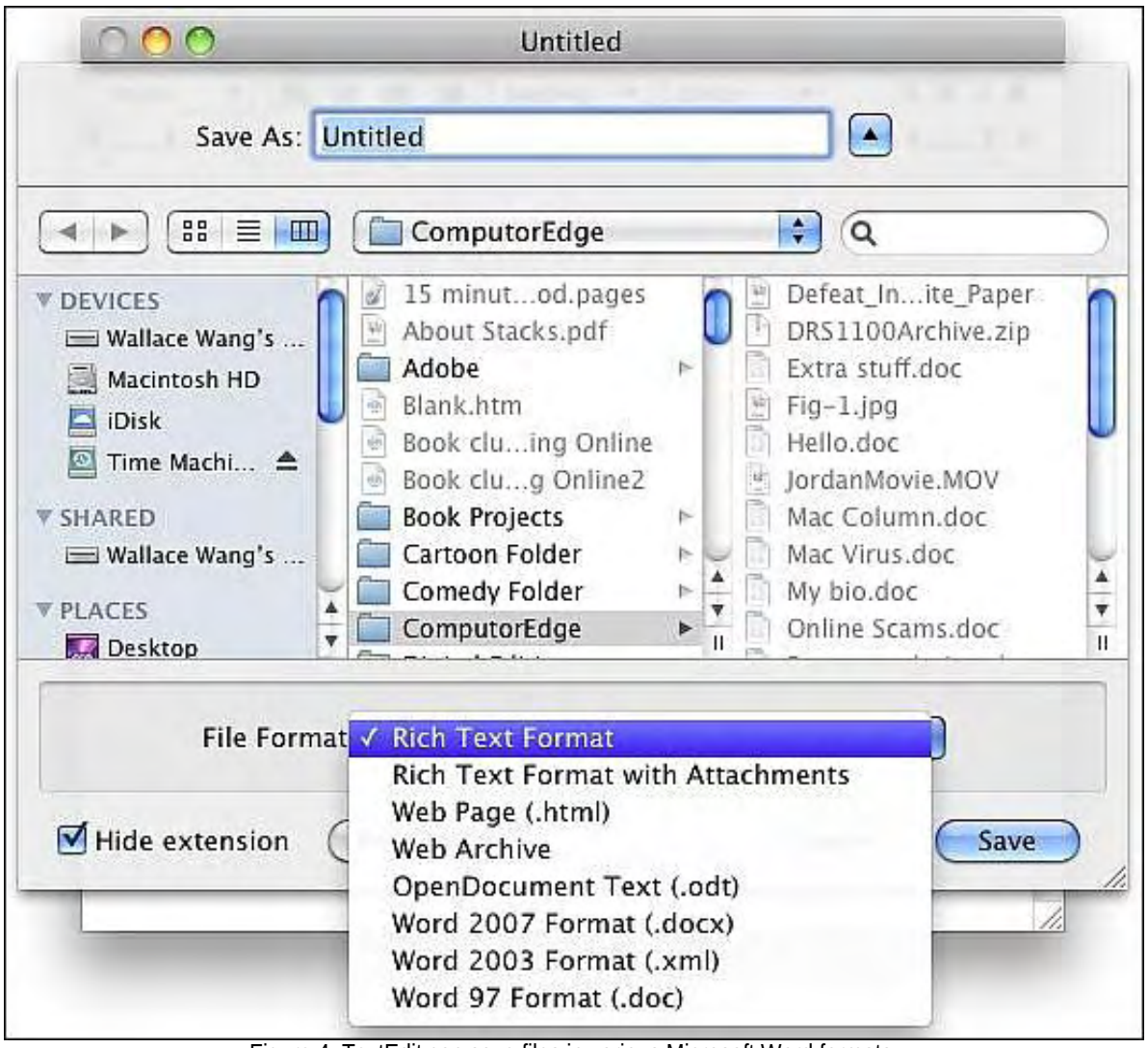


Figure 4. TextEdit can save files in various Microsoft Word formats.

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

Wally is responsible for the following books:

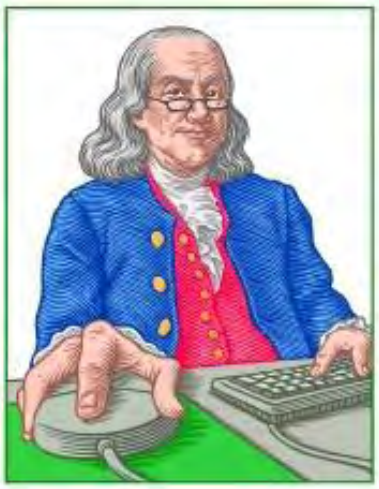
• Microsoft Office 2007 for Dummies (*www.amazon.com/gp/product/0470009233?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0470009233*),
• Beginning Programming for Dummies (*www.amazon.com/gp/product/0470088702?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0470088702*),
• Breaking Into Acting for Dummies with Larry Garrison (*www.amazon.com/gp/product/0764554468?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0764554468*),
Beginning Programming All-in-One Reference for Dummies (*www.amazon.com/gp/product/0470108541?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0470108541*),
• Steal This Computer Book 4.0 (*www.amazon.com/gp/product/1593271050?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1593271050*),
• Visual Basic Express 2005: Now Playing (*www.amazon.com/gp/product/1593270593?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1593270593*),
• My New Mac (*www.amazon.com/gp/product/1593271646?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1593271646*),
• My New iPhone (*www.amazon.com/gp/product/1593271956?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1593271956*),
• Strategic Entrepreneurism with Jon Fisher and Gerald Fisher (*www.amazon.com/gp/product/1590791894?*

ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1590791894).

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

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

Return to Table of Contents



LINUX LESSONS

"AN INVESTMENT IN LINUX KNOWLEDGE PAYS THE BEST INTEREST."

Linux Lessons: Fedora, Part 2

"The Fedora Installation" by Pete Choppin

Last week, we introduced you to Fedora. This week we will begin the installation of Fedora and demonstrate the partition process.

Last week, we introduced you to Fedora. This week we will begin the installation of Fedora and demonstrate the partition process. Since we have already discussed partitions at length in the presentation of Ubuntu, we will just cover the differences in Fedora. The basic partition layout we will create will be identical to how we set up Ubuntu.

Begin the Setup

Put the setup disc for Fedora (*docs.fedoraproject.org/readme-burning-isos/en-US.html*) in the drive and then start up the computer (obviously you would need to have the computer on to insert the disc and would restart the computer in this case).

The computer should boot up to this disc. Refer to your computer's BIOS settings if you are unable to boot to a DVD. Once it boots up you are presented with the installation menu:

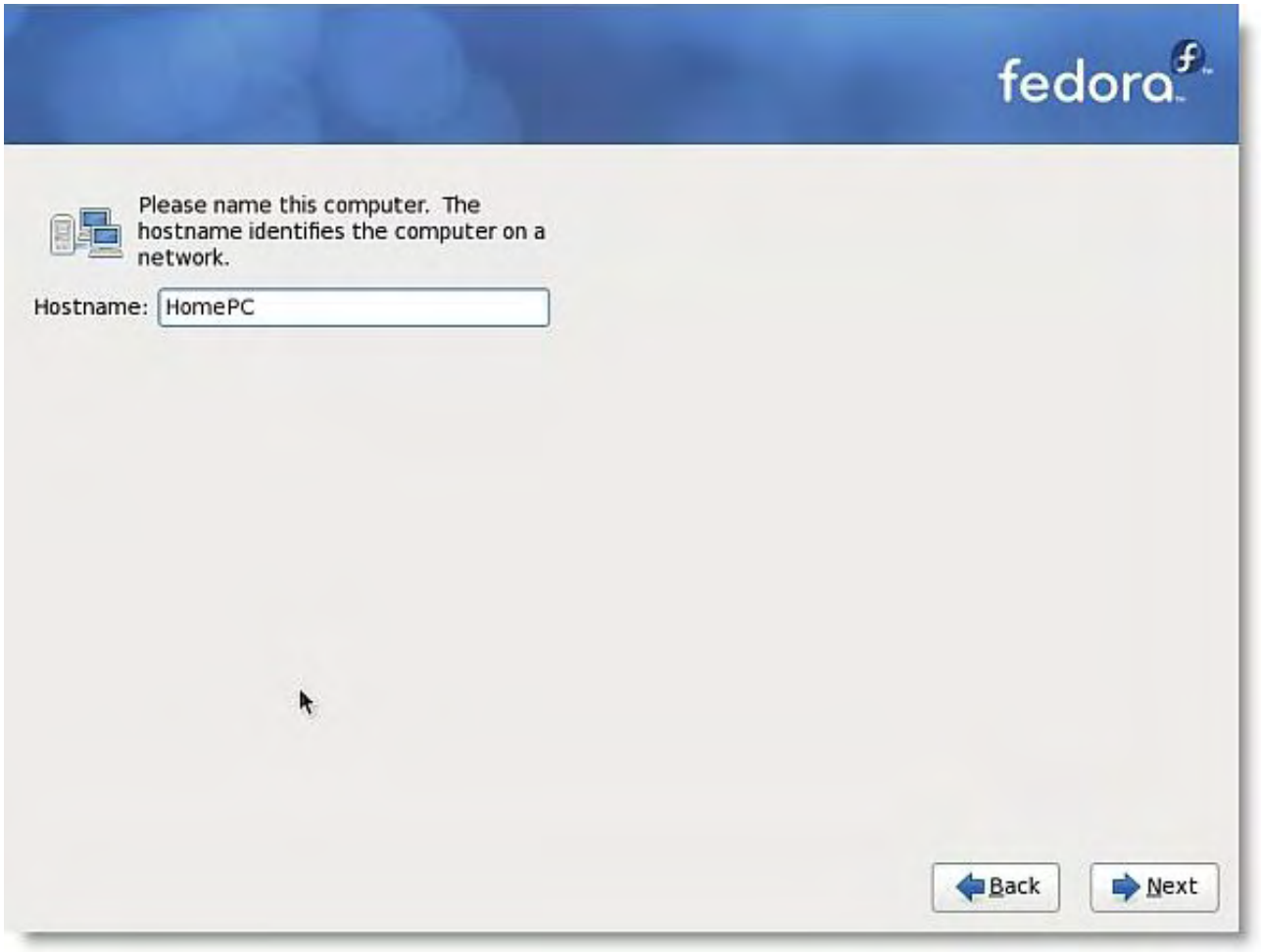
Select the first option to install Fedora. Some brief initiation and setup files will load, and then you will be presented with the option to check your media:

It is a good idea to go through this check the first time your setup disc is used. This will check for any physical errors on the media. If

there is a problem with your disc, an error will be displayed indicating problems with the disc. You would then need to recreate your setup disc. I do not recommend attempting to install Fedora with a disc that has problems. You will likely have problems with the OS, and the setup will probably not go well, if at all. Once you have a successful disc check, it is not necessary to perform this check for future installations, and the check may be skipped.

After the media check is completed you will be able to continue with the installation. The next screen will display system files loading and other necessary installation prep functions. After a moment you will see the graphic interface load. At this point there will be help files and onscreen explanations that will assist you with the installation.

Continue through the next few screens. These should be fairly self-explanatory. You will see a screen that is asking for you to supply the name of the computer.



Just enter a name that makes most sense to you. This name will also appear in the command prompt on the command line (unless you modify the command-line prompt, which we will cover later).

The next screen allows you to select your geographic location. Select this, then go to the next screen, which is requesting you to create the root password. This is a particularly important password because it provides full access to your entire system. For security purposes, it is a good idea to make this reasonably difficult to guess. In fact, if you enter something simple or recognizable, Fedora will give you a warning to this effect. You can use any password you wish here, but it is good practice to choose a fairly secure password.

Partitioning

Again, I would like to point out that this part of the installation is one of the more complicated processes. Of course you can simply use the default partition layout if you do not wish to get into this. This layout is intended for users who simply want to get their system up and running with the fewest complications.

The next screen after you set your root password begins the partition-creation process.

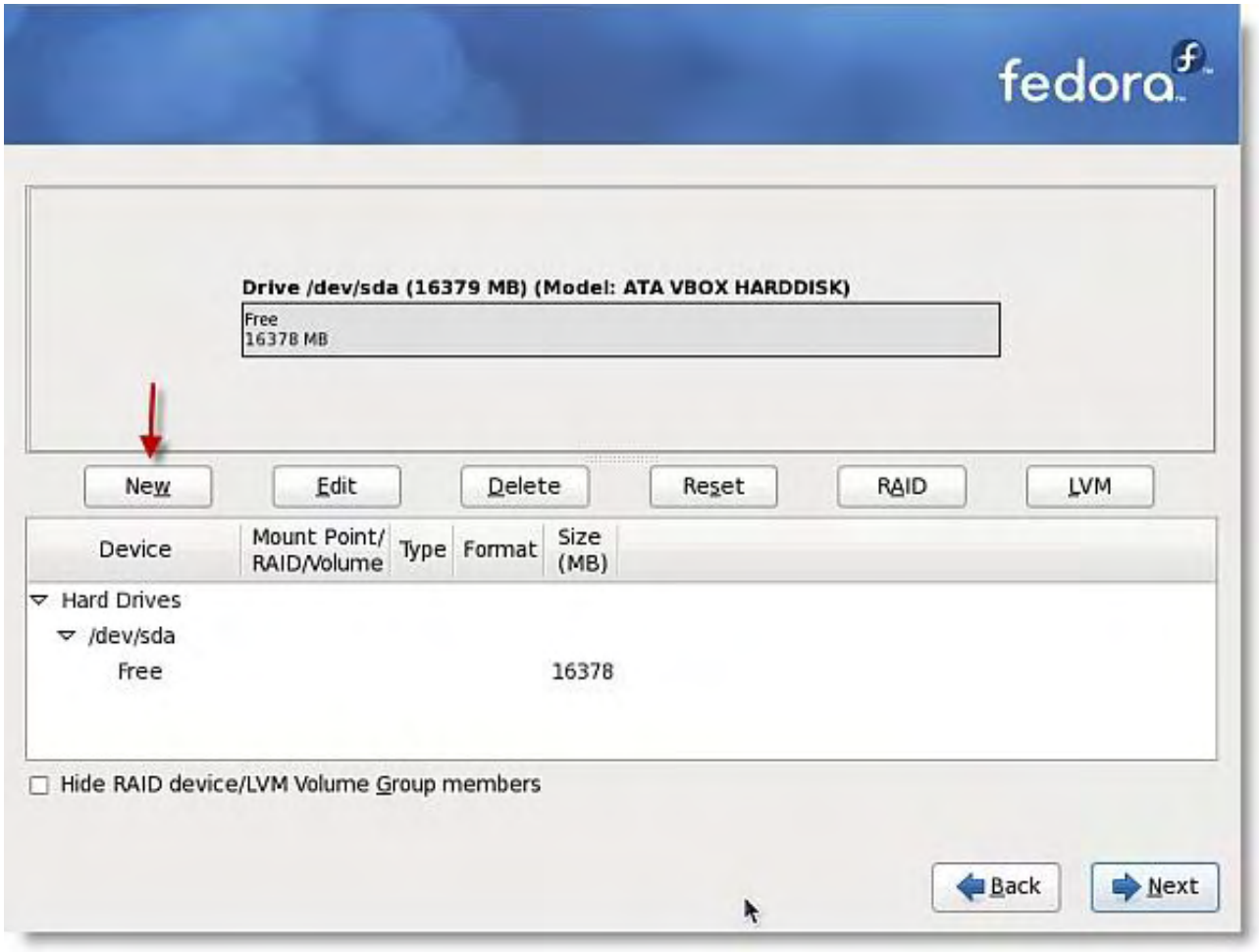
For your information, I am including an image of the default partition layout [link to default_part.png] in case you want to skip the partition process.

Custom Partition

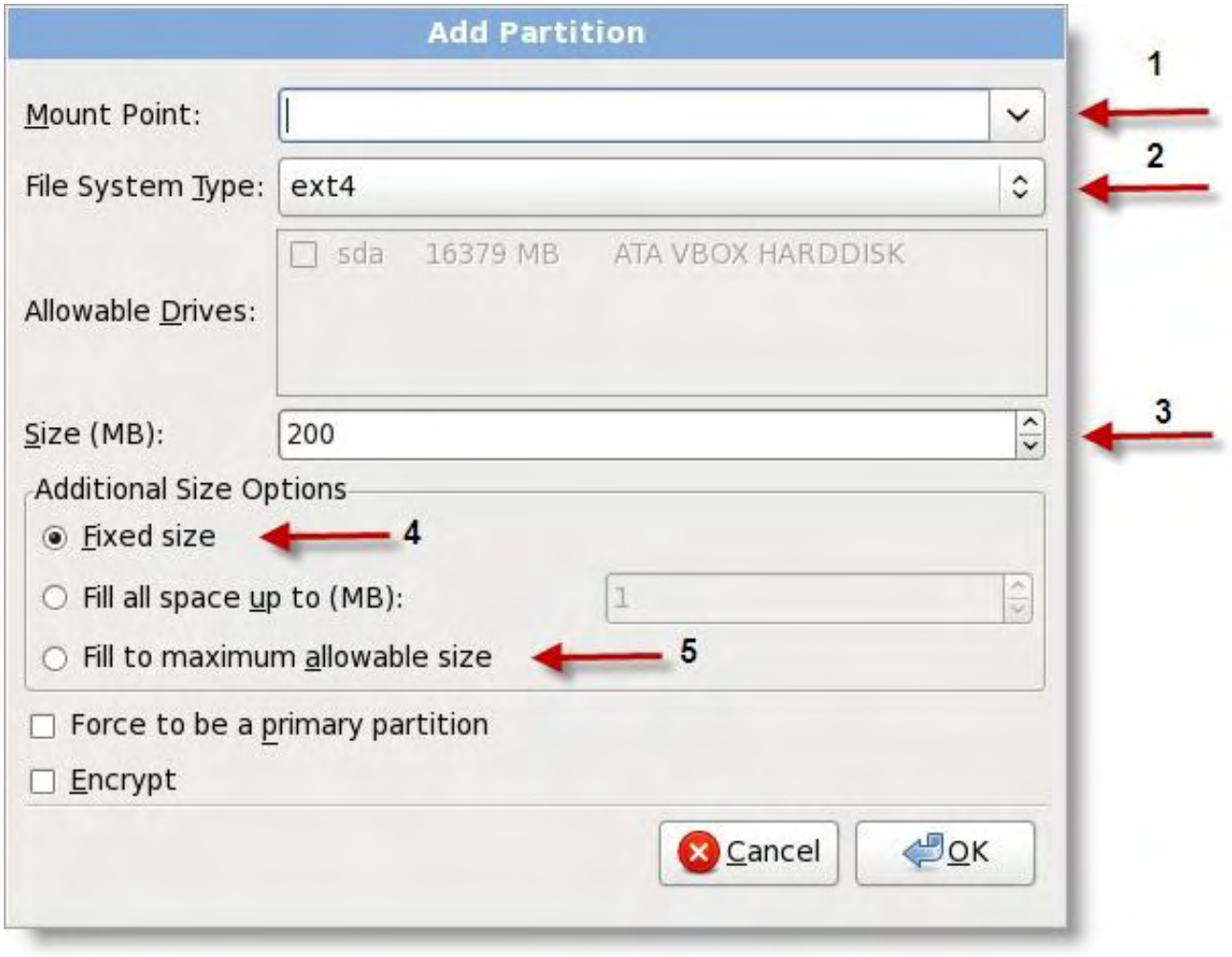
We will be creating a custom partition for this install, so change Replace existing Linux system to Create custom layout from the first partition screen:

This is all you need to change on this screen. Click Next.

The next screen is where you will define the custom layout of your partitions. To create a partition, click the New button:



When you click New, the Add Partition screen comes up:

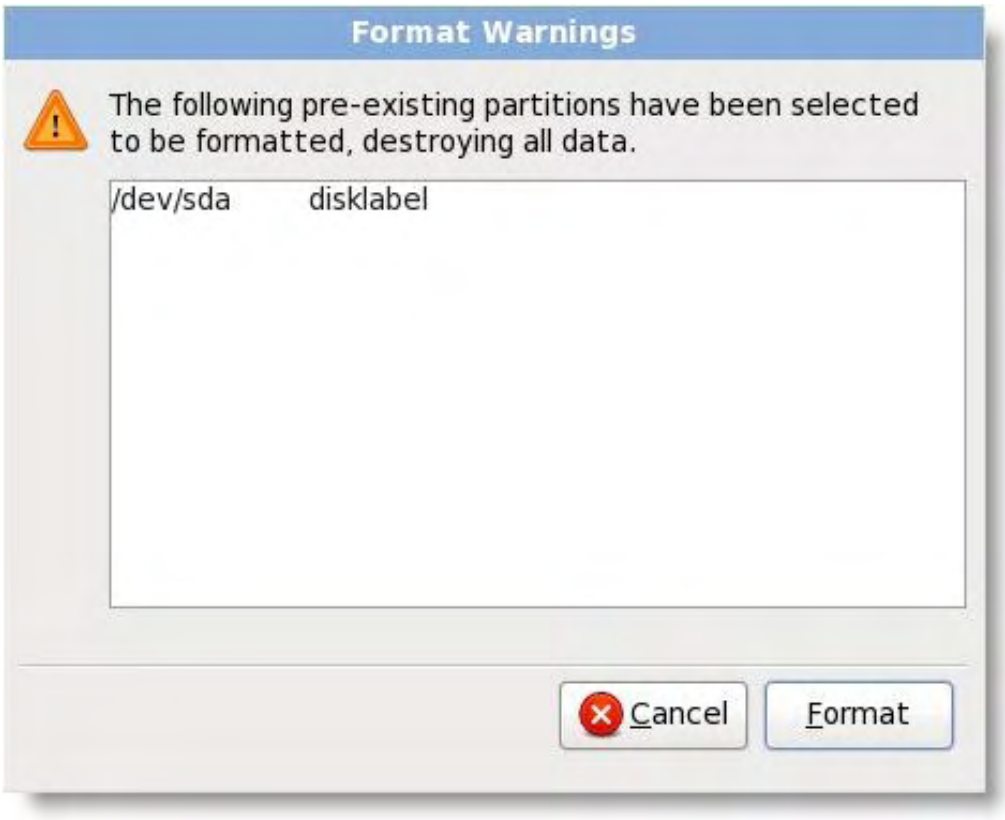


You will be creating three partitions: a swap partition, a boot partition and a root partition (/). For each partition, change the (1) mount point, (2) file system type, (3) size. Select (4) fixed size for the swap and boot partitions, and select (5) Fill to maximum allowable size for the root partition. (See figure 9 below for each partition and its settings.)

You should end up with the following layout:

Device	Mount Point/ RAID/Volume	Type	Format	Size (MB)
Hard Drives				
/dev/sda				
/dev/sda1	/boot	ext4	✓	100
/dev/sda2		swap	✓	2048
/dev/sda3	/	ext4	✓	14230

Click Format. You will receive a format warning message like this:



You will then see another warning that you will be writing these changes to disk. This is your final chance before the disk is written to. Click Write changes to disk. The file system is then created.

Let's stop here. Next week we will continue the Fedora installation and discuss repositories and selection of packages.

Pete Choppin has worked in the computer and IT industry for 13 years. He currently works as a network and systems administrator for a company called Albion based in Clearfield, Utah. His interests include cooking, sci-fi, computers and technology, and web design—a semi-professional endeavor, having designed Web sites in the dental field, e-commerce businesses, and for the Boy Scouts of America. Pete also contributes regularly to Ptolemy's Tribute (*ptolemystribute.blogspot.com*)—a blog which covers political and technical topics and issues. Pete has been a devout reader of *ComputorEdge* since 1990. He has contributed to articles and responded to topics on *ComputorEdge*. He can be contacted at *pchoppin@comcast.net*

Return to Table of Contents

Spam of the Week

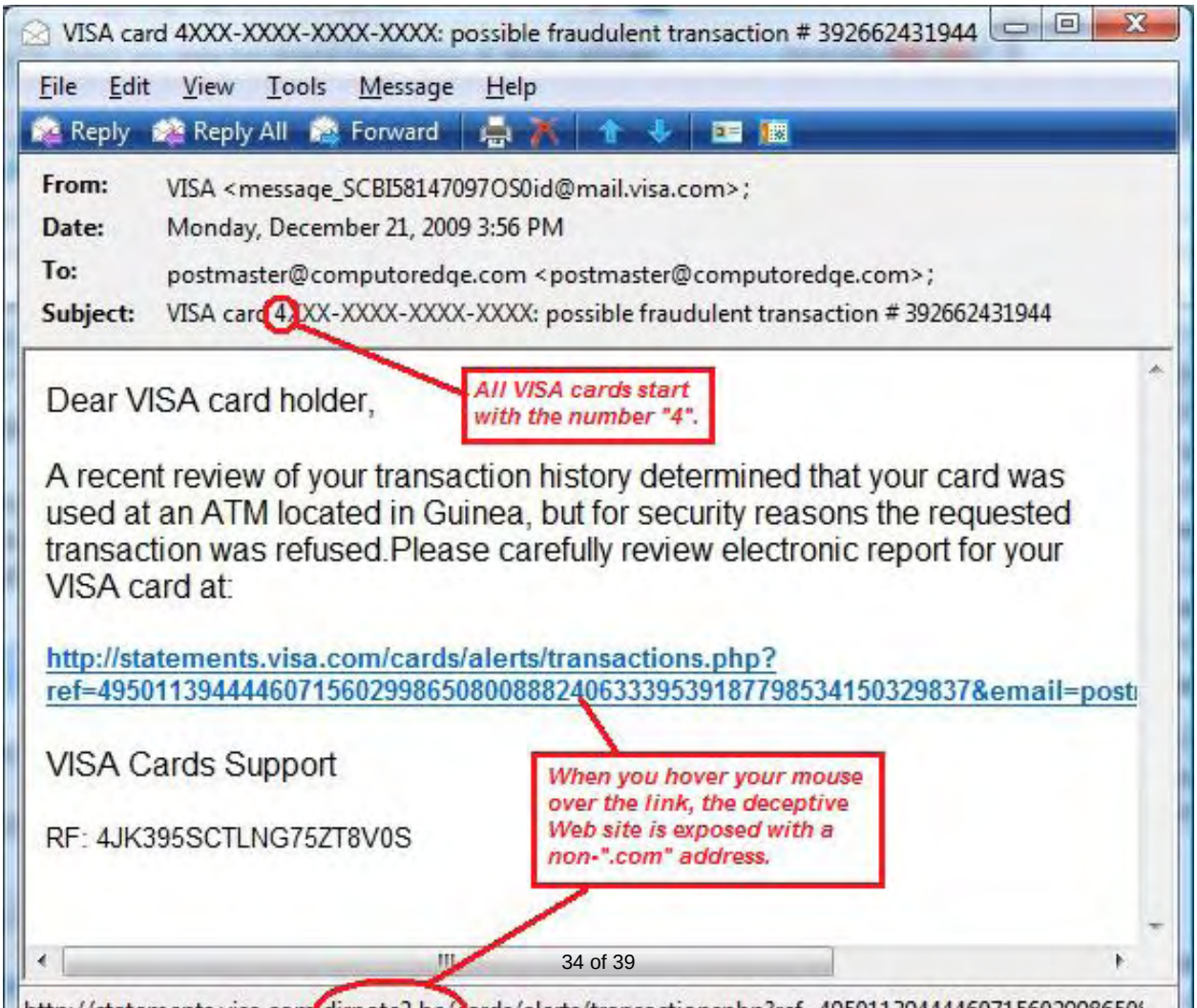
"The latest in annoying and dangerous e-mail currently making the rounds." by ComputorEdge Staff

This week, the spammers are phishing for Visa card holders. That can't be more than a billion people!

This week, the spammers are phishing for Visa card holders (see Figure 1). That can't be more than a billion people.

The fake e-mails are claiming that someone in a remote location has tried to make a fraudulent transaction with your Visa card—the one that starts with the number "4." What a coincidence? Your Visa has "4" as the first number. (They all begin with "4.") Fortunately, these guys stopped them! Yeah, right!

The locations where the perpetrator tried to use your card are all believable: Belize, Central African Republic (Is that a real country? Yes!), Liechtenstein, Malaysia, Guinea, Angola, Ukraine, Bulgaria, Ireland (Hey!?), Tunisia, Costa Rica, and the Russian Federation—to name a few.



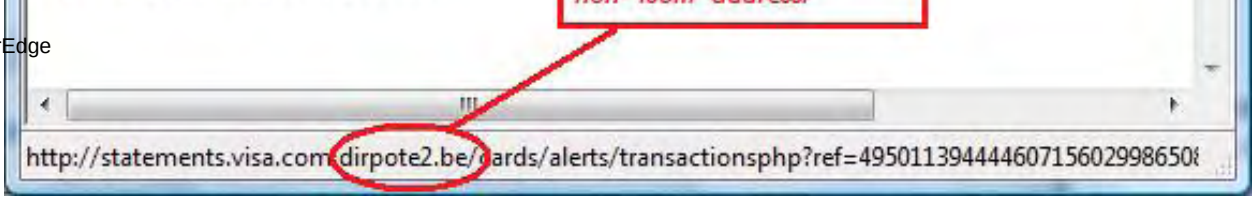


Figure 1. Visa Spam of the week.

It wasn't your photo last week, and this is not your Visa card, nor should you follow the link. Just delete 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*.

Return to Table of Contents

EdgeWord: A Note from the Publisher

"ComputorEdge wishes you a happy holiday and a prosperous new decade." by Jack Dunning

Technology is the essence of hope. No matter how bad the economy, how screwed up the politicians, how depressing the state of society, there is a new technological future just around the corner.

This wraps up another year and another decade. It has been my observation that when we are young we count each year. As we mature, we count the decades. Rather than being specifically 24 or 25 years old, we may be in our 40s, 50s, or another well-aged decade. *ComputorEdge* is in its third decade and after a couple more years will start its fourth 10-year period. One thing is certain about the future—technology and how it impacts us will continue to evolve.

In 1983 when *ComputorEdge* was launched, CP/M computers were the rage. (512K of RAM was power in those days.) The IBM PC (and MS-DOS) was just starting to take over the market. Many consultants in the computer market were still insisting that there would always be a place for mini-computers (big boxes that served dumb workstations). The primary applications were word processing (WordPerfect), spreadsheets (VisiCalc), and some database (dBase). Few were dreaming that the Internet would become a dominant force in computing.

It has been a period of creative destruction—although not necessary desired. Typesetting businesses are long gone. Stockbrokers have found it much harder to survive. The U.S. Postal service falls further behind every year. The print industry is in a major—probably irreversible—decline. (We are reluctantly becoming the paperless society.) There is almost no business that hasn't been affected by computers and the Internet—except possibly barbershops. It has been upheaval in one form or another for almost everyone.

Yet, as uncertain as these technology-driven times may have been, they have brought forward the essence of the old sci-fi movies. The fact that my wife and I can sit at our computer and hold a live video session with our kids and their kids sums it up for me. What we fantasized about doing as children, we are now doing as adults. It was brought about by computers and the Internet.

I'm looking forward to what comes next. That's the fascinating part of technology. It is the essence of hope. No matter how bad the economy, how screwed up the politicians, how depressing the state of society, there is a new technological future just around the corner. It is rejuvenating to see people sinking their lives into an obscure high-tech development that just may be that next big thing. Most may not succeed, but the entrepreneurial spirit lives on, in spite of the intrusions of politics and big government.

The next 10 years will be exciting—I have no doubt.

ComputorEdge wishes you a happy holiday and a prosperous new decade.

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*

Return to Table of Contents

Editor's Letters: Tips and Thoughts from Readers

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

"Cheap-But-Good MP3 Player?," "Where's the Memory?," "Welcome XP Feature," "Identity Theft Protection"

Cheap-But-Good MP3 Player?

[Regarding Pete Choppin's December 4 article, "The Nuts and Bolts of MP3 Players":]

Thank you for the wonderful article on MP3 players. I currently have a very cheap player with a small screen. In order to find the song I want to play, I have to click and click, while the name of each song appears singly on the screen. The clicker works intermittently and it's a pain, plus I can't get it to erase the songs that are on it.

My grandchildren have iPod Nanos, and I am jealous, but I do not want to pay $150. Is there a player that would show me a list of songs installed and allow me to highlight the song I want to play? I don't want to download a lot of songs, nor video or pictures. I just want it to operate like a Nano for less money. I often look at cheaper ones in the stores, but the information I am looking for is not on the back of the package. I would appreciate any help you can give me.

-Sally

Sally,

Thank you for your kind words and for reading my article in ComputorEdge*.*

It looks like you have discovered that in the high-tech world of gadgets, nothing of high quality is very cheap, or using my dad's vernacular, "you get what you pay for." My take on how to buy tech gadgets is that I am one who likes to be informed when I make a purchase. I would rather spend $100 for something that I have researched and know the features and capabilities of than to pay $10 for something that I did not know anything about and will be disappointed in anyway.

Unfortunately, I have not personally tried out very many MP3 players myself. I can, however, give you some Web sites where MP3 players are reviewed and categorized by price and features.

I recommend checking the following sites for reviews on MP3 players. These should give you more information from which you can make an educated purchase. Even if you do end up spending more money than you wanted, at least you will know what you are buying and why:

- *CNET Reviews (*reviews.cnet.com/mp3-players/*)*
- *PC Magazine (*www.pcmag.com/category2/0,2806,2359,00.asp*)*
- *ConsumerSearch (*www.consumersearch.com/mp3-players*)*
- *MP3.com (*www.mp3.com/hardware.php*)*

-Pete

Where's the Memory

[Regarding Pete Choppin's November 27 article, "Picking Computer Hardware":]

[Pete] wrote, ". .. you can never have too much memory (there was a limit of just over 3GB RAM for Windows XP. This has been fixed with 64-bit Windows 7)."

I put 4GB into my eMachine T6420 (AMD Athlon 64 2.2 GHz), running XP 32-bit and discovered exactly what you wrote. So, I installed Win 7 64-bit and thought it would solve the problem, but nooooo. I'm still getting "Installed memory: 4.00 GB (3.12 GB usable)." What can I do wake up that sleeping RAM?

-Ken Schuster

Ken,

I have done some looking into this, and indeed there appears to be some catches to the RAM upper limit maximum for Windows 7.

First, we should make the distinction between 32-bit and 64-bit operating systems, in that it is not technically possible for any *32-bit OS to be able to use more than about 3.5GB of RAM. The 32-bit architecture simply cannot accommodate any more address space to support anything higher.*

64-bit architecture is another story. These operating systems can make use of a lot more address space—a lot more.

*Another thing I ran across is something called Physical Address Extension (PAE) (*en.wikipedia.org/wiki/Physical_Address_Extension*). This is a feature for the x86 and x86-64 architectures—the latter is a hybrid of the 32-bit and 64-bit OS's and can function in either mode. The concept of PAE is that you can theoretically extend the address space of the OS to accommodate higher amounts of RAM than what the 32-bit architecture will allow. This is actually a function of the CPU memory addressing capabilities. However, further reading (*blogs.msdn.com/oldnewthing/archive/2004/08/18/216492.aspx*) has shown that this is a misnomer because it is still limited to the 32-bit architecture limitations of the CPU, which physically cannot be exceeded.*

Now, I know this all sounds interesting and is keeping you on the edge of your seat for some kind of answer to your dilemma. However, none of this explains how you might still be seeing a memory limitation of your system, which is now using a 64-bit operating system.

*A couple of things that may be limiting you: (1) Is your video card integrated on your motherboard, and therefore possibly using some of your memory? I read a few discussion threads where this was the case. And I am particularly suspecting this to be your case since your OS is reporting only 3.12GB instead of 3.5 which is the typical limit for a 32-bit OS. (2) Are you certain you are in fact using a 64-bit architecture? It is possible that you have installed the hybrid of a 32/64-bit OS (which is what Windows 7 (*msdn.microsoft.com/en-us/library/aa366778%28VS.85%29.aspx#physical_memory_limits_windows_7*) is). To take full advantage of the 64-bit architecture of the OS, your hardware must be 64-bit as well. This means you may need to move to the newer Core i7 technology [*www.intel.com/products/processor/corei7/index.htm*], which unfortunately means a complete system board, CPU, and memory purchase in order to take advantage of the true 64-bit features of your OS. I do see you noted you are using an AMD Athlon 64-bit chip and this may be true 64-bit. I'm an Intel guy, myself, and I am not completely familiar with the AMD processors so I am not able to advise you there.*

I hope this helps. It may at least give you a few things to think about.

-Pete

Welcome XP Feature

[Regarding the December 4 Windows Tips and Tricks: Another Handy Free Windows Utility column:]

A most welcome article on the use of a feature in XP that I have never seen mentioned anywhere else. Will now spend part of the weekend working through all the details.

Many thanks,

-Allen Gates, San Diego, CA

Identity Theft Protection

[Regarding the December 4 Worldwide News & Product Reviews column, one security tip listed was:] "Manually search your computer for your credit card number, as it can be saved in your computer."

How do I manually search the computer?

Thanks,

-Chuck Schroeder, El Cajon

In Windows 7 and Vista, text in files is indexed by default. A search in the Start menu should do the trick. Just type in part of your SSN. In XP, searching for the text in files is an option in the wizard opened from the Start menu. —Editor

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