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# M O N I T O R

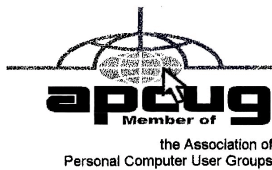
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## HangTen

### How to Get the Most out of Your Web Surfing

by Beverly Rosenbaum

*Houston Area League of PC Users, TX*

**M**any people consider “Google” to be synonymous with web searching, implying that it is the only search engine available. Indeed, practically everyone uses the word “Google” as a verb to describe searching the Internet, much like “Xeroxing” is intended to mean photocopying. But Google is only one

of hundreds of search engines and search tools available. And, depending upon what information you're seeking, selecting the best one can improve the success of your search. This is especially true when searching for more specialized technical, legal, medical or scientific information. As an example, Google would be a poor choice when looking for job opportunities, while there are more than ten job search engines that would yield much better results.

So exactly how do search engines work, and why would you need them? They're actually tools designed to retrieve content from Internet indexes based on criteria defined by you, the user. These databases contain information collected from billions of pages and documents that are on the Internet. Google claims an index of more than 3.3 billion pages, and Yahoo more than 3.1 billion! Think of a search engine as a card catalog in a huge library, to help you locate the information you need without having to examine every single book yourself.

When you sit at your computer and submit a search, you are presented with a list of results almost immediately. The speed of this search varies from one engine to another, and the results are often different because each search engine uses a different ranking process. And you're probably wondering how search engines can collect information from so many pages that are constantly changing. To do this, they use software programs called "robots" or "crawlers" or "spiders" to continually follow hyperlinks from one document to another all around the Web. When these programs discover new links, updated pages, or dead links, they send that information back to their main site to be indexed. Google's Googlebots fetch not only titles and text, but also copies of the page contents, and return them to their index stored on a huge set of computers. That is how you're able to view from a Google search result a "cached" copy of how a web page last appeared, when the site may be currently unavailable.

An estimated 30 billion web pages are linked to more than 100 million web sites, and every single page has a unique address or URL (Uniform Resource Locator) to specify its location. This address incorporates three components—1) the protocol, 2) the domain name or IP address where the resource is located, and 3) the path and file name. The protocol identifier is separated from the resource by a colon and two forward slashes; for HTTP (Hypertext Transfer Protocol), the resource name would always begin with "www." The parts of the domain name or IP address are separated with periods, and single forward slashes separate the domain from the path of the files. So in this example—[http://www.hal-pc.org/journal/2009/09\\_feb/index.html](http://www.hal-pc.org/journal/2009/09_feb/index.html)—the protocol is HTTP, the domain name is [www.hal-pc.org](http://www.hal-pc.org), and [journal/2009/09\\_feb/index.html](http://www.hal-pc.org/journal/2009/09_feb/index.html) is the path for the index page of the February 2009 issue of *HAL-PC Magazine*.

## Site Maps Play an Important Role

To improve visibility and inform search engines about the pages on their site, webmasters create a text document outline of those links called a Site Map. This is a standard inclusion for web sites, and is always located at the root of the server. The URL for ours is [www.hal-pc.org/sitemap.html](http://www.hal-pc.org/sitemap.html). The Site Map is an XML file that contains URLs for the site along with additional information about each URL (when it was last updated, how often it usually changes, and how important it is, relative to other URLs in the site), enabling search engines to more intelligently "crawl" the site. So the information from Site Maps augments the data collected in the "crawling" process. In addition, visitors to specific web sites often seek out and use the Site Map to find the page they need more quickly. This "bird's-eye view" of the site's content shows the structure and layout, and allows one-click access to all the topics.

Visually impaired users who employ text readers to help them surf the Internet are also able to navigate web sites much more easily with a good Site Map. They are as important for human visitors as for the automated indexing “crawlers.”

You can imagine how single web pages that are not linked to any other page would never appear in the search engine results. Google first introduced the Sitemap Protocol in June 2005 so web developers could publish lists of links from across their sites. The next year Google, Yahoo, and MSN announced their joint support, followed by other search engines, and state governments were the first to announce that they would use Site Maps on their web sites.

## How to Search

I'm sure you've often entered a search term and either gotten too many pages of results or nothing at all. Here are a few rules to remember: The most important thing to do is keep the search simple—describe what you are looking for in as few words as possible. If you'd like to search for an exact phrase, enclose the words within quotation marks. You can exclude certain words by appending them to the search terms, preceded by a space and then a minus sign (-). Placing a plus sign (+) immediately before the search term will yield only an exact match and no synonyms.

The biggest general search engines include Google ([www.google.com/](http://www.google.com/)), Yahoo ([www.yahoo.com/](http://www.yahoo.com/)), and Ask ([www.ask.com](http://www.ask.com)). While Google and Yahoo process search terms similarly, Ask allows you to enter your search in the form of a natural question, such “How do I make a resume?”

Both Yahoo and Ask also provide kid-oriented search engines at [kids.yahoo.com](http://kids.yahoo.com) and [www.askkids.com](http://www.askkids.com).

In meta-search engines like Dogpile ([www.dogpile.com/](http://www.dogpile.com/)), Mamma ([www.mamma.com/](http://www.mamma.com/)), Clusty ([clusty.com](http://clusty.com)), or Copernic ([find.copernic.com/](http://find.copernic.com/)), the keywords you submit in the search box are transmitted simultaneously to several individual search engines and their databases of web pages. Within a few seconds, you are presented the results from all the search engines queried. Meta-search engines do not have their own database of Web pages, they search the indexes maintained by other search engine companies. Most send their queries to smaller, free search engines and directories, but Dogpile uses Google, Yahoo, Ask.com, and MSN Livesearch. Many search engines blend into the results any sites that have purchased ranking and inclusion, so you'll see “sponsored” links below or beside the search results.

## Waiting 17 Years for an Engine

A new search engine is due to come online later this year as a result of the Anti Car Theft Act of 1992 (Public Law 102-519). The National Motor Vehicle Title Information System (NMVTIS) will provide a searchable database of Vehicle Identification Numbers (VINs) to avoid fraudulent retitling of salvaged vehicles. This system will provide an electronic means to verify and exchange titling, brand, and theft data among motor vehicle administrators, law enforcement officials, prospective purchasers, and insurance carriers, and allows state titling agencies to verify the validity of ownership documents before they issue new titles. It has taken thus far 17 years to accomplish a piece of legislation that a majority of Congress obviously agreed would benefit the public. When available, it will be found at [www.nmvtis.gov/](http://www.nmvtis.gov/).

At the end of 2008 Google controlled 72% of all searches in the US, Yahoo had 14%, and

MSN 8%, for a total of 94%. So all the other search engines together have 6% market share. In future columns we'll explore what you may be missing. Did you ever want more information about some of the people in the news? There are lots of reference engines, and even a pronunciation engine that provides both phonetic and audible assistance from 50 resources.

The Internet is a great place to find information on any topic by letting your fingers do the walking on your keyboard. In future columns, we'll delve more deeply into search strategies and how to select the best tools for your needs. If you have any search queries, questions, or favorite search tools to share, send them to [webwindow@hal-pc.org](mailto:webwindow@hal-pc.org).

*Beverly Rosenbaum, a HAL-PC member, is a 1999 and 2000 Houston Press Club "Excellence in Journalism" award winner. This article has been obtained from APCUG with the author's permission for publication by APCUG member groups; all other uses require the permission of the author (webwindow (at) hal-pc.org).*

## Networking for Dummies (Part 2)

by Ron Hirsch

*Boca Raton Computer Society, FL*

In Part 1, I reviewed the history of my first network installation about 7 years ago, and the difficulties I encountered. Part 2 will cover all the work I did to essentially replace the old network, since the main wireless router had failed. For all practical purposes, the work involved now would have been the same as if this were a new network installation, starting from scratch.

### The Purpose of a Home Network

The main purpose of most home networks is to share an internet connection among several computers. Using a wireless router typically provides 4 plug-in ports for hard wired cable connections, and a receiver/transmitter which broadcasts the connection wirelessly, with a typical range of up to 300 feet, depending upon the router, the surroundings, walls, etc.. You can of course share files, printers, et al, should you wish to do so, but configuring this is done after the initial setup.

### You Will Need the Following

First you will need a wireless router. The two current main varieties of routers are the "G" and "N" series. The "G" series wireless capability can handle up to 54 Mbps (megabits per second), and the "N" series is roughly twice as fast. But for home use, the "G" series hardware is more than fast enough for any high speed cable modem connection. And the "G" series runs at 2.4 Ghz, as opposed to a much higher frequency for the "N" series. Considering all the spec variables between "G" and "N," I would recommend the "G" series, since it is also more readily compatible with earlier hardware types, especially "B." I used a Linksys WRT54GL for this new install. The price range for this is in the \$70 region, depending upon your choice of vendors.

This router comes with an installation CD. Just run the CD, and follow the instructions which are plainly and clearly presented. In the areas of security, I would accept the suggestions made along the way. You will have to establish some passwords et al, and connect things up as directed. From what I've seen, most routers today come with a good install CD. Before you buy your router, check to make sure that is the case for the unit you choose.

There may be one window which comes up along the way, where there are fields to be

filled in re IP addresses, gateways, etc. But the one key item to be selected is the choice of static or dynamic IP addresses. In most instances, such as Comcast, dynamic IP addresses are used, and when that choice is made in the window, all the other fields disappear, making life that much easier. Locate the router as high up as possible.

A computer cable modem is required. But if you already have an Internet service provider, you already have the necessary modem in place and working. For a number of years, I rented the cable modem, for \$5 per month on my Comcast cable bill. You are allowed to purchase your own modem, which I did, and save the monthly charge. A suitable Motorola cable modem will cost in the \$40-\$55 region, and will quickly pay for itself. Of course, if you own it, you are responsible for it. Cable modems seem to have very long life however.

Several lengths of Ethernet Cat-5 cable with RJ-45 connectors You will need one length to connect the cable modem to the wireless router, and then another length to connect the router to your computer. You can, of course, have all your computers run via a wireless adapter. But it is usually better to have your “main” computer hard wired to the router. However, if your cable modem is in a location which is not convenient for this, all computers can run in the wireless mode. Most routers come with one length of cable. If you need more, CompUSA is as good place as any to go. Even Office Depot may carry the needed cables.

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## Windows 7 Tips

**Q. Now that Windows 7 has been released, what's your impression of it and do you have any new-user tips?**

A. I've been using Windows 7 since its initial beta version and I remain impressed. I would characterize it as Vista, but without the quirks. (I'm being diplomatic.) Bottom line, Windows 7 is a good, solid operating system and at least at this stage, Microsoft appears to have redeemed itself from its V-word debacle.

If you are using Windows 7, or if it's in your future, I added a new Windows 7 section to my weekly "Ask Mr. Modem!" newsletter ([www.MrModem.com](http://www.MrModem.com)). Heading into its tenth year of publication, each week I deliver helpful, easy-to-understand tips for all versions of Windows, as well as prompt, personal responses to subscribers' questions by email.

As far as Windows 7 tips, here are four little "teaser tips" from my newsletter:

1. The Show Desktop feature that was used to minimize all open windows in XP and Vista has been replaced by Aero Peek. Peek is enabled by mousing over a "glass" rectangular area in the lower right-hand corner of the screen, to the right of the time display. When you mouse over this little panel, all open windows are hidden and replaced by window outlines. If you

prefer the older style “Show Desktop” effect, click the little panel instead of mousing over it and all open windows will minimize.

2. Gone, too, is the Quick Launch bar in Windows 7, but the new Taskbar effectively serves the same function. If your Win 7 Taskbar is taking up too much room because of its large icons, right-click the Start orb, click Properties > Taskbar > Use small icons > OK.

3. If you drag one window to the left side of the screen and another to the right, the windows will instantly resize, each filling half the screen, so you can easily use them side by side. Love it!

4. Windows 7 includes a number of new keyboard shortcuts. A few of my favorites include: The Windows (Logo) Key + G displays gadgets in front of other windows. The Windows Key + Up maximizes the current window, while the WinKey + Down minimizes the current window. The WinKey + Spacebar causes all windows to become transparent so you can see through to the Desktop, and the WinKey + (+ or -) will zoom in or out.

**Q. I downloaded a font that I like, but I can't figure out how to install it in my word processor. I followed instructions, but the font doesn't appear in the list of available fonts. Can you help, Mr. M?**

A. In this instance, don't install your new font into the word processor itself, install it in Windows where other programs can then access it. To do this, using Windows Explorer, for example, copy the font file into your C:\Windows\Fonts folder, or whatever folder is appropriate for your system if it's configured other than in this manner, which is typical. Then go to Control Panel > Fonts > File > Install New Fonts. In the Add Fonts dialog box, navigate to the C:\Windows\Fonts folder, or whatever folder is appropriate on your system. Double-click to open the folder.

Under “List of Fonts,” click to select your new font, then click OK. Restart your computer and the font will then be available for use in all Windows programs, including your word processor.

**Q. I understand there are methods and devices that can transfer 35mm slides to a hard drive or CD. What can you tell me about them and where can they be purchased?**

A. There are a number of methods for converting slides to digital images that are described in detail in the following articles: “Converting Your 35mm Slides to Digital Format,” at <http://tinyurl.com/tze8j>, and “How to Convert 35mm Slides to Digital,” at <http://tinyurl.com/yjofg6j>.

There are also devices that can perform the conversion (<http://tinyurl.com/yl6oedl>), or you can use any number of professional services, such as Larsen Digital Slide Scanning at [www.slidescanning.com/slides.htm](http://www.slidescanning.com/slides.htm).

## **Mr. Modem's DME (Don't Miss 'Em) Sites of the Month**

### **Roadside Peek**

Get comfy and enjoy an open-road journey back through time. Travel old routes (including the legendary Route 66) across America. See the old motels, bowling alleys, drive-in theatres (remember drive-ins?), neon signs, petrol pumps, tacky tiki villages, and other roadside treasures. The site's default font is a bit small for my trifocals, so if you want to enlarge the font, click View > Text or Zoom in your browser or press CTRL and the + sign.

[www.roadsidepeek.com](http://www.roadsidepeek.com)

### **Shakespeare Insult Kit**

Shakespeare was, of course, a brilliant writer, but he also had a cutting wit that could

skewer an adversary faster than you can retort, “Says who, thou fobbing, earth-vexing dewberry?” Use this site to create your own Shakespearean insults. Choose an entry from each of three columns, string them together, precede the phrase with “thou,” and you’ve got an insult worthy of a 17th century poet, thou calumnious, muddy-mettled mumblemeus.

<http://tinyurl.com/yez5m9v>

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## Hints for the Wannabe Blogger

by Joan McIlmoyl Cleghorn  
*Big Blue and Cousins, BC, Canada*

### Do I Need or Want to Have a Blog?

**N**ow, for many, the first question is “what on earth is a blog?” and, “why would I want one?” The origin of the actual word ‘blog’ comes from the definition of what it really is—a **web log**—which then became shortened to ‘blog’.

People are using blogs for many varied purposes. Some use them like a personal diary, as though the world is truly fascinated by the minutiae of their daily lives (though in the case of celebs, that may be the case). Others, for sharing their knowledge of a particular subject which doesn’t necessarily lend itself to publishing a book; and still reporting on the constantly changing happenings in a specific area of interest. In many instances now, professional reporters, whether radio, TV or in print, are writing blogs as well as their regular reporting functions. Others, for reporting on the constantly changing happenings in a specific area of interest.

There are two advantages of using blogs over publishing in the more traditional ways—first, they can be interactive, allowing the readers to make comments, add to the information or contradict the writer; and, second, as mentioned, the ability to update immediately with new or additional information.

My purpose in starting a blog at the end of June was prompted by an article in the Family Chronicle which pointed out how, by publishing a family history book, relations that you’d never known or connected with would suddenly contact you.

This struck a chord with me as I was in the midst of planning a family history book and wanted to connect with others researching this same family. Obviously, publishing a book wasn’t the answer for my particular situation.

After some thought on this, I decided to investigate what was involved in creating a blog, thinking this might accomplish my purpose. Of course, one can use any of the social media sites such as MySpace, Facebook, etc. as a type of blog. However, I was looking for specific ‘blog’ sites. Well, typing ‘free blog sites’ into Google gave me far more results than I could have dreamed of! Fortunately, there were two with which I was somewhat familiar so I opted to check them out first.

I wanted simple and easy to use.....nothing fancy, just the ability to type whatever I wanted to post and have it work. Obviously I was asking a lot for anything connected with technology right? Actually, wrong. I was able to set up the blog, type out my first posting and have it

online within an hour!

You want a site that gives clear, easy to understand directions and allows you to have some choices on the appearance or theme of your blog. Also, if you want some interaction with your readers, make it easy for them to add their comments. The site I chose definitely qualified under these points; much more so than the second site I checked out. I also checked out a few that I wasn't as familiar with and found that my first choice was still the best for my purpose. The two choices I initially checked out were Google's Blogspot and Wordpress. They can be found at [www.blogspot.com](http://www.blogspot.com) and [www.wordpress.com](http://www.wordpress.com); however, be sure to check out some of the others as well.

Should you decide to start a blog, there is one caveat I'd both read about as well as heard about from others—don't start posting, and collecting followers of the site, only to lose interest, and just stop posting, or become very erratic in your postings. When first starting my blog, I hoped to post about three times a week, with no less than once a week. In the nine weeks since I started, I've made 18 posts so have averaged two per week, even though I had a couple of weeks when I didn't make any posts due to the death of my mother.

Now, was posting my blog successful in my original purpose? So far, yes. I've heard from a couple of researchers with whom I'd lost contact a number of years ago, plus another couple of whom I'd never heard, so I certainly accomplished that part of my goal. Another bonus is the information I'm gaining from those connections that I might not have otherwise found. Should you wish to take a look at my blog, here's the address: [www.mcilmoylfamna.blogspot.com](http://www.mcilmoylfamna.blogspot.com). If you decide that having a blog is something you'd like to do, I wish you well, and have fun with it! For tips on 'how to blog' just type 'blog tutorial' into a search engine and you'll find lots of choices.

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## Free Laptop Protection

If your laptop is stolen, you aren't just out your laptop, you lose all the personal data, and possibly even your identity. With Prey, you can fight back. Install a simple, light-weight program and, within minutes, you are protected.

Should your laptop go missing, simply go to their website and report it. Prey will leap into action, silently connecting your laptop to any available network. It then starts sending back reports, documenting the current IP, sending screen-shots of what the thief is doing, and even sending photos (if you have a webcam).

Best of all, Prey is free open-source software, so there is no excuse for not putting it on your laptop today!

<http://www.PreysProject.com>

## Making Windows More Legible

by Gary Bentley

*Southwest International Personal Computer Club, El Paso, TX*

Have you noticed that each time you purchase a new computer with a higher resolution screen you find everything on the screen looks smaller than it did on the lower



resolution monitor screen (if the diagonal size of your monitor was increased you might offset this phenomenon somewhat, but still be surprised that things looked about the same size in that case)?

This is because the Windows operating system assumes that the actual number of pixels per actual inch lighting up on your monitor screen is 96, i.e., 96 DPI (“dots” per physical inch) is assumed by the operating system.

Why would this assumption make things (icons, pictures, text, etc.) look smaller on a monitor that had higher native resolution (native resolution meaning the actual number of pixels lighting up per actual physical inch on your screen)?

Let us look at a real-world example. My Dell Latitude D620 has a 14 inch diagonal LCD screen with 1440 (horizontal) by 900 (vertical) pixels (native resolution, i.e., actual LCD pixels). How many DPI, i.e., pixels per inch is my screen? Well, recalling the Scarecrow’s recitation in the Wizard Of Oz when he received his “brain diploma” (or what he should have said, since he actually misstated the Pythagorean theorem—we can only assume that the Wizard did not want to damage Scarecrow’s self-esteem by correcting him), we know that the 14 inch diagonal on my screen is the hypotenuse of a right triangle, the sides of which are 1440 and 900 pixels. So we can take the square root of the sum of the squares of those two sides and that will give us the number of pixels along the 14 inch diagonal. The square root of 1440 squared plus 900 squared is, using Wolfram | Alpha (<http://www.wolframalpha.com/examples/Math.html>, use the basic arithmetic box there), 1698. Note that Wolfram uses standard means of entering mathematical operators. You might have to look those up and make adjustments, e.g., I asked for the square root by telling Wolfram to take the parenthetical operations to the 0.5 power since I knew how to enter the exponentiation operator (“^”), but not a square root sign (a radical sign).

So we have 1698 pixels along my 14 inch screen diagonal, or  $1698 \text{ pixels}/14 \text{ inches} = 121 \text{ pixels per inch}$  (121 DPI). How wide is one pixel?  $1 \text{ inch}/121 \text{ pixels} = 0.008264 \text{ inch per pixel}$ . Why would this make things smaller on my Windows desktop? Well, Windows assumes 96 pixels make an inch, so an inch on my screen is now  $96 \times 0.008264$  or 0.79 inch. So everything on my Windows desktop is only 80% of the size it would be if there were actually 96 pixels per inch on my screen. I can verify that my calculations are correct by setting Microsoft Word to display an 8.5 x 11 inch standard document at 100% size. When I measure the width of that document on my screen I obtain  $6 \frac{13}{16}$  inches or 6.8125 inches.  $6.8125/8.5 = 0.80$ , i.e., the 8.5 inch wide document is displayed at 80% of its actual size as we calculated would occur.

This means that text fonts are 80% of their intended size on my screen also. Fonts are defined in terms of points. A point is defined as  $1/72$  inch, i.e., 72 points per inch. Windows assumes there are 96 pixels per inch, so a Windows logical point is  $96/72 = 1.333$  device independent pixels. A 10 point font should be around  $10 \times 1.333$  pixels or 13 pixels vertical (leaving aside details of leading, etc.). That would be  $13/96 = 0.13$  inches high roughly on a 96 DPI monitor. On my 121 DPI monitor that 10 point font would only be  $13/121 = 0.10$  inch high approximately, again about 80% smaller.

A Microsoft study indicates about 55% of people reduce the resolution of their monitors (configure Windows screen resolution in Display Properties for a lower value), presumably to make the text and other items on their computer screen larger. For example, if I changed my laptop screen resolution to 800 x 600 there would be fewer Windows pixels to cover the same area, so the “pixels” would be larger, making everything constructed with those fat pixels

larger too. Fat pixels make fuzzy or pixilated images, though they are larger images. This is rather like purchasing a \$474 Canon EOS Rebel with 10 Megapixel resolution and then setting it to take 640 x 480 photos (when you have paid for a camera that can take 3648 x 2736 pixel photos roughly).

A better way to increase the size of text and other items on your screen is to use Windows DPI scaling. You can tell the operating system that you want an inch on your screen to be made up of more than 96 dots/pixels (if you don't have a monitor with more than 96 actual dots per inch this would not work as well, since the operating system would have to "fake" the additional pixel density using mathematical algorithms). In Windows XP you can right click on the Desktop, select Properties, then Settings, then Advanced, then DPI setting. Choose more dots per inch, say 120 DPI. Go higher if needed. Evaluate the effect in normal use of your system.

In Windows Vista, Open Personalization by clicking the Start button, clicking Control Panel, clicking Appearance and Personalization, and then clicking Personalization. In the left pane, click Adjust font size (DPI). If you are prompted for an administrator password or confirmation, type the password or provide confirmation. In the DPI Scaling dialog box, increase the size of text and other items on the screen by clicking Larger scale (120 DPI)—make text more readable, and then click OK. You can use higher DPI settings to obtain still larger fonts and objects.

If we chose to scale up to 120 DPI on my laptop, then an inch would be 120 dots/pixels and a Windows inch on my screen would indeed be an inch, restoring the size of items on my screen to that of a typical 96 DPI monitor. I should note that Internet Explorer 7 and 8 both have a zoom feature which will enlarge text and other items on a web page. This is a separate issue in some respects.

How big would that 10 point font be if you used a 64.5 inch diagonal HDTV with 1920 x 1080 native resolution with PC VGA input for your computer monitor? Calculate screen DPI: 34 DPI (calculate the number of pixels in the 64.5 inch diagonal for 1920 x 1080 pixel right triangle as we did above; divide that number of pixels by 64.5 inches). Simply looking at the ratio, the HDTV pixels would be 96/34 or 2.82 times larger than a 96 DPI monitor. So, a 10 point font might be around  $0.13 \text{ inch} \times 2.82 = 0.36 \text{ inches}$  high---over a third of an inch. And if you scaled up your Windows DPI setting to 200 DPI, you might get that 10 point font up to 0.8 inches high (over three quarters of an inch high) on that 64.5 inch \$4,000 dollar HDTV computer monitor.

I have barely scratched the surface on this topic, but I hope I have said enough to give you some ideas about making things more visible on your computer screen without throwing away the high resolution of your monitor.

*Mr. Bentley studied electrical engineering at the University of Texas, began working in the electronics industry in 1978 with GTE Network Systems (Lenkurt), then software engineering with various startups in the 1980's, designing and implementing, among other things, pre-Internet email communications systems multitasking on Intel platforms and MSDOS PC's 1984 -1986. Gary now provides Information Technology consulting services in the El Paso, TX and Las Cruces, NM areas. Gary has edited and contributed articles to the award-winning Southwest International Personal Computer Club monthly magazine, Throughput, since December, 2003.*

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# Finding Our Roots

by Constance Brown

*Canton Alliance Massillon Users Group, OH*

**F**inding our roots has become important to many families as they begin realizing that much of the past will be lost as those who have been a part of our lives forever begin to slip away. Capturing the information the older generation knows about our families, recording the stories of their joys and struggles, and discovering the strength that sustained them is an important part of preserving our family history. Not everyone has the patience to research their family roots, but those who do may find surprises along the way: family members they have not met in the past, ancestors who actively created history, others whose lives were an embarrassment to their families and society. When you research genealogy, you have to be prepared for it all!

If you are ready to find out more about your roots, the Internet offers an abundance of materials to help you locate information that will shed light on world events that shaped the lives of your ancestors. Other sites will help you locate missing pieces of the genealogical puzzle. Here are a few sites you will want to visit. First is FamilySearch.org, the official genealogy records site hosted by the Church of Jesus Christ of Latter Day Saints in Salt Lake City.

Not only do they provide free genealogical software, but also a huge database of records including census, military, marriage, and death records. If you are looking specifically for death certificates, they can be found at <http://familysearchlabs.org/>. The records are for dates after 1908 and prior to 1953.

Newer death certificates can be found at the County Health Department of the county where the individual died or your state's health department. The records at Family Search are free. Newer records typically cost \$17.95. Family search also provides at no charge the ability to permanently archive your family tree, making it available for download or on CD.

Another of my favorite sites is found at <http://www.usgenweb.org>. The UsGenWeb project is developing as volunteers add information to the site. The amount and type of information for each state varies. If you click on Ohio, you will find each county listed. Under them is the information that has been preserved for that county. More is added regularly. I checked Clinton County where my paternal grandparents lived and was delighted to find the old Clinton County history book preserved and readable there.

Yes, I read about my great great grandfather Jonathan McKay! As I searched Vigo County in Indiana, I was surprised to find the newspaper obituaries for my grandmother Harvey who died in 1982 as well as my aunt whom we buried on Christmas Eve in 2001.

I found that watching Robert Ragan's 5 minute Genealogy Courses was a great help. He gives a number of tips on how to find information about your family using specialized Google searches.

Here are links to some of his materials:

[www.5minutegenealogy.com](http://www.5minutegenealogy.com)

<http://www.youtube.com/user/5minutegenealogy>

<http://amberskyline.com/treasuremaps/>

If understanding the political, economic, and scientific events that were shaping the times

in which your ancestors lived, you will want to visit Google's Time Line at <http://newstimeline.googlelabs.com>. You may also want to check through the lists of Google Books to see what books were read and shaping the lives of that generation.

Here are a few a few more helpful tips. Robert Sizelove has spent a life-time photographing cemeteries with a special focus on stones that are difficult to read and cemeteries that are not visited frequently. If you have pictures of any tombstones, he appreciates your sending them to him so they can be uploaded to the USGenWeb project and other sites to preserve these memorials.

To look at cemetery pictures he has collected, do a Google Search for Robert Sizelove along with the county and state name, putting both into the search box, e.g. robert sizelove stark county ohio.

Not all research can be done free.

One of my distant cousins works at a family history center for the Latter Day Saints. She has created 60 family genealogies and has researched and traced the family tree to 168 AD. The only site for which she pays a fee is Ancestry.com. Most other paid sites eventually send you there, so you might as well pay that fee. When you upload your GedCom file, Ancestry.com looks for possible connections to other uploaded ancestral files and places a leaf by the name on your family tree that may be connected to a name on another family tree. This feature allows you to expand your tree much more quickly than doing all the research yourself. Caution. Make sure the information you connect to your tree is as accurate as your own!

Another of my favorite sites is found at [tribalpages.com](http://tribalpages.com). Here you can upload your tree, add pictures, create slide shows, add family memories and connect with others. This is a wonderful place to host the wealth of family memories. It is free until you have more than 50 pictures. At the highest hosting charge, you get 5,000 pictures and pay less than \$60 per year. The site is amazingly inexpensive, simple to use, and very well designed!

Do you need ship lists? Here are a few sites to check.

Ellis Island Free records of ship lists

[www.ellisland.org/default.asp?SID=2188&gclid=CleyzfioipwCFQ\\_EhDQodTQ58Yg](http://www.ellisland.org/default.asp?SID=2188&gclid=CleyzfioipwCFQ_EhDQodTQ58Yg)

[www.Olivetree.com](http://www.Olivetree.com) and

Cindi's List: <http://www.cyndislist.com/>

*From The Memory Map, October 2009. This article has been obtained from APCUG with the author's permission for publication by APCUG member groups; all other uses require the permission of the author (constance (at) mystepco.com).*

## Microsoft's Bing Maps

by Ira Wilsker

**F**or several years I have been a loyal user of Yahoo! maps ([maps.yahoo.com](http://maps.yahoo.com)) to get route maps on my local and long distance road trips. Sometimes I would also check Google's road map utility ([maps.google.com](http://maps.google.com)) to corroborate what was displayed by Yahoo!, and also to determine if there were any good alternative routes. I also have used Google Earth ([earth.google.com](http://earth.google.com)) to display aerial and satellite photographs of areas of interest, as well as view 3-D images of the buildings in an area so I could better understand the area I was traveling to. Recently, Microsoft has joined the fray with the public rollout of its competitive product, Bing Maps beta ([maps.bing.com](http://maps.bing.com)).

When I first accessed Bing Maps beta using my Firefox browser, I was able to access

several of the Bing Maps features, but Microsoft advised me that in order to make use of all of the rich features of the service, I would need to download and install Microsoft's free Silverlight software. Silverlight is application software that is a 5mb download and enables the display of enhanced graphics, video, multimedia, and animations. Silverlight downloaded and installed quickly on my computer, and while it adds substantial capabilities to Bing Maps, it is not a requisite to use the basic functions of Bing Maps. With Silverlight installed, I was able to access very high quality digital images that rival Google's Streetview and Google's free standing Google Earth utility. Microsoft calls its highly localized street images "Streetside," and offers very sharp and detailed street level and aerial images which can be viewed either as an image, an image overlaid with streets and other features, or as a more traditional street map. While localized Streetside images are not yet available for the entire country, they are currently available for many major cities. Bing Maps beta also automatically integrates with the countless images available on Microsoft's Photosynth imaging service, providing high resolution local images.

When first loaded, Bing Maps beta shows the current local weather, a local map, and some thumbnails of local Photosynth images (if available). Links on the page also display "What's nearby," restaurants, hotels, and current local traffic information if available in that locality. Clicking on a Photosynth thumbnail starts an animated "trip" which zooms over the region, zooms in on the precise spot on the aerial map, and opens the image. Once opened, the image can be manipulated, zoomed, and rotated giving a 360 degree image from street level. In some cities (about 100 so far, according to Microsoft), the downtown areas have been digitized allowing not just the 360 degree Photosynth image, but also a fully interactive and controllable 3-D image of the area, where the buildings and other features can be navigated as if flying through the canyons of structures.

Another interesting feature of Bing Maps beta is real time traffic information, which shows road construction information and current speeds (color coded) on major roads in the larger cities. This traffic information integrates well into detailed driving directions, such that the traveler can visualize any road construction or other impediments to a speedy trip. When getting travel directions, the user can have Bing Maps determine the shortest route, the fastest route, and even produce round trip directions. Multiple way points can be added by clicking on the "add to route" link. Once a route is determined and displayed, Bing gives the user the opportunity to modify the route by clicking on "See best route based on traffic." Icons on the bottom of the page allow the user to selectively display live traffic information, email the selected route information, print a detailed routing, see "your places," or implement additional applications. Gas stations, hotels, restaurants, hospitals, shopping malls, and other points of interest can be selectively displayed on the maps.

When printed, Bing Maps travel directions give detailed and graphical directions. One very helpful feature of the printed directions, typically lacking on competing services, are highly visible landmarks at major points on the map, which can be used to easily determine where to turn. On the example that I ran, driving from the Examiner offices to the IAH airport in Houston, the printed directions said, "Turn right onto JFK Blvd / John F Kennedy Blvd. Pass SHELL in 0.8 mi" and "Take ramp right for E Belt Dr / E Beltway 8 / E Sam Houston Pkwy N toward Houston / Liberty - Pass VALERO in 4.6 mi." In this particular case, the Shell and Valero gas stations would be very visible landmarks to visually ease the finding of the turns on the route. One cute feature was intended to show if you passed your chosen destination;

“Arrive at Houston Intercontinental Airport, TX on the right - If you reach Terminal Rd S, you’ve gone too far.”

Bing Maps beta may also be a helpful tool to locate restaurants and other points of interest. While a map is displayed, clicking on “What’s nearby” displays points of interest on that open map at the selected scale. As an experiment, I selected to show the locations of Genghis Grill in Dallas, one of my family’s favorite restaurants. Placing the cursor over a selected restaurant (or other place of interest), information on that selection is displayed, and a link for “add to directions” appears which will create detailed driving directions to that location.

To add interest to selected maps, the link to the additional map applications opens a selection of about twenty choices all keyed to the map on display. These applications connect to neighborhood information, Twitter comments on the neighborhood displayed, a restaurant finder where restaurants can be selected by type of food, businesses by category, local news, hotel information, webcams, roadside attractions, graffiti, murals, signs and billboards, and other highly localized categories of information.

Bing Maps is currently a beta, or pre-release version, and is not totally refined. As I was using it to compose this column, I occasionally received a popup that said that the service was temporarily unavailable, but usually within a few seconds Bing Maps was functional again. Bing Maps beta is clearly an unfinished work in progress, but what is currently available is very attractive and useful. I can also see Bing Maps along with its massive database of local information, a very useful mobile application, which is clearly in the works. Other than some performance issues, I found Bing Maps beta a very useful service, and will reference it frequently both locally and while traveling.

### Websites:

<http://maps.bing.com>

<http://www.bing.com/maps><http://en.wikipedia.org/wiki/Silverlight>

## Cryptography

### A Big Word That Helps Keep the Internet Secure

by Phil Sorrentino

*President, Sarasota PCUG, FL*

**Y**ou may have asked yourself some of the following questions. How secure is the internet? What has been done to make the Internet secure? How safe is my private information during an internet transaction? If so, read on; if you are a very trusting individual and figure that “they” will keep the internet secure, jump to the next article. During this time when the Internet provides essential communication between tens of millions of people and is being increasingly used as a tool for commerce, security has become a very important issue. And when it comes to computers, “security” is of concern on many different levels. There is physical security that keeps your computer hardware from being stolen. There is software security that keeps people out of our private files. There is “malware” security, that keeps your computer software from being infected with viruses, spyware, worms and the like. And finally there is “network” security that keeps private data protected as it goes from one computer (or client) on the internet to another computer (or server) on the internet. This article deals with

network security, which is ensured by applying cryptography to messages that are transmitted on the Internet.

Remember the “s” in “https://” and the little lock icon on the browser when you went to a “secure” website? Well, cryptography is behind all that security. Cryptography is used to secure Internet and even telephone communications. Cryptography is nearly as old as written language itself. It was invented to address the age-old question: How can I communicate with my friend, so that no one else will know what was communicated? Cryptography becomes necessary whenever one is attempting to communicate private information over an “un-trusted” medium, such as the Internet. Typically, you can be sure that the message you send over the internet will get to its destination, but you cannot guarantee that intermediaries (computers along the way) will not be able to see and read your message, unless it is protected. With a collection of not-so-expensive equipment and a good deal of knowledge, a message on the internet can be intercepted (sniffed), and if it is “plain text”, it can be read. For mundane e-mail messages, this is not much of a concern, but for messages that contain private information, such as passwords or bank account or social security numbers, this could be an invitation for Identity Theft.

Cryptography to the rescue. Cryptography (from the Greek for “hidden writing”) is the ancient science of encoding messages so that only the sender and receiver can understand them. Cryptography can be defined as the conversion of data (plain-text) into a scrambled code (cipher-text) that can be sent across a network, and deciphered by the rightful receiver at the other end. There are two main techniques used to encrypt data, Symmetric and Asymmetric. Symmetric encryption uses the same key for encryption as it does for decryption. Symmetric encryption is also called Secret-key encryption because the key is kept a secret between the two cooperating parties. Asymmetric uses separate keys for encryption and decryption. Asymmetric encryption is also called Public-key encryption because one of the keys is allowed to circulate in the public (and one is kept private). Cryptography is now available to everyone thanks to the development of modern computers, which can perform more mathematical operations in a second than a human being could do in a lifetime. An ordinary PC, with the proper software, can produce codes of such complexity that the most powerful supercomputer using the best available software could not break them in thousands of years. Before modern times and the personal computer, cryptography was concerned solely with message confidentiality. Message confidentiality is conversion (encryption), of messages from a “plain-text” form into an incomprehensible one (cipher-text) for transmission and then back again to the original form, at the other end (decryption). This keeps the message unreadable by interceptors or eavesdroppers who do not have knowledge of the “key” needed for decryption of that message. (With the advent of the personal computer and the proliferation of digital information, the field of digital message protection has expanded beyond only confidentiality concerns to include techniques for message integrity checking, identity authentication, digital signatures, and password protection all of which we will leave for future discussions.)

As stated above, Secret key cryptography refers to encryption methods in which both the sender and receiver share the same key. Secret key cryptography is ideally suited to encrypting long messages, providing privacy and confidentiality for messages typically used in computer to computer transactions. Public Key Cryptography refers to methods in which two keys are owned by each participant, one for encryption (public key) and one for decryption (private key). Public Key cryptography is suited to short messages and is typically used to

exchange “secret keys” between two computers. Public Key cryptography could, theoretically, also be used to encrypt messages but this is rarely done because Secret-key cryptography is about 1000 times faster than Public-key cryptography.

So, just how do these schemes work in our typical computer to computer (network) communications? Secret-key and Public-key cryptography are used to setup and maintain a secure data path from a client (your computer browser) to a server (information or data storage system). Because Secret-key cryptography is best used for long messages, a secret key will be used to encode all messages during the transaction. But how do we get a secret key to be used by both computers for the transaction. In comes Public-Key cryptography. Public-key cryptography, which is best suited for short messages, is used to send the secret key (which is short) from one computer to the other, so that both will have the secret key for encoding the messages that follow. The server has a public key for the client (your computer) and it encodes a “secret key” with that public key. It then sends the encoded message to the client and the client can then decode the message with its private key. The private key is used to decode the “secret key message” so that the client knows what to use as the secret key for subsequent message encoding (i.e., the decoded secret key). This all sounds very complicated, and it is, but all of this is controlled by the “secure software protocols” and you, the user, don’t have to get involved at all. (I’ve actually simplified the operation a bit, but the essence of how cryptography is used is still pretty accurate.) So, with the use of Public-Key, and Secret-Key cryptography, you can rest assured that the messages you are sending over the Internet will not be of any value to anyone attempting to intercept such information. What more could you ask for - through the use of cryptography, the un-trusted Internet can now be used to send private messages, therefore providing secure communications, over the Internet, for everyone.

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## The News this Month

by Greg Skalka

*President, Under the Computer Hood User Group, CA*

**I**t is prime holiday shopping time, and the deals are out there, tempting us to stimulate the economy. Target advertised a \$200 Acer Netbook even before Black Friday. There will probably be lots of good deals all the way through New Year’s Day, as the retailers are hurting and are looking for ways to get customers into their stores. This holiday season will probably see additional increases in online shopping, as shoppers try to save money, gas and time.

One way I’ve used to save money on purchases is to take advantage of manufacturer and store rebates. Over the years I’ve submitted hundreds of rebate forms and received thousands of dollars back. I’m currently waiting on eight rebates, for a savings of \$124. Normally I would expect a check in the mail for each, but six of them are for Visa prepaid cards.

The prepaid plastic card for rebate payment is the latest rebate trend. They force the consumer to purchase something to redeem them, rather than just deposit them into a savings account, so they provide additional economic stimulation. They also reduce costs for the issuing manufacturer or retailer. One article I read listed the manufacturer’s cost for a rebate check as \$1.85, while a prepaid rebate card cost about 6 cents.



Besides having to buy something else, there are a few additional consumer pitfalls with prepaid rebate cards. It is best to make a purchase that is greater than the card's value, as any amount remaining is not refunded, but stays on the card, and it is often impossible to check a card's balance. These cards do expire (as do rebate checks), so they should be used promptly. Some rebates provide a store-branded card that can be used only at that retailer.

Many people dislike the hassle of filing for rebates. It is estimated that up to 60% of eligible consumers never bother to file. I figure that I'm getting a savings on my products at the expense of those that are not willing or able to file and track their rebate submissions. The prepaid rebate card adds a little more inconvenience, but if it allows more rebates to be offered, I'll keep buying and applying.

## **McAfee's 12 Scams of Christmas**

Anti-virus software maker McAfee recently released its list of 12 popular online attacks for this holiday season as a warning to consumers:

1. Charity phishing scams—be careful who you give to
2. Fake invoices from delivery services to steal your money
3. Social networking scams—fake friend requests lead to malware
4. The dangers of holiday e-cards—clicking can lead to malware
5. Discount luxury gift sites that lead to malware
6. Shopping from open Wi-Fi networks can lead to identity theft
7. Risky holiday searches—fraudulent holiday web sites provide malware instead of Christmas carol lyrics
8. Fake job-related sites prey on unemployed
9. Too-good-to-be-true auction-site deals that never arrive
10. Password stealing scams—malware that contains keyloggers
11. E-mail banking scams
12. Your files for ransom—ransomware scams

I've heard of many of these scams, but some were new to me, or were things I didn't really consider. It is good to be charitable, especially during the holiday season, but it is good to be reminded that there are scammers out there ready to take advantage of your generous nature. Just as with banking scams, don't respond to e-mail donation solicitations directly.

It is unfortunate, but you really need to be suspicious about every e-mail you receive and every web site you go to. I've read about holiday e-cards that carry malware, so I typically don't send or open them. I didn't really consider before that cybercrooks might set up holiday sites, hoping to entice me to download wallpaper or screensavers laden with malware after finding their site in a search for holiday song lyrics. It also never occurred to me that crooks might succeed in taking over my PC, encrypt my computer's files, and then ask for payment of ransom to unencrypt them. I think I take enough precautions to make this unlikely.

I've wondered, though, about using public or open Wi-Fi connections for secure activities. All the advice I've seen, including McAfee's recommendations, say that online shopping and banking should not be done at a public Wi-Fi hotspot, but only through a secure Internet connection at your home or work. That makes sense, but where does that leave public Wi-Fi? Is it only useful for benign web surfing? How do you safely access your online bank account when traveling, and don't have a secure Internet connection?

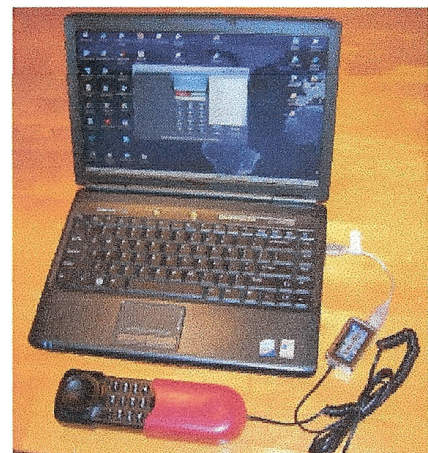
I read one intriguing posting on CNET that accessing an online banking site from a public

Wi-Fi connection is safe, as the bank employs SSL (secure socket layer) encryption of the data between your PC and their site. This also seems to make some sense. I know that VPN (virtual private network) software like StrongVPN ([www.strongvpn.com](http://www.strongvpn.com)) and others claim to secure Wi-Fi links. Services like GoToMyPC ([www.gotomypc.com](http://www.gotomypc.com)) also claim to allow remote connection to your home computer in a secure way. I'd like to find out more about SSL and VPN connections, so that it may be possible to use free Wi-Fi to bank and shop.

## New Communications

I installed Skype ([www.skype.com](http://www.skype.com)) on my laptop a few months ago so that I could use it to allow Gene Barlow to give our group the webinar presentation on Acronis True Image. I think Skype is great for audio and video communication over the Internet, though I've only found a few occasions to use it. I've done some test videoconferences with our editor, Art, and my wife has used it with our netbook computer to call me when she was away on business. The main downside to Skype is that it must be run on both ends for a free call. You can use it to make a call to any phone from your PC, but that incurs a charge. Unless the person on the other end of the connection is willing and able to use Skype, it does not help you much.

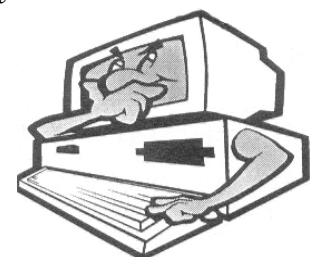
I've been making all of my recent long distance calls over MagicJack, and have had no problems with it. I look forward to taking it on a trip and being able to make calls for free over free Internet service in a hotel or hotspot. I even bought a compact corded phone on eBay to use with MagicJack. Its limitation is the U.S. call restriction; it may be able to call International, but I'm sure there would be additional fees involved. The company does advertise it as the perfect communication tool to take on a foreign trip to call back to the U.S. for free. I'm hoping for a chance to try that out one day.



Another great communication tool that I've started using is drop.io ([www.drop.io](http://www.drop.io)) which I learned about from our editor, Art. It provides a free "drop box" for transferring up to 100 MB of photos or any other files to anyone. You create a drop, upload the files and provide the drop name and password to the recipient, who then downloads the files from the drop.io site. I recently had to provide 300 MB of photos to someone, so rather than mail them a CD, I set up three drop.io drops and sent the access info through e-mail.

I've read about a new online service called Snailmailr ([www.snailmailr.com](http://www.snailmailr.com)) that may be of use to me one day. For \$0.99, it will print and mail up to two pages to anywhere in the world. That is not bad, considering the cost of postage and the hassle of getting it into the postal system. Since the letters are mailed from the U.S., it would be a great way to inexpensively and quickly send letters here from abroad.

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# The Great Computer Build, 2009

DIY in the Decade of Dell

by Jan Fagerholm

*Associate Editor and 'Puter Parts Purveyor, PC Community, CA*

First in a series on building a high performance computer with the latest technology. Personal computers have become ubiquitous. Not only as desktop computers, but as a variety of portable computers. These days, laptops of various stripes outsell desktop computers by a large margin. And why not?—Laptops do nearly everything that a desktop computer can do, and are smaller and portable. The present crop of Netbook computers are a case in point: they are the first new variant introduced that break the march of the past (bigger, more features, faster) with a new reality appeal: the just-right size and performance for the task.

This scaling doesn't always work in the performance direction. A high performance laptop with a big screen will cost lots of low performance dollars but its performance will still fall well short of a desktop computer that costs half as much, particularly in graphics performance. So if you want to build a performance computer, you are still looking at buying or building a desktop computer.

I use a laptop computer for much of my work for the same reasons most people do: it's portable, and good enough for all but the most demanding graphics tasks. For the more demanding CAD/CAM work and for desktop publishing (DTP) I rely on my desktop machine because of its superior graphics capability.

In the early days of PCs, enthusiasts normally built their own machines from individually selected components, which had the advantages of getting exactly what you want, and it was cheaper to roll your own than buy one pre-built from a retailer. Companies like Dell have turned this scenario inside out, and it is now possible to buy a pre-built computer cheaper than you can put it together yourself from identical components. Computer consulting is part of my business, and I have gotten away from building computers for my clients because I can get the computer they need pre-built from an online source cheaper than I can build it myself. This also has the advantage of knowing all the parts will work together (a potential problem when dealing with bleeding edge technology) and I don't have to warranty the machine myself.

I remain an enthusiast, though, so the compulsion to roll my own still remains. The justification is that I still think I can build a machine best for my needs (not all rational) at a price I am willing to pay. If you lean toward the performance end of the scale, it is still possible to just throw money at the problem and get a high performance machine. Moore's Law is still the rule (George Moore, while Director of Research at Fairchild Semiconductor, wrote an article for the April 19, 1965 anniversary edition of *Electronics* magazine where he hypothesized that the number of transistors in an integrated circuit would double every year through 1975. Others, later, dubbed it "Moore's Law") Bill Machrone, in *PC Magazine* in 1984, stated a pragmatic corollary; "the computer you want will always cost \$5000." Neither Moore's Law nor Machrone's corollary has changed much to this day. Niklaus Wirth, inventor of the Pascal programming language, popularized what he credited as Reiser's Law: "software is slowing faster than hardware is accelerating" (Martin Reiser, then at IBM Research, subsequently demurred, "It is not the first time I am accused of having said something that I cannot remember having said.")

Stated in a canonical context, “what Moore giveth, Gates taketh away.” Ask yourself, does your newest computer boot and load applications any faster than the computer you had ten years ago?

But I digress. Today’s point is that I have been one of those who have spent money on the bleeding edge of this technology since 1978, and while I still want a fast computer, I’m not willing to spend \$5000 on it right now. These days, that money will get you a high end gamer machine (that’s where the technology really rides) with the fastest quad core CPU (\$1000), the fastest quad PCI-E video cards (\$2400), 16 GB DDR3 RAM (\$800), two 7200 RPM 2 terabyte hard drives with hardware RAID 0 (\$750) (note that “10,000 RPM” and “terabyte” do not come together at this time—more on that later). We have spent \$4950 on this and we don’t even have a monitor, case, power supply, keyboard and mouse yet.. . What’s a 3D gamer, -er, high end CAD/CAM user to do?

Obviously, some scaling down in expectations is required when you budget purchases. Your performance vs. pocketbook price point will vary, but I will explain mine as we go along. The objective is to build a machine capable of running high end software (Adobe CS4, CAD/CAM) and provide respectable performance with 3D game software. (3D games are one of the better informal benchmarks for hardware.

Right now, I’m starting with a budget constraint and working within that, much as I do for my clients.

Buying computer by parts, we are dealing with essentially these parts: CPU, motherboard, memory, hard drive, optical drive, monitor, the case, power supply, and probably a new keyboard and mouse to make the newness complete. (When building your own, it is tempting to recycle many of the parts from the old computer, but if the computer you are considering is more than three years old, you will probably compromise the new computer’s performance by using these parts.)

In subsequent articles, we’ll examine in turn CPU-motherboard-memory, then the rest of the stuff. Yes, there is even something to learn about cases and power supplies. Stay tuned.

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## 2009 Come and Gone

by Elizabeth B. Wright

*Computer Club of Oklahoma City, OK*

**Y**es, another year is coming to a close. And what do we have to show for it? Another Microsoft OS for those who are not already confused, limited software and a world gone wild on the internet. Is that what we had hoped for as 2010 looms on the horizon? While all of the above were probably inevitable, how can we make the most and best of it?

First: the new MS OS, fondly known as Windows7. It’s really not too bad, considering the fact that all Windows based computers work under the original handicap of the hardware created by IBM for its personal computers. I have seen my friends and loved ones switching to Apple based computers and loving every minute of it, even though Apple creates new operating systems about as often as does Microsoft. But then, most people switch for the graphics and possibly the word processing capability of Apple (Mac) machines, and perhaps are not as compelled to upgrade to a new OS like Windows customers are. Yes, our

photographs are very important to us and Apple made that kind of computing a good experience many years ago.

But what about those of us who like to work with both graphics and number-crunching software? Best to stick to the unending procession of Microsoft operating systems. With powerful enough hardware, including RAM memory and a good graphics card, even Windows can do a passable job with graphics. It has always done exceptionally well with the numbers stuff. And if we can get version 7 and whatever comes next to work with our older software, then maybe we can carry on business as usual. I for one plan to give it a try. But to utilize additional RAM, we are faced with using the 64bit version of Windows 7 with a 64bit processor.

So we might not actually get as much good out of the new OS and newer photo editing software if our hardware can't meet those standards.

Second: limited software. By now most average users have all the programs they will ever use. About the only thing new many people buy is the latest, greatest antivirus program. Businesses use number crunching, word processing and data manipulation software; individuals tend to use graphics, word processing and the internet. Microsoft and Apple, and to some extent Sun Microsystems, have both categories firmly in hand, and we likely will see no new software for average users. But the old MS and Adobe stuff will continue to be "improved" in order to keep those companies in business. No need to beat that dead horse. Programs for Linux based computers are more of the same. As for huge corporations, they depend on specialists to continually fine-tune their programs in order to keep up with the competition. The industry that has developed for just that purpose is something of which most of us are not likely to have much knowledge or interest.

Third: The World Gone Wild. That is the one that worries most thinking people more than anything else. Again, it doesn't need explaining since most of the people reading this are well aware of the idiocy available on the internet. Yes, there is still some really good stuff out there, but so few people are taking advantage of it. The bad stuff, and everyone knows just how bad it is, may be the ultimate downfall of civilization as we now know it. From selling iffy goods to selling sex and extreme violence, the internet is a place where legitimate learning and business is losing the battle. Even the so-called online universities are often nothing but sham corporations. They tie people up with debt as soon as they enroll, knowing full well that many of their "students" will never finish even the first course, much less graduate. And what are those degrees worth? I guess I can expect a lot of dissent on that subject, but first hand experience with relatives has shown me that my theory is on target.

But of course, the upside is that the internet system will probably implode in perhaps the not-too-distant future. Either governments will hijack it or it will just crumble from its own weight and greed. Do you remember the world before the internet? What you may not remember, or possibly don't know about, was the existence of computers connected via phone lines and other cabling systems which were military and scientific in nature. Then the rest of us got into the act.

Outlook for 2010: For computer users who want something more than email and surfing, there continue to be ways to improve skills. And many of those choices are still available free on the internet. Check out your favorite program to see what and where you can find training programs, then DO IT! Make the effort to at least make Microsoft, Apple and all others work for you instead of the other way around.

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## MotionDSP vReveal: Flawed Video No More

Software Review by Steve Miller

*VP Vendor Relations, Brookdale Computer User Group, NJ*

**D**o you shoot video with your cell phone, digital camera, or other handheld device?" is the question found on the website for vReveal. "Then the chances are good that you have shaky, dark, noisy, pixilated, or blurry videos. Less-than-ideal videos that obscure your life's best, captured moments."

"But those moments don't have to be lost to common video problems anymore," the site promises. "vReveal has the advanced enhancement technology and 'one click' touch-up tools that make it easy to dramatically improve the quality of flawed videos."

I was impressed by vReveal's enhancements of my video. I was equally impressed by the dramatic speed increase resulting from off-loading computing from my motherboard CPU to my system video card. As advertised, vReveal improves snowy/jerky/low quality video. It also exports a high quality photo, derived from lower quality source video.

### Installation

I own a compatible late-model NVIDIA graphics card (8800GT). I downloaded the latest NVIDIA graphics driver, which enabled vReveal software to use parallel processing by ~100 processors in my video card. During the simple vReveal installation, I specified a video folder to be "watched" by the new program.

### Evaluation

Figure 1 shows the primary user screen. My video was displayed split-screen, in order to contrast before and after application of the video enhancements. I discovered an important, but unadvertised use for this amazing software. vReveal improves the quality of Standard Definition (SD) video, so the contrast becomes less noticeable when SD videos are used in the same movie with High Definition (HD) video.

My Standard Definition video sources include traditional SD camcorders as well as my digital still camera (in "video capture" mode). My HD sources include a HD camcorder, and digital photos, which I "pan" and "zoom" to create motion.

I used the following vReveal settings to enhance my Standard Definition video:

9. "One Click Fix" (this automatically "Cleaned," "Sharpened," and AutoContrast").
10. "De-interlace." ("de-interlace" is an important feature which prevented unacceptable artifacts during video with fast motion).

To view the result of video enhancement, I used my favorite video editor to create one timeline that contained three types of content.

11. Standard definition video, no enhancement
12. Standard Definition video, enhanced with vReveal
13. High Definition video

I then "burned" a standard DVD, and also "burned" a High Definition BluRay DVD (encoded with the optional HDV MPEG2 format). I used Cyberlink "Power DVD" software with a 24 inch Samsung LCD (1680X1050) to "play" the DVDs, and compare SD video (with and

without enhancements) to the HD video.

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## Visible results

The original (un-enhanced) SD content was clearly deficient to HD video content. After enhancement, my SD content exhibited remarkable video improvement (although not quite up to the high definition sources): Snow (especially resulting from low light) totally disappeared on my SD content after enhancement. Colors were brighter, blacks were blacker, and contrast was enhanced.

vReveal, owned by NVIDIA, includes a performance and control dashboard to showcase the speed increase resulting from leveraging NVIDIA video card GPU (graphics processors). My jobs ran twice as fast when I shifted the processing from my high performance quad core to my lower-end video card!

(Enhancement of my 40 minute SD video took about 90 minutes when off-loaded to the video card, and took about 180 minutes when confined to my high performance quad processor.)

## System Requirements

Hardware: Intel or AMD 1.6GHz CPU, 1GB RAM, 50MB hard drive space; NVIDIA video card with “CUDA” enabled (GeForce 8-series, and higher); 100GB free disk per hour of enhanced video (uncompressed AVI)

Software: Microsoft® Windows XP with Service Pack 2 or Windows Vista™ Home Premium, Business, Ultimate, or Enterprise (certified for 32-bit editions).

Output file types supported: WMV and uncompressed AVIs

Price: \$49, download from [www.nzone.com](http://www.nzone.com) 30-day trial software is available (watermark is applied to output video files.)

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## The Lighter Side

Thank you for contacting Technical Support,

Regarding your login issue is now resolved and you will be able to access the course in which you are enrolled. Sorry for this incontinence it has caused and thank you for your patience.

Technical Support

My grandfather has recently started a course called "Computers for the Terrified." He's nearly eighty and, although he used to be an engineer within the British Royal Airforce, is completely stuck when it comes to computers.

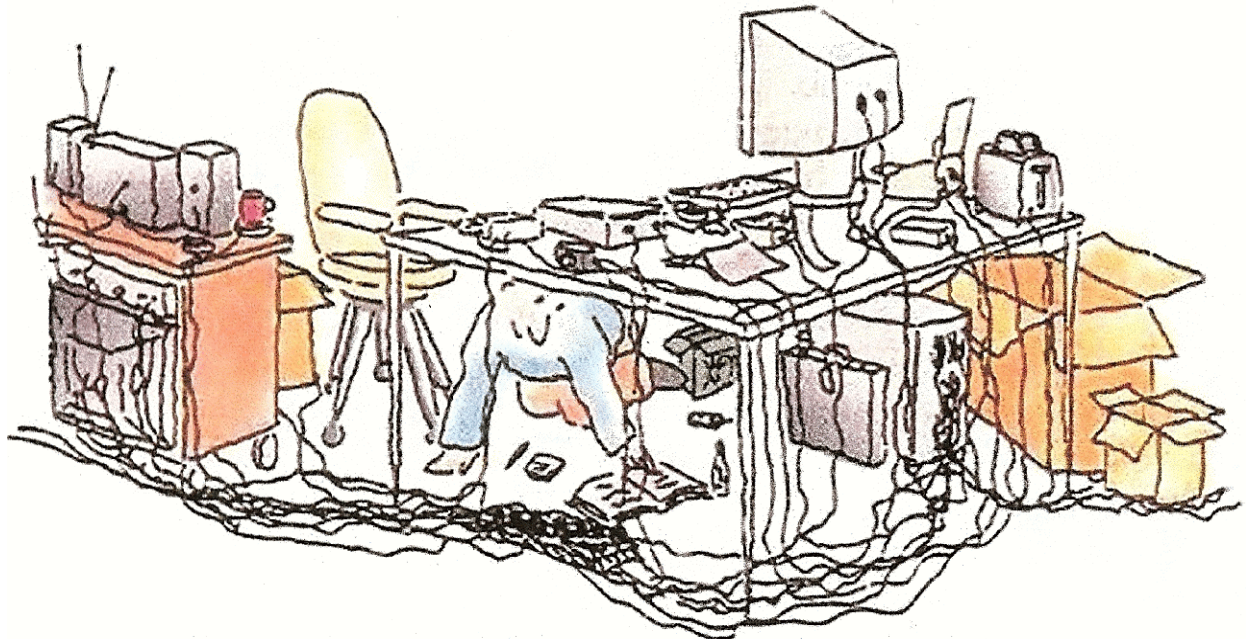
He came back from his first evening at this course. When asked how it had gone, he replied, "Yes, it was really good. I really enjoyed it, but I really couldn't get to grips with my mole."

I stopped for a second, completely puzzled, until I realised he was talking about the mouse.

The place where a friend of mine works was going through the process of upgrading all of their computers. On one computer in particular, they had determined they needed more memory. One of the senior partners got it into her head that they needed more “Meg.” My friend tried to tell her that what they needed was RAM, but she insisted that the machine had plenty of RAM and that they needed more Meg—specifically, about 16 megabytes of Meg. He got tired of arguing with her and said to go down to the computer store and buy some Meg.

She came back with an envelope with RAM in it—on the envelope was written “16 megabytes of Meg.”

“The salesman tried to tell me the same thing you did,” she told my friend, “but then he went and talked to his manager, and he set him straight. Now go install this Meg.”



**“Now, if you can find the power switch, flip it on.”**