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Why You Need A Firewall

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When you connect your computer to the Internet, you have opened a door which invites any other computer in the world to come in. Actually, you have more than 65,000 doors into your computer, any one of which may be open. That is, unless you have taken steps to keep these doors closed. That is the purpose of a firewall. The firewall filters the information packets that show up at your "door" or computer port as we usually refer to it, and can either prevent them from entering or pass them through.

When your computer connects to the Internet, it is assigned a numeric address or IP (internet protocol) address. These addresses are a 32 bit number. They usually written out in four groups with periods between each group as follows: 111.11.11.111. Traveling over the Internet are many programs that simply look for unprotected IP addresses. The IP address of any unprotected computer is sent back to the originator who can then upload a trojan or spyware package to that address. The originator can then take con-

trol of the computer or the application will record keystrokes and send all recorded information back to the program originator.

Although your computer has one IP address there are many different ports on your address. There are different ports for different purposes on your computer. Your connection to the Internet is usually through port 80. This is referred to as the HTTP (hypertext transfer protocol) port. It is used when you connect to a web page. The web page data is downloaded to your computer through this port. Another commonly used port is 25. This is used for the SMTP (standard mail transfer protocol) or e-mail transfer. Another port is used for incoming mail or POP3 transfer is port 110. These are all part of the port series from 0 to 1024 that are the most common ports. Many applications use ports in this region including PC Anywhere, Internet telephones, MSN messenger, Net

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Exploring Windows Explorer – Part 2

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This is part two of Exploring Windows Explorer with the idea of learning how useful this tool can be.

There are several ways to bring up Windows explorer. Click means left click unless preceded by the word right. In no particular order:

1. Click on Start, hover the mouse pointer over All Programs till the window with all options appears, click on Accessories to open the sub-window, then click on Windows explorer. On most machines, it will open with the My Documents directory/folder highlighted and expanded.
2. Right click on Start to open the options window, click on Windows Explorer. On most machines, it will open with the Start Menu directory/folder highlighted and expanded. This is usually down four directory levels with the path - Local Disk (C:)/Documents and Settings/(current user name for that machine)/Start Menu.
3. Click on Start, on the default XP menu, click on My Computer, this opens Windows Explorer in the Task Pane mode. This is also true if you click on My Documents, My Pictures, My Music, or My Network Places. For most people this means navigating down a path one directory at a time, then backing out one directory at a time with the left arrow in the green circle. If you have followed the advice in part 1, at least you can see the path to where you are at in the address bar. Very few people that use this mode make use of the history file provided by the little

down arrows next to the left and right arrows. The history files can speed up navigation quite a bit, but in my opinion are nowhere near as efficient as having the Folders Pane visible instead of the Task Pane. Clicking on the Folders icon in the Menu Bar causes the full tree structure to be displayed in the left hand pane. That allows much more efficient navigation of the files on your disk(s).

4. Double click on the My Computer icon on the desktop - takes you to the same place as #3.
5. Depressing either Windows key (the ones with the MS flag icon and the word "start" on them) and then tapping the "E" key, opens Windows Explorer in the Folder mode with My Computer highlighted.
6. Depressing either Windows key, and then tapping the "F" key, opens Windows Explorer in the Search mode with the left pane asking: "What do you want to search for?" You then have the option of choosing several different categories of search including my most common choice – All files and folders.
7. Clicking on Start and then Search opens Windows Explorer in the same mode as #6.
8. Right click on start, then click on Search, opens Windows Explorer in the Search mode with the left pane stating: "Search by any or all of the criteria below." This is the same location you end up at if you choose path #6 and then click on – All files and folders.

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figure 1

But wait, if that's not enough ways to open Windows Explorer, there's more!

9. You can make Windows Explorer part of the start menu with the following sequence:

Start -> All Programs -> Accessories -> right-click on Windows Explorer -> Pin to Start menu

10. You can put a Windows Explorer icon in the Quick Launch portion of the Taskbar with this sequence: right click Start, click explorer, click on the WINDOWS folder, in the right pane, scroll down to explorer.exe and right click it, when the option window opens, click on "create shortcut", place the mouse cursor over the new shortcut, depress and hold the right mouse button then drag the new shortcut to the Quick Launch part of the Taskbar. Release the right mouse button and click on "Move Here." [figure 1]

What!, you say you don't have a Quick Launch area, probably because the XP default for that feature is set to disable. You can fix that by right clicking on the Taskbar, hovering over the Toolbars entry till the options window opens, then click on the Quick Launch entry to set a check mark next to it and enable that feature. Once the icon is in place, a single click on the Windows Explorer icon will launch it.

11. You can put a Windows Explorer icon desktop with this sequence: right click Start, click explorer, click on the WINDOWS folder, in the right pane, scroll down to explorer.exe and right click it, when the option window opens click on create shortcut, then click and drag the new shortcut to the desktop. Right click on the shortcut icon you just created and when the option window opens, click on properties. When the properties window opens, click on the Shortcut tab and edit the Target line to have Window Explorer open with the directory of your choice displayed. This is an example of an edited Target line: C:\WINDOWS\explorer.exe / e, /root,c: /select,C:\Documents and Settings\Jim.LIAN-LI\My Documents\NOCCC related files. By substituting the path of your choice for the "C:\Documents and Settings\Jim.LIAN-LI\My Documents\NOCCC related files" portion of the above example, you can have Windows Explorer open and display the directory of your choice.

As noted in part 1, the default columns that are displayed in the Window Explorer detail view are: Name, Size, Type, Date Modified. But you should know that they are just four of the 45 possible column types. Not all column types are pertinent for a given file type. For example, Bit Rate is not going to be very useful in a directory full of *.jpg or *.tif files. Camera Model is not very useful in a directory full of *.mp3 files. As hard disks are humongous today (see article -**How big is a 300 GB hard disk**), more and more people have large collections of pictures, video, music and Microsoft Office document files on their computer (and far too many are not backed up). The ID3 headers on MP3 files can provide a lot of information about each track. To easily see that information, you need to turn on more column details. You **can not** break anything by playing with these options. Click on View, when the menu opens, click on Choose Details [figure 2], click on an item in the list to place a check mark in the box which activates the feature, then click on a directory and look at the results. If you don't like the results, repeat the procedure to remove the check mark and it is gone.

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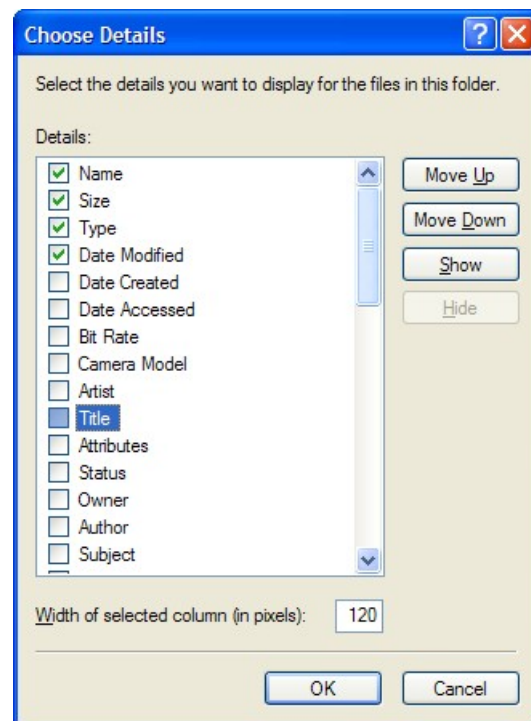


figure 2

Hasta La Vista — Gadgets And The Windows Sidebar

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I'm told the literal meaning of "hasta la vista" in Spanish is "until the seeing." Or maybe a more adequate translation is "see you later." But in this column, I'm using that phrase to invite you to take a look at Microsoft's latest version of Windows: Vista.

Devotees of the Apple Mac have for some time had available, in their OS X Tiger operating system, something called Dashboard, which allows them to have what are called Widgets (mini-applications that provide a very simple, tightly focused interface for common tasks) available for instant use. Now Windows Vista introduces something similar in its Windows Sidebar. This is a narrow strip of "Gadgets" that can be parked along either the right or the left side of your Desktop. You can also drag the Gadgets off the Sidebar and place them somewhere on the Desktop. You can configure the Sidebar to start either every

time when Windows starts, or only when you want it to appear. It is available on the Start Menu under All Programs -> Accessories -> Windows Sidebar.

There are a number of ways you can configure the Sidebar after you right click it and select Properties from the context menu. For example, you can set it so that Sidebar is always on top of other windows; you can hide or unhide it from view (unhide it by right clicking the small Sidebar icon in the Notification Area of the Taskbar and select Open); if you have multiple monitors connected to your pc, then you can configure which one the Sidebar is displayed on. You can add and remove Gadgets from the Sidebar (perhaps the easiest way is to right click the small plus (+) sign above the Gadgets and select Add Gadgets from the context menu), and detach them from or reattach them to the Sidebar. You can have multiple copies of the

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The following is the complete list of possible column types:

Name, Size, Type, Date Modified, Dimensions, Title, Date Created, Date Accessed, Attributes, Status, Owner, Author, Subject, Category, Pages, Comments, Copyright, Artist, Album Title, Year, Track Number, Genre, Duration, Bit Rate, Protected, Camera Model, Date Picture Taken, Episode Name, Program Description, Audio sample size, Audio sample rate, Channels, Company, Description, File Version, Product Name, Product Version, Profile, Width, Height, Duration, Bit Rate, Frame Rate, Sample Rate, Keywords.

There will be more in part 3.

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Facebook corresponds more with real life than Myspace, as users typically add people they already know as their 'Facebook friends'. Myspace, users are often contacted by random locals.

In upcoming articles, I'd like to further examine the role Facebook plays in the life of the student, as well as the advantages (and maybe one or two disadvantages) of the site. Lastly, we'll uncover how Facebook is affecting the dating world, and improving the love lives of college students everywhere.

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The Phenomenon Of Facebook

Redefining Social Networking

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What do Hillary Clinton, Tony the Tiger, and millions of college students have in common? They all have profiles on the contemporary social network known as *Facebook*.

As a college student, and avid Facebooker, I intend to share my knowledge and experiences with the site in order to uncover the reasons behind Facebook's widespread success.

As Facebook.com explains, the purpose of this "social utility" is to keep friends connected and help people network in a safe online environment.

Mark Zuckerberg, an extremely intelligent student of Harvard University, created Facebook three years ago. At the age of 19, Mark and his college friends launched the site, which began as a place to connect Harvard students.

Today, Facebook has connections to universities across the globe, with over 25 million registered users. If you have a high school or college age child, chances are they're very familiar with this popular site.

Once a fixation only among college students, Facebook is quickly expanding in the hope of connecting a diversity of users. Anyone with a valid e-mail address can register and create a free Facebook profile.

The site is successful because it is changing the ways in which the world can communicate.

Through Facebook, users create a profile where they can express their interests, activities, favorite movies, shows, books, quotes, and basic contact information. They can search for their friends and co-workers, and then click to add them as their 'Facebook friend'.

There are countless ways to participate on Facebook, such as uploading pictures, 'tagging' or identifying

'facebook friends' that appear in your pics, sending messages, writing on friends' walls, customizing your profile, writing notes to publish on Facebook, and updating your status to allow your friends to know exactly what you're up to at any given time.

With all of these opportunities to connect, it's no wonder people (especially students) are spending hours on this site, and visiting it repeatedly in order to stay updated with what's happening in the lives of their Facebook friends.

Through Facebook, I am connected with 73 different networks, and hundreds of people, from the U.S to Australia. I can see what my friends who are currently studying abroad are up to, and view pictures of their adventures.

Some of my favorite professors are now Facebook users. The site is an excellent tool for professors to get to know their students on a more personal level. It's not uncommon for students to ask academic questions through Facebook messaging instead of e-mail, or to write friendly comments on their professor's wall.

Employers are also discovering the benefits of Facebook, and can search for the profiles of potential employees. Therefore, it's smart to keep a clean profile, and to be aware of who you are associating with through the site. Many sororities, fraternities, and campus organizations monitor the profiles of their members and discourage pictures of drinking, and inappropriate behavior.

Facebook's privacy settings and methods of connectivity separate it from Myspace, and all other internet social networks. Myspace, which has similar features to Facebook, emphasizes individuality and expression through more personalized profiles. Facebook focuses on simple, safe connectivity.

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Hard Drives and Partitions

By Gene Barlow, User Group Relations www.ugr.com [gene\(at\)ugr.com](mailto:gene(at)ugr.com)

Lots has happened in hard drives in the past 8-10 years that I have been giving presentations on partitioning and backing them up. Ten years ago, the largest hard drives were only a few hundred MB. We had not yet seen the 300GB hard drives that are common today. Also, the price of hard drives was much higher then than it is today. So, conserving hard drive space was a bigger issue then.

Today, most of us have more hard drive space that we know what to do with and we see new 250GB drives selling for under \$50. Things have really changed.

In light of this new environment of cheap and plentiful hard drive space, I no longer push keeping FAT32 partitions down under 16GB in order not to waste more than 10% of the drive space. Most users are now using NTFS which also has cluster problems, but these are not nearly as big as the FAT and FAT32 cluster problems.

The cluster problem was that each file needed to be stored on an even number of clusters. So, the wasted space was equal to half the size of a cluster times the number of files stored. The worst case, was when you had lots of little files stored in large partitions with large cluster sizes. So, a 256kb Shortcut in Windows would take up 32MB of space when stored on the hard drive. Hence the large wasted space. But a few very large files stored in one large partition would not waste much space as lots of little files stored in that same partition. Backup image files are about the biggest files you will find in Windows. Some of these are 30-40GB each. So, you may only have a few dozen image files stored on your external hard drive before you fill it up. So, even a large cluster space with very few large image files will waste very little hard drive space. Hence, even if we were still worried about wasted space on hard drives, backup image files would be an exception and having large partitions would be much easier to manage than many partitions that may waste more space because you could not fit large files in a partially full partition. Hence the recommendation to just use folders to store image files on one very large partition. Most users do not

have a partitioning utility to adjust the size of the partitions as the drive gets full of large image files. Folders work better in this case and do not require a partitioning utility.

Another change in my recommendations over what they were 10 years ago is that I now no longer recommend a separate Application partition from the Operating System partition and the Data partition. Today, I recommend that you store your application programs in the same partition as your operating system. I do this for several reasons. First, applications want to install in the operating system partition by default. You have to direct them to a separate application partition if you want to keep them separate. This makes installing applications slightly more complicated than letting them install where they want to install naturally.

Hard drive space and wasted space is no longer a big issue, so a larger c: drive is not a problem. In running multiple operating systems, you could share the same applications between two operating systems if you did it correctly. That required a separate APPS partition and then you would install the same application twice into that partition. Once from one operating system and the other time from the other operating system. You had to do this to keep the registry entries on both operating systems correct. Keeping two operating systems in synch with one application partition was a challenge for even the more advanced user, so today, I recommend keeping the application with each operating system, even if it means having that operating system installed twice on your computer.

So, today, I recommend three partitions should be used. One for the operating system and application programs. One for all of the data files. And one on an external hard drive for backing up the other two partitions. This is the best way to go today with our large inexpensive hard drives on our PCs.

I hope this helps you understand why I have changed my recommendations.

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Windows Vista Calendar

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Windows Calendar, built into Windows Vista, helps you plan your activities and coordinate your plans with those of others. With Windows calendar you can set up multiple calendars and view a single or multiple calendars at a time. This makes it easy to compare the calendars and look for conflicts in scheduling.

Graphic

I personally use the calendar in Outlook for my scheduling but if you don't have Office the Windows Calendar is a great planning tool. It is especially useful if you need to handle a variety of different schedules. Set up a calendar for everyone in the family or group. Then use Windows Calendar to integrate them to compare daily activities. I quickly set up the three calendars for display in this combined view.

Appointments

With Windows Calendar, you can create appointments and set up an alert to remind you when the appointment is approaching. Set Windows Calendar to alert you minutes, hours, or days ahead of time. I set my reminders in Outlook for 2 days notice.

If you attend regular meetings, like the CRUG membership meeting, set up recurring appointments. In Windows Calendar create one appointment and then have the calendar set up a series of similar appointments at the selected intervals.

Tasks

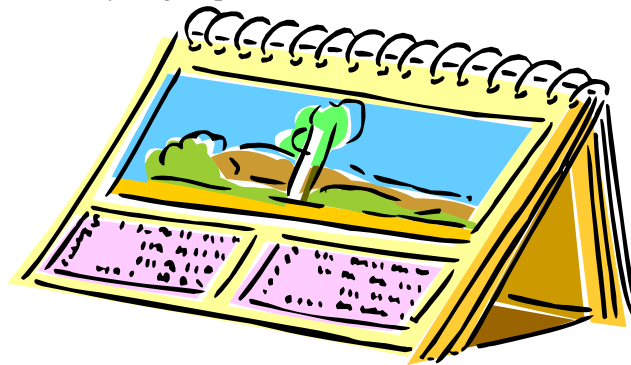
Windows Calendar includes a personal task list. For each task, describe what is required, set a completion deadline, choose a priority ranking, and then track of your progress right in the calendar. You can set reminders like those for appointments. As a task is completed, simply check it off the list.

Sharing Calendars

With Windows Calendar, you can set up individual calendars for multiple people. This makes it easy for people using the same computer to coordinate their personal schedules. They can quickly compare information from any or all of the calendars, side-by-side in a single view. Each person can manage their own schedule and view the others' calendars, selectively or all at once.

Set Up a Calendar

To set up a calendar in Windows Vista click Start and type Calendar in the Start Search box. In the results, click Windows Calendar under Programs to select it. A calendar opens with the name assigned to the computer. You can generate this calendar or in the File drop down menu select New Calendar and start fresh.



In the new calendar type in a name in the Calendars task pane and click Enter. This calendar and any others appear in the Calendars task pane. Clicking to add checks in the boxes next to the calendar lets you see those selected together. In the Details pane, select a color to help identify each calendar.

Add Appointments and Tasks

Once the calendars are set up you can add appointments and tasks. Click New Appointment or New Task on the toolbar and add the information.

You can even publish your calendar to your web site and send invitations and appointments by email.

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Countdown To The Digital TV Deadline

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Television, as most of us know it, has barely two years of life left in it. Congress has set a deadline of February 17, 2009 for analog broadcasts to end. That means that the faithful television that you have had, for I don't know how many years, will cease functioning on that date. Well, cease functioning may be too strong of a description, but there will no longer be an over the air broadcast of the analog type of signal that it knows how to interpret.

Starting on that date, all of the over the air television broadcasting stations have been mandated to transmit the digital television format signal only. Old faithful, or maybe not so old, can still be used as long as there is some device that can feed it the analog signal that it knows how to deal with. This could be your VCR or DVD player for instance. Or, it could be one of the set top boxes that millions of people are going to have to purchase if they wish to continue using their analog television to receive over the air television broadcasts. The purpose of the set top box is to tune in the digital television frequency and convert it to the NTSB analog signal that your television knows how to deal with.

The set top boxes contain an ATSC tuner. This stands for Advanced Television Systems Committee. They are an international organization setting the standards for digital television. In time, they will replace the NTSC, which is an American organization overseeing analog TV transmissions. There is considerable talk about Congress passing legislation to subsidize, or provide free of charge, set top boxes to low income families. At this time there is no requirement that the recipients be United States citizens.

When you purchase a digital television, ATSC is a term that will be listed on the specifications showing that the television has a built-in digital tuner. There are eighteen formats in the DTV spectrum, 12 SDTV formats and 6 HDTV formats.

The Federal Communications Commission (FCC) is the regulating organization in the United States that controls conversion from analog to digital. The Fed-

eral Communications Commission has set deadlines that mandate all manufacturers include digital tuners in their televisions. These are the dates that have been mandated:

July 1, 2005: all TVs with screen sizes over 36 in. must include built-in ATSC tuner.

July 1, 2006: 100% of 25 to 35in. TVs must include ATSC DTV tuner.

July 1, 2007: 100% of 13 to 24in. TVs must include ATSC DTV tuner.

July 1, 2007 100% of all interface device's must have ATSC DTV tuner. That includes equipment such as VHS VCRs, DVD player/recorders, and DVRs.

These deadlines only apply to new televisions and do not include the huge inventory of existing units. That is why you may see a number of television's larger than 36in. still being sold without built-in digital tuners.

Definition of television; a television is a viewing device that includes a tuner. A device without a tuner is called a monitor. There is a loophole in the FCC regulations that allows manufacturers to build TVs without any tuner which would technically make it a monitor.

Most cable subscribers and all satellite subscribers use their service provider's set top box to receive and decode the digital signals instead of using the television's built-in ATSC tuner. One exception to that rule is a small credit card type of chip that takes the place of the set top box and is called a CableCARD.

Most cable and satellite providers charge in the neighborhood of \$9.95 a month to receive HD channels. Over the air High Definition channels are "free" in the same sense that current analog channels are free, that is you pay the price of watching the commercials but don't actually have to shell out money. So if you spend the extra bucks up front to buy an HD television that includes the ATSC tuner, you are not forced to pay that additional monthly charge. By

purchasing an antenna from an electronics store for in the neighborhood of \$25.00 to \$100.00, a person that owns a set with a built-in ATSC tuner can enjoy the over the air broadcasts for free.

When the analog signals are turned off and digital becomes the standard, cable and satellite providers will probably provide the local networks for free if they don't do so already. But you will still have to buy or lease the cable box which right now costs in the neighborhood of \$199.00. In addition to that, you'll still have to purchase the programming from the provider.

So if you are a person that currently relies on getting all of your television through a rooftop antenna, in less than two years you will be faced with the choice of spending money for some new equipment or no longer being able to watch television.

One method of dealing with the problem would be to purchase one of the new DVD VCR combos that include the ATSC tuner. A number of VCR manufacturers, including Panasonic, have announced that when the new regulations go into effect, they will simply stop manufacturing that class of equipment. JVC has announced a new DVD/VCR/ATSC tuner model that will be available in May, the DRMV99 at \$329.95. If you already own a good VCR and a good DVD player, it might make more sense to go ahead and purchase just the ATSC set top tuner.

In addition to dealing with all of the high definition signal acquisition problems, a whole lot of people are already trying to deal with the somewhat confusing array of HDTV offerings. The terminology which is frequently observed in the papers can be very confusing. The phrase "HD ready" is usually an indicator that the unit is a monitor that does not include a tuner. A lot of advertisements conveniently do not include what version of high definition a particular offering is. It is simply referred to as HD without saying whether it is 720i, 720p, 1080i or 1080p. The actual pixel resolution is often omitted as well. The 720i or p sets need to have a resolution of 1280 pixels by 720 pixels. The real 1080i or p sets need to have a resolution of 1920 pixels by 1080 pixels. Just like the older VGA computer monitors the 720i refers to an interlaced display and the 720p refers to a progressive scan display. The progressive display is the better quality.

Then you have to decide which display technology you are going to pick. The Plasma flat panel, the LCD flat panel, the rear projection DLP television, the rear projection LCD television, the wall projection unit in either DLP or LCD. What is the brightness level? What is the viewing angle? What is the life expectancy of the projector bulb? What is the cost of the projector bulb? Does the unit have a VGA, a DVI and an HDMI video connector?

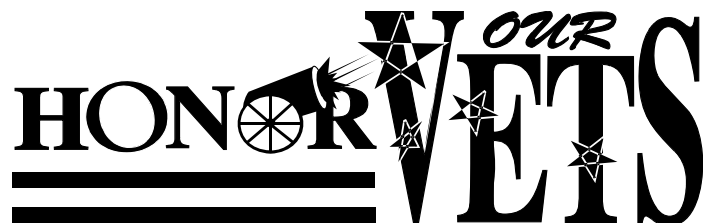
At the moment, I think the best bang for the buck is to purchase a projector that will do 720p, and if you can afford the extra cost, one that will do 1080p. If you have never seen even an older 800x600 projector displaying a movie from a standard DVD on an eight foot diagonal screen, I think you will find it impressive and I think you should do that before you spend money on anything.

Some selected FAQs from <http://www.dtv.gov/> site.

What is the digital TV transition?

The switch from analog TV (the traditional TV system using magnetic waves to transmit and display TV pictures and sound) to digital television (the new TV system using information transmitted as "data bits"—like a computer—to display movie-quality pictures and sound), is referred to as the digital TV (DTV) transition. In 1996, the U.S. Congress authorized the distribution of an additional broadcast channel to each TV broadcaster so that they could introduce DTV service while simultaneously continuing their analog TV broadcasts. In addition to improved picture and sound quality, an important benefit of DTV is that it will free up parts of the broadcast spectrum for public safety as well as other valuable uses. This is possible because the modern technology of DTV is more efficient than analog TV technology. DTV allows the same number of stations to broadcast using fewer total channels (less of the broadcast spectrum) which will free up scarce and valuable spectrum for public safety and new wireless services.

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What is the February 17th, 2009 DTV deadline date?

Congress passed a law on February 1, 2006, setting a final deadline for the DTV transition of February 17, 2009. Most television stations will continue broadcasting both analog and digital programming until February 17, 2009, when all analog broadcasting will stop. Analog TVs receiving over-the-air programming will still work after that date, but owners of these TVs will need to buy converter boxes to change digital broadcasts into analog format. Converter boxes will be available from consumer electronic products retailers at that time. Cable and satellite subscribers with analog TVs should contact their service providers about obtaining converter boxes for the DTV transition.

What is digital television (DTV)?

Digital television (DTV) is a new type of broadcasting technology that will transform television as we now know it. By transmitting the information used to make a TV picture and sound as “data bits” (like a computer), a digital broadcaster can carry more information than is currently possible with analog broadcast technology. For example, the technology allows the transmission of pictures with higher resolution for dramatically better picture and sound quality than currently available – called High Definition Television (HDTV) - or the transmission of several “standard definition” TV programs at once – called “multicasting.” “Standard definition” digital TV pictures would be similar in clarity and detail to the best TV pictures being received and displayed today using the current analog broadcast system and TV receivers. DTV technology can also be used to provide interactive video and data services that are not possible with “analog” technology.

Is HDTV the same thing as DTV?

HDTV is the highest quality of DTV, but it is only one of many formats. In addition to HDTV, the most common formats are Standard Definition Television (SDTV) and Enhanced Definition Television (EDTV).



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1. **HDMI** – latest version is 1.3, this is a connector that requires a special cable and is not usually included with your TV. This could be used for 5.1 or 7.1 surround sound systems, video games such as X-Box, HD-Cable boxes, HD-DVD players, etc.

2. **Component** – One to three inputs are provided, used to connect DVD Players, games, etc.

3. **Cable Slot** – latest version is 2.0, used for Cable Simm Cards. Most cable companies are not interested, but new FCC mandates starting next year, 2007, may change this. Also some companies are considering including the Cable Card internally.

4. **Tuners** - Usually two tuners are included, one NTSC (we are now using Analog & Digital TV, also called Standard TV) and one ATSC (this is the new HD digital TV tuner, required for HDTV). Stay away from a TV listed as “HD-ready”, it does not have an ATSC tuner.

Summary. It boils down to what you think looks and operates the best for your situation. Ask questions and check out the specification of the unit you wish to buy. If you are upgrading your cable or satellite service to HDTV, be sure to ask for “hi-def”, not digital. Good luck!

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SDTV is the baseline display and resolution for both analog and digital. Transmission of SDTV may be in either the traditional (4:3) or wide-screen (16:9) format. EDTV is a step up from Analog Television. EDTV comes in widescreen (16:9) or traditional (4:3) format and provides better picture quality than SDTV, but not as high as HDTV.

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Buying An HDTV?

By Bob Elgines, Editor, Colorado River Computer Club, AZ
<http://www.crccaz.com/> [Elginesz\(at\)rraz.net](mailto:Elginesz(at)rraz.net)

There are three things necessary for true High Definition (HD) Television (TV): an HDTV, HD receiver (or tuner) and HD programming. All TV stations will be capable of HD by 2007.

New HDTVs are here and will be required starting in 2009; but, of course, there will be converters available. The standard for Analog TV was 525 lines per frame vertically. The old mandates of FCC requirements were first 2004, and then 2007. There are many HDTV models out there and some of the description of their characteristics are confusing. Hopefully I can clear up a few items of concern.

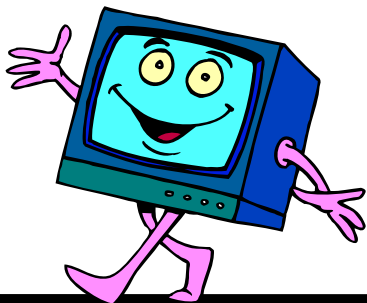
First let us consider the three **types** of TV screens or TV monitors:

1. LCD – Cheaper in price

They can be wall mounted;
 37" weighs about 50 to 60 pounds;
 Sizes up to 52"; 4" to 5" thick;
 160 degree view angle (with decreasing contrast);
 Lasts 10 to 20 years;
 The thinnest, lightest sets and have minimum reflection of lights in the room.

2. PLASMA – Moderate in price

They can be wall mounted;
 42" weighs about 85 to 90 pounds;
 Sizes 42" and up; 4" to 5" thick;
 170 degree view angle (contrast good thru-out);
 Lasts 10 to 20 years;
 Better color accuracy and displaying the deepest black, but screen's shiny surface can produce reflections of lights in the room and static images can "burn-in" and produce a ghost image.



3. DLP – (digital light processing)

Moderate in price for size;
 Not wall mounted;
 42" weighs about 45 to 60 pounds;
 Sizes 42" and up;
 8" to 15" thick;
 160 degree view angle (contrast good thru-out);
 Lasts 8 to 10 years (bulb or lamp);
 A "rainbow effect" that some viewers may notice on the edges of bright objects on the screen.
 DLP is used in most new projectors.

Second, let's discuss **Resolution** (pixels are the number of dots per line), the higher the resolution the better the picture, or higher quality. The old Standard Digital TV format is 720 (Horizontal) x 480 (Vertical). The new HDTV formats are 720 and 1080, but most HDTVs also allow using the 480 standard. There are not many things out there for the 1080 "i" or "p" format. Where "p"= Progressive – draws lines on screen from top to bottom, and is considered the best for high speed movement without blur. Whereas "i"= Interlace – draws odd lines from top to bottom then even lines from top to bottom.

1024 x 768 pixels, 1366 x 768 pixels, and 1780 x 720 pixels all fall under the 720p format and many 720p-HDTVs accept the 1080i format.

1920 x 1080s fall under either the 1080i or 1080p format and most accept the 720p format.

Screen size is measured diagonally. Therefore, if you now have a 32" TV, you will most likely want a 37" to 42" for your replacement. That way you will have basically the same height, but of course it will be wider.

Third, let's discuss other concerns such as inputs and outputs (most sets come with stereo sound speaker systems):

(Continued on page 10)

Irfanview 4.0 – Freeware Image Editor And Media Player

By Ira Wilsker

WEBSITE: <http://www.irfanview.com>

Imagine a free (for non-commercial use), full featured utility that can display and edit almost all known image formats, and convert from any one format to any other. Imagine a utility that can play almost every known audio and video format with its free “Plugins” file, all in a small and very efficient software package. Some skeptics may say that this sounds too good to be true, but lucky for us, it is indeed true. The program that can do all of the above, and more is the very popular Irfanview, version 4.0 (www.irfanview.com), written by a Bosnian named Irfan Skiljan. This outstanding program is not a well known secret, as the popular download site Download.com alone reports over 26 million downloads of Irfanview (including previous versions), with probably tens of millions of copies downloaded from countless other download resources, and over a million additional copies downloaded every month.

People send me several emails every day with images or videos attached, and I have Irfanview set as my default viewer and player for almost all images, audio files, and videos. Using Irfanview is fairly simple, straight forward, and somewhat intuitive. After downloading (www.irfanview.com) and installing the file, I recommend that the companion file “Irfanview Plugins” also be downloaded and installed. After installing the “plugins” the user is given the option to selectively choose Irfanview as the default for any or all of the file extensions it supports. It may not be a bad choice to allow Irfanview to be the default for those extensions, but the decision can be reversed if decided later.

One frequent function that I use Irfanview for on a regular basis is image editing. Recently, a relative sent me several unedited JPG digital photos of her new puppy taken at maximum resolution with a 6 megapixel digital camera. Each image was huge both in file size (several megabytes), and in viewing size. I have a big-screen monitor running at a high screen resolution, and still could not view the entire

image without scrolling, as the image size was greater than my monitor resolution. Since I opened the attached images in Irfanview, it was but a few mouse clicks to edit them down to a more manageable size; I clicked on IMAGE – RESIZE/RESAMPLE and then selected a percentage of the original size, and then saved the image in its reduced size. It is good netiquette to reduce the size of multi-megapixel images, and then email the digital images in a more reasonable size such as 800x600 or 1024x768. It is also good netiquette to crop the image, which can be done simply by clicking and holding the left mouse button on a corner of the desired image, and then dragging it in a frame to the desired borders of the cropped image. EDIT – CROP SELECTION will instantly produce the cropped image which can be saved or further edited.

Another purpose of Irfanview is to improve the quality of digital images by enhancing the colors. The command IMAGE – ENHANCE COLORS opens a dual pane window that shows the unedited original image and the new image with the changes applied. Possible changes that can be made include brightness, contrast, color balance, gamma, and saturation. By using a slider or manually entering values allows the user to see the effects of any changes before saving the edited image. Another selection I often utilize is the “sharpen” command on the image menu; this automatically sharpens a fuzzy image. Other image commands include red-eye reduction, and a panorama function where separate images can automatically be knit together to make a larger panoramic image.

Readers of this column will notice that sometimes images are displayed along with the text. Most of these images are screen captures made with Irfanview. By selecting OPTIONS – CAPTURE/SCREENSHOT a hot key is then used to capture the image on the monitor. I use the default hotkey (Ctrl-F11) for image capture, crop the image as desired, and then save it in the desired format.

While there are many other image editing features included in the program, Irfanview also shines as an audio and video player if the plugins are installed. Popular audio formats, such as MP3, RA, and WAV are fully supported, allowing this single program to play almost any audio format, with full control of volume and other technical details. There are many video formats in common use, such as MPEG, AVI, and WMV that are often used for the videos that people email or display on a webpage, and Irfanview can handle almost all of them interchangeably, and can serve as an able substitute for Windows Media Player, and most other media players. Audio and video on CDs and DVDs can also be played with Irfanview.

Irfanview 4.0 will work well on all versions of Windows from 95 to Vista, and is simple enough for beginners, and sophisticated enough for professionals. The software is free for non-commercial use, and the author encourages purely voluntary contributions via PayPal. I suggest that readers of this column download it and try it. There is no adware or spyware embedded in it, and the program has a clean and uncluttered interface. I have personally used Irfanview on an almost daily basis on all of my computers for several years, and can strongly recommend it. Try it, and you may end up liking it as much as I enjoy Irfanview.



Washington Area Computer User Group

WACUG Meetings will be held on November 17, 2007 from 12:30 to 3:30 pm . at the Fairfax County Government Center, 2000 Government Center Parkway, Fairfax, VA . See announcement on page 16!

You do not need to be a member to attend. For more information on WAC meetings and events, call the WAC AnswerLine (voice) at (703) 370-7649. Also see WAC's Web Site at

<http://www.wacug.org/>

(Continued from page 4)

same Gadget open in the Sidebar if you want (which might be convenient for clocks or weather gadgets, for example), and you can drag them to different positions up and down in the Sidebar.

The built-in Gadgets for Windows Vista include: an onscreen Calendar, a clock that can show the time in any time zone or city, a Gadget-based version of your email Windows Contacts, a CPU meter which consists of two gauges that show the load on your computer's microprocessor and RAM, a simple currency converter, a notepad for jotting down reminders, a photo slideshow, a weather Gadget, and others. In addition, there are dozens of other Gadgets you can choose from if you aim your web browser at:

<http://microsoftgadgets.com/>

You can even design your own Gadgets and submit them to Microsoft at one of the links on the above page.

With each Gadget, you can choose from a right click menu which allows you to close the Gadget or adjust the opacity of the display, among other options. When you move your mouse over a Gadget, you will see a little "X" icon and one that looks like the head of a wrench. The X icon can be used to close the Gadget, while the wrench icon accesses that Gadget's property page. With the right click menu of the Windows Sidebar icon in the Notification Area, you can choose to Open the Sidebar if it has been closed, Move Gadgets to the Front, access the Property page for the Sidebar, Add Gadgets, get Help, or Exit the entire Sidebar application.

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(Continued from page 1)

Meeting, and all AOL operations. Ports 1024 to 49451 are referred to as registered ports. There are many Internet games that use ports in this region. There are also other specific functions assigned to these ports and some may duplicate functions in the common port region. The final group of ports are dynamic and have no specific functions registered. However, the point is that all of these ports can be accessed by remote computers somewhere out on the Internet and use them to connect to your computer if you have not protected them.

Automated port scanning software is available free on the Internet from many "hacker sites". Its use is very common on the Internet. There are various types of scans. Some scanners will look for any of the 65,535 possible ports. Another type looks for open UDP (user data protocol) ports or may use an FTP (file transfer protocol) bounce to hide the origin of the scan. If an open port is located, software can be downloaded that will open a "backdoor" on your computer. This allows remote input and output. Such access can be used to record and transmit out information from your computer. It can also be used to attack other computers to produce a "zombie" network. Such networks have been used to attack large computer servers in attempts to bring them down or to produce a "denial of service" attack.

Many users believe that a router with a firewall is adequate protection. Most routers use either network address translation (NAT) or a packet filter. Information on the Internet is transmitted in packets which contain the IP address of the sender and the address of the receiver in addition to the data. The routers firewall uses filters that look at the sending and receiving addresses of incoming packets on port 80 (HTTP). Only those packets that are a response to an outgoing request are allowed through. If your router uses a packet filter it can be penetrated by a fragmented scan. This type of scan breaks up packets into fragments which can easily get through the simple packet filter found in most router firewalls. Routers using NAT either alone or in combination with a packet filter can also be easily thwarted. NAT is not successful when the packet is an FTP packet or is sent by Microsoft's Netmeeting or similar audio/video applications that bury the address in the body

of the packet. Only when the address is in the header of the packet can the router use address substitution. So packet filtering and NAT, although useful, do not provide complete firewall protection for all Internet connections.

Another method for preventing intrusions is "stateful" packet inspection. This is the method used by most software firewalls and is found in some of the newer routers. When your web browser opens a connection to the Internet, the firewall software records that connection and keeps a record of its status. Whenever a packet arrives at your computer, the data in the packet can be compared to the information in the firewall state table. The firewall software can also make decisions based on the data content of the packet, not just the sender's address. Because this examination does require some time there may be a slight slowdown of your system. However, in most cases, there will not be a long enough delay for most users to notice.

So inbound packets can be filtered and examined for dangerous content. However, when the user connects to a web server, the page requested is downloaded to the users computer. It is possible for that web page to contain a small program or a link to a dangerous site in a one pixel unit on the page. When this is downloaded the program is run or the link activated. This results in an outgoing packet to some Internet address through a non-standard port so the user is not aware of the activity. This type of activity would not be stopped by a hardware firewall in a router. It can only be blocked by a software firewall which recognizes that this activity is coming from a new application that has not previously made an Internet connection. In this case the software will query the computer user to determine if this new application should be allowed to connect. Hopefully, the user would recognize that this was not an application that the user was running and the outbound packet would then be blocked. It is absolutely necessary for the firewall to process both incoming and outgoing packets. Only a software firewall can establish the necessary tables for comparing the incoming/outgoing packets to allowed activity and request user interaction when necessary.

This leads us to the Windows firewall. This firewall, as used with Windows XP, does not have any control of outbound packets. Any application is allowed to

connect to the Internet without any filtering or other checking of source or content. Windows Vista was supposed to come with both inbound and outbound filtering. However, as it is delivered it provides only inbound protection just as did XP. The outbound protection is turned off by default. So, if it is there, how do you turn on the outbound protection. To change this you have to use the Microsoft Management Console. Then you have to write a rule to block each "malware" application you anticipate might get on your computer. You can not create a general rule for all malware. Creating rules that would cover all possible malware applications is an impossible task. Microsoft has been quoted as saying "outbound filtering isn't really needed, and the key is making sure that malware doesn't infect the PC in the first place." Also they have stated that large enterprises had requested that it be turned off by default. Microsoft does say that "core Windows Services have specific behaviors which are monitored by the firewall". Instead of using outbound filtering Microsoft recom-

mends that you buy "Windows Live OneCare", a product and subscription service. My recommendation is that you obtain a free two-way firewall like ZoneAlarm and ignore the Windows firewall completely.

Whatever you do, don't connect your computer to the Internet without using a firewall and an antivirus application. I have come across too many computers recently that are attached to constant on Internet connections and had no protection. The cost of removing the malware from these systems was more than the cost of premium protection. So don't get caught short!

Dr. Lewis is a former university & medical school professor. He has been working with personal computers for more than thirty years. He can be reached via e-mail: [bwsail at yahoo dot com](mailto:bwsail@yahoo.com).

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Please send your change of address to the club PO box as soon as possible to avoid missing issues.

Thank You!


Special Multi Group Meeting Speaker & Presentation November 17

From Paul Howard

**Join Us and Enjoy "Whittle's Picks
for the Digital Home - Only the Best,
Not All the Rest"**

Dave Whittle, will be the special guest at WAC's Saturday, November 17th meeting. I'd like to promote this heavily, as a joint meeting of WACUG and NCTCUG, and encourage all our members to attend, as well as invite the folks from other groups

Dave will introduce some of his favorite technologies, products, and services that solve real problems for real people and can help make life a little bit or a lot better for each of us. "Whittle's Picks" are hidden gems from companies large and small, old and new, with outstanding, innovative offerings. For some background, Dave and Kathy represented Intel several years ago, providing "presentations in a box" that were used at our meetings. NCTCUG's demo computer motherboard and processor resulting from this Intel technology series,

November 2007	
1st Wed. (11/7) 7 p.m. General Meeting	
4th Wed (11/28) 7 p.m. Internet SIG	
3rd Monday (11/19) 7 p.m. Board of Directors	
All meetings are at Carlin Hall , 5711 S. 4th St., Arlington VA: East off of Carlin Springs Rd, just south of Arlington Blvd/Route 50.	

and several meetings where we put the demo computer together.

You'll recall we later ran the "Build Your Own Computer" two part seminar at both groups, which resulted in the elaborate build session at WAC, with Geof and Bill using video cameras to follow the assembly of Jim Bruggeman's computer, along with the PowerPoint slides of the assembly process.

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First Class

