PATACS Posts

Newsletter of the Potomac Area Technology and Computer Society

Useful Bits & Pieces

by Lorrin R. Garson
Columnist, Potomac Area Technology and Computer Society

Novel Computer Security

A start-up company named Bromium (see http://www.bromium.com/) is developing a promising new method for computer security. Their approach is to dynamically create a "micro-virtualization (MV)", which is a temporary, virtual compartment that isolates e-mail attachments, browser tabs and other applications from the core computer system. If the MV associated software detects misbehavior, such as malware trying to exploit a security hole, it eliminates the compartment before damage can be done to the rest of the computer. When a particular task is completed within a specific MV, that MV is eliminated. With this approach, malware may gain entry into a computer, but its effect should be eliminated or greatly reduced. In principal this approach should be more effective against attacks that exploit unknown vulnerabilities in applications before traditional anti-virus and anti-malware software can be updated and downloaded to deal with the threat (a "zero day attack"). If and when Bromium will release their products and to whom (enterprise customers and/or consumers) is uncertain. For more information see

http://www.theregister.co.uk/2012/06/20/bromium_microvisor_security/ and http://www.sfgate.com/technology/article/Security-startup-Bromium-destroys-malware-3659371.php.

Disk Drive Diagnostics

When an application suddenly doesn't work or a saved file can't be accessed or is corrupted, your hard disk drive may be failing. Of course, the first remedy you should try is to re-boot your computer, but if that doesn't work a diagnostic of your hard drive may be in order.

Windows 7 (as well as Vista and XP) comes with a disk analysis tool called chkdsk.exe. This utility searches for problems and errors and attempts to fix them. Chkdsk looks for things like lost clusters, bad sectors and directory errors. In Windows 7 it is invoked by (a) going to Start and left-clicking on "Computer", (b) right-clicking on the suspect hard drive (or thumb drive), (c) selecting "Properties", (d) left-clicking on the "Tools" tab, (e) left-clicking on the "Check now..." tab, (f) checking the box(es) for "Automatically fix file system errors" and/or "Scan for and attempt recovery of bad sectors", and finally (g) left-clicking on the "Start" button.

Be prepared to wait a considerable length of time for chkdsk to finish, depending on the size of the

disk drive, number of files, errors encountered, etc. Depending on your version of Windows you may need to have administrative rights to run chkdsk. Also you may need reboot the computer for chkdsk to run. Before running chkdsk, close all applications and files. See http://answers.microsoft.com/en-us/windows/forum/windows_7-performance/using-windows-7-how-do-i-run-chkdsk/a68b3e4d-1a42-e011-9767-d8d385dcbb12?auth=1&page=2 for a useful discussion of chkdsk.

However, chkdsk is not the only diagnostic tool available. Some disk drive manufactures provide diagnostic tools as do a number of software developers. See the following table.

Caution: Before downloading and installing <u>any</u> software it is prudent to seek reviews and only download from trusted sites.

Is your hard drive making funny noises? See http://datacent.com/hard_drive_sounds.php for information that may be helpful in diagnosing the problem.

Time Machine—Apple's Backup

Apple's computers are of legendary quality, but their disk drives still fail and users lose or mess-up files, so backup is essential. Time Machine, Apple's backup utility was introduced in 2007 and runs on the Mac OS X operating system including the current Mountain Lion version. Backups are written to an attached external disk drive or Apple's wireless Time Capsule. Time Machine creates a folder on the backup device that's named the current date and time. The utility then copies the contents of all locally attached drives to this folder, excluding files and directories that have been so earmarked. Subsequently every hour, a new folder on the backup drive is created using the same naming scheme. Instead of making another complete copy of the primary hard drive, Time Machine backs up only files that have changed and creates links to files that already exist on the backup drive. Following the initial backup, Time Machine keeps hourly backups for the past 24 hours, daily backups for the past month, and weekly backups until the backup drive is full, then it automatically erases the oldest backups to free up space for new backups. A user can browse backups to recover lost or damaged files and folders. The backups can also be used to transfer data from an existing Apple computer to a new machine using the Migration Assistant utility. See http://www.apple.com/findouthow/mac/#timemachinebasics for a video on how to set up and use Time Machine. See http://support.apple.com/kb/HT1427 for Apple's tutorial entitled "Mac 101: Time Machine".

Source	Tool	Information and/or Where to Obtain
CrystalDiskInfo		http://crystalmark.info/software/CrystalDiskInfo/index-e.html
DiskCheckup		http://www.passmark.com/products/diskcheckup.htm
Fujitsu/Toshiba		http://storage.toshiba.com/storage-services-support/warranty-support/software-utilities
HD Tune		http://www.hdtune.com/
HDDScan		http://hddscan.com/
Seagate/Samsung	SeaTool	http://www.seagate.com/support/downloads/seatools/
Western Digital	Lifeguard	http://www.wdc.com/wdproducts/library/other/2779-701022.pdf

March 16th Meeting Topic: FastStone Image Viewer

At the March 16th meeting in Fairfax, Dan Feighery will discuss FastStone Image Viewer for Microsoft Windows. It is a fast, stable, user-friendly image browser, converter and editor. It is free for home use and has a nice array of features that include image viewing, management, comparison, red-eye removal, e-mailing, resizing, cropping, retouching and color adjustments. Its innovative but intuitive full-screen mode provides quick access to Exchangeable Image File Format (EXIF) information, thumbnail browser and major functionalities via hidden toolbars that pop up when your mouse touches the four edges of the screen. Other features include a high quality magnifier and a musical slideshow with 150+ transitional effects, as well as lossless JPEG transitions.

Bio: Dan is a retired Air Force Flight Instructor who has been an Osher Lifelong Learning Institute (OLLI) member for several years and was the coordinator of the OLLI Photo Club for about 5 years. Some of his recent photographs are on display in the OLLI Tallwood social room.

PATACS Logo Contest Update

Unfortunately, PATACS received only one entry for the logo contest announced in the November 2012 **Posts** (page 6). The PATACS Board of Directors is reviewing options for the group logo. If you have suggestions, please e-mail them to the PATACS Secretary at Director14@patacs.org.

Tell Us About It!

Got a new tech device? Tried a new App or have one that you can't live without? Found a solution to a tech problem?

Help and inform your fellow members by writing a few paragraphs about it for this newsletter! It doesn't require a lot of writing or a degree in journalism, just a short description of why you wanted it, cost (if any), where you got it and whether or not it met your needs.

Users helping users is what we are all about!

Linux and Open Source News

by Geof Goodrum
Potomac Area Technology and Computer Society
linux(at)patacs.org

New Vendor Firmware Boot Bugs

Now that computers are on the market with Secure Boot enabled (a feature that Microsoft required for Windows 8 certification—see my previous article on page 3 of the November 2011 *Cursor* newsletter, http://www.wacug.org/pdf/cursor/1111cursor.pdf), users are encountering broken vendor implementations that prevent booting other operating systems.

Users of Samsung series laptop models 300E5C, 530U3C, NP700Z5C, NP700Z7C and NP900X4C reported that booting live installation media for Ubuntu GNU/Linux v12.04 and v12.10 left their laptops unbootable. The cause was traced to a change Samsung made in the way these laptops boot, whether Secure Boot is enabled or not. Linux kernel developers provided a fix that disables driver code originally provided by Samsung when it would cause this problem. The fix is expected to be included within stable kernel v3.7.6 and in GNU/Linux operating system distributions that follow. Samsung is reportedly working on a firmware fix for their laptops, as well. For those with unbootable ("bricked") laptops, reports indicate that resetting the system by opening the case and disconnecting the CMOS battery backup temporarily to restore factory settings will recover the system.

Toshiba failed to include valid Linux keys in a boot key database, which prevents booting Linux with Secure Boot enabled (reported for model Satellite S855 with firmware v6.40 failing to boot Fedora 18). Toshiba reportedly fixed this issue with firmware v6.60 for the affected model. Otherwise, the only option is to install GNU/Linux with Secure Boot disabled.

The Lenovo ThinkCentre M92p has a firmware problem not directly related to Secure Boot, but with the vendor's overzealous validation of descriptive text during boot. While an attempt to install the Fedora GNU/Linux operating system

completed successfully, the firmware won't boot an entry from its menu unless it has "Windows Boot Manager" or "Red Hat Enterprise Linux" in the descriptive text. Until Lenovo provides a fix, change the firmware setting to use the legacy boot process (not UEFI).

Reference
http://mjg59.dreamwidth.org/22028.html.

Featured Linux Software of the Month: March 2013

The software described below can be downloaded at the links provided or copied onto a USB flash drive at the PATACS Fairfax meeting. However, please check the online package management tool included with your GNU/Linux distribution first, as installation is often just a click away.
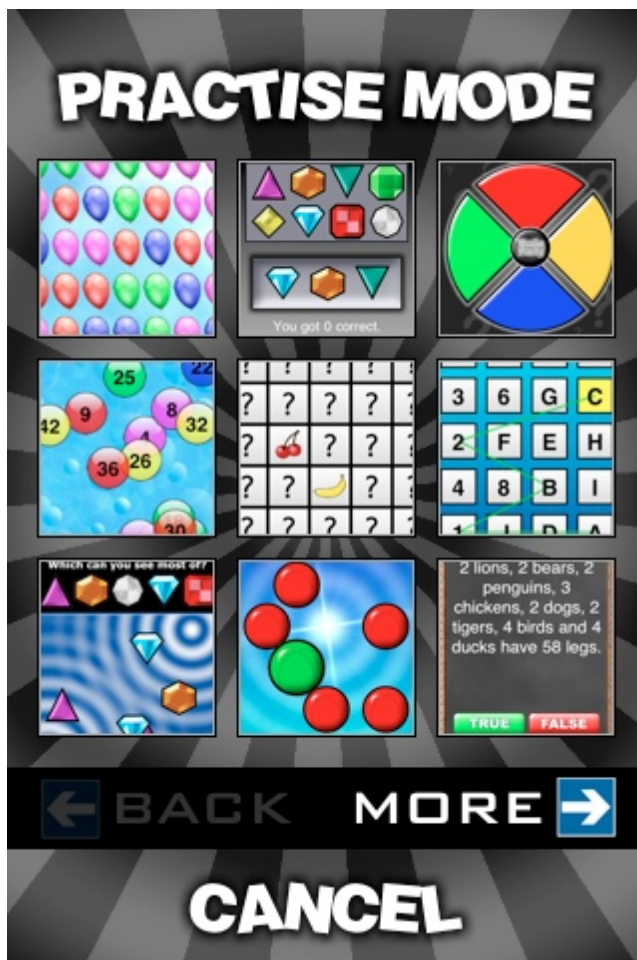
Brain Party – v0.61.
https://launchpad.net/brainparty. Free GNU General Public License 3.0 C++ source code for Linux and MacOSX by Paul Hudson (also available
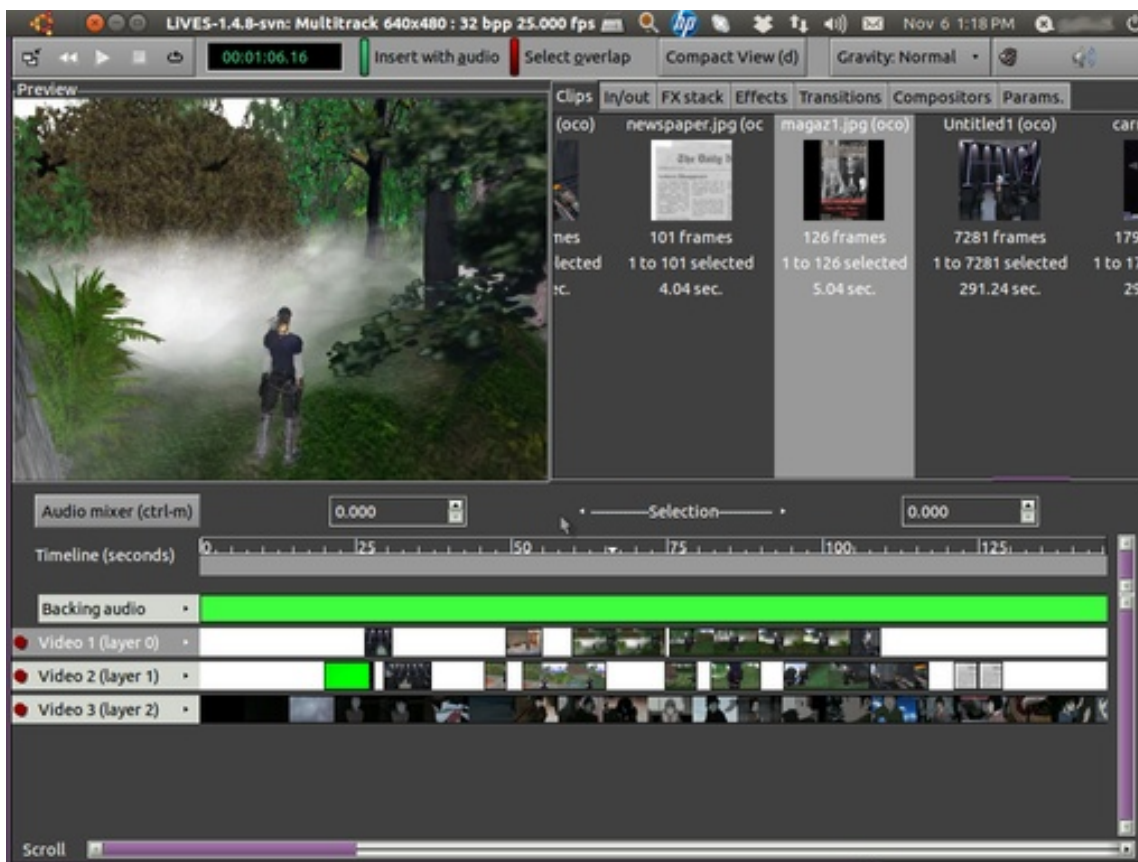

on Apple's App Store at $0.99 for iPhone and iPod Touch). Brain Party is a fun, family-friendly puzzle game that's made up of 36 mini-games designed to push your brain to its limits by testing memory, logic, mathematics, reaction time, and more. It is split into two modes; test mode gives you five mini-games in a row and adds up your brain weight to see how smart you are, and practice mode lets you play your favorite mini-games as often as you want. If you do well enough, there are six extra mini-games that can be unlocked, as well as a new game mode designed to keep you playing and enjoying your favorite games even longer. Requires SDL, SDL Mixer, SDL TTF, SDL Image, SDL GFX and OpenGL libraries.

Chromium – v26.0.1401.0.
http://www.chromium.org/Home. Free BSD license source code and executable packages for Linux, Windows, MacOSX, ChromeOS, Android, and iOS by The Chromium Authors. Chromium is an open-source web browser project that aims to build a safer, faster, and more stable way for all Internet users to experience the web ("... we think of Chromium as a tabbed window manager or shell for the web rather than a browser application"). The Chromium web browser is the development community basis for the Google Chrome web browser. Chromium differs from Chrome in that Chromium does not include auto-updating, an option to send anonymous usage statistics to Google (enabled by default in Chrome), nor code to send installation and country of use statistics to Google. Other privacy features are user-selectable in preferences ("Chromium provides users full transparency and control over the information managed by the browser"). Chromium also provides advanced security features such as integrated sandbox with protection for Adobe Flash and the integrated PDF viewer, and anti-Phishing and Malware defenses. Chromium also supports a wide variety of add-on applications and feature extensions (including enhancements for privacy and security). Note that compiling Chromium from source requires 6GB or more of available memory.

Multitrack video editing with LiVES (earlier version)

LiVES – v1.8.1. http://lives.sourceforge.net/. Free GNU General Public License 3.0 source code and executable packages for Debian, Ubuntu, openSUSE, Slackware, Mageia, Arch Linux and Fedora by salsaman et al. LiVES is a Video Editing System that is designed to be simple to use, yet powerful. It is small in size, yet it has many advanced features. LiVES mixes realtime video performance and non-linear editing in one professional quality application. It will let you start editing and making video right away, without having to worry about formats, frame sizes, or framerates. It is a very flexible tool that is used by both professional VJ's and video editors - mix and switch clips from the keyboard, use dozens of realtime effects, trim and edit your clips in the clip editor, and bring them together using the multitrack timeline. You can even record your performance in real time, and then edit it further or render it straight away. For the more technically minded, the application is frame and sample accurate, and it can be controlled remotely or scripted for use as a video server. And it supports all of the latest free standards.

winetricks – v20120912. https://code.google.com/p/winetricks/. Free GNU Lesser General Public License shell script by Dan Kegel et al. Winetricks is a multi-purpose tool for Wine that helps when Windows applications forget to bundle needed runtime libraries, fonts, tools, or plugins. It knows the safest place to legally get the missing files (often at microsoft.com), and will painlessly install them for you. It also can tweak Wine settings, and can automatically install about 100 applications and games, including any needed workarounds. It is a simple shell script, and does not require installation. If invoked with no arguments, it displays a simple GUI to let you pick exactly what you would like to install.

Kernel Source – v3.7.5. http://www.kernel.org/. Free GNU General Public License source code for all platforms by the Linux community.

Free Income Tax Preparation Online
by Ira Wilsker

WEBSITES:
https://www.taxact.com
http://www.hrblock.com/online-tax-preparation/free-edition.html
http://www.taxhawk.com
http://www.freetaxusa.com
http://turbotax.intuit.com/personal-taxes/online/free-edition.jsp
http://www.freefile.irs.gov
http://freefilealliance.org
https://www.techsupportalert.com/best-free-income-tax-filing-software.htm

It is that dreaded time of year for many us, when our mailboxes start to fill with those dreaded W-2, 1099, and other forms that indicate to us what may be taxable income. Some people simply throw all of the tax documents in a shoe box or gallon size plastic bag, and take them to a CPA or store front tax service for completion of those dreaded 1040 series of forms and schedules. Many others collect their tax documents and use one of the many commercially available boxed income tax programs from the likes of H&R Block or Intuit's TurboTax. For those eligible, there are a number of respectable companies that offer free online tax calculations and e-filing to those eligible. According to the IRS, "... approximately 70% of all taxpayers have an AGI (adjusted gross income) of $57,000 or less ..." which makes them eligible to use one of the many free online tax services that are members of the IRS Free File Alliance, the listings of which will be available on the IRS website at freefile.irs.gov starting on January 22. In the past, over 36 million individuals took advantage of these free filing services.

According to the IRS website, "The Free File Alliance, LLC is a group of industry-leading private-sector tax preparation companies that have agreed to meet the IRS' high standards for security and privacy and provide tax software options for free." Over 20 tax preparation services, all members of the Free File Alliance (freefilealliance.org), have offered free online tax calculation and e-filing services to those eligible.

Generally, anyone (or couple filing jointly) with an adjusted gross income of $57,000 or less is eligible for these free filing services. Some of the services are only available to residents of specific states, while others have other restrictions, but as previously stated, the IRS claims that 70% of workers, about 100 million people, are eligible for at least one of these free online services. Some of the online services also have special arrangements for military families, military retirees, students, or retirees. Most of these services only prepare simple tax returns, which may not be appropriate for many people. All of them meet IRS requirements for safety, security, accuracy, and privacy, and will electronically file (e-file) the tax return with the IRS when completed, providing the fastest possible refunds for those receiving them. Most of these free file services do not prepare state income taxes for free, but instead charge a nominal fee from $5 to $15 to prepare and e-file (where available) state income taxes. No special tax knowledge is necessary in order to utilize these free online services as they use a question-and-answer method to solicit appropriate information from the taxpayer, providing explanations as they go along. All of them will make the necessary calculations, freeing the individual up from trying to comprehend the massive IRS tax tables.

Among the better known companies offering free online tax preparation and e-filing is H&R Block, with its "H&R Block At Home Free" (www.hrblock.com/online-tax-preparation/free-edition.html). This online service is intended only to complete what it calls "simple tax returns", which is defined by H&R Block as, "A simple tax return excludes self-employment income (Schedule C), capital gains and losses (Schedule D), rental and royalty income (Schedule E), farm income (Schedule F) and shareholder/partnership income or loss (Schedule K-1)." Taxpayers with any of these forms of income (or losses) will have to use one of the commercial products or paid preparers. This free online product offers many of the same benefits and services as its commercial (paid) counterparts, including H&R Block's "Accurate Calculations Guarantee", and "Worry-free Audit

Support". The number of IRS forms and schedules that can be completed by this free service is arguably the most comprehensive list available in a free service. H&R Block's free online service will complete a 1040EZ, 1040A, or 1040 as appropriate, along with any additional forms or schedules, as determined by a comprehensive and easy to understand interview process. This interview process is somewhat intelligent, in that it will attempt to find all lawful deductions and credits in order to maximize any refund, or minimize any taxes due.

Another extremely popular tax preparation software or online service is TurboTax, which also offers a free online service for simple returns at turbotax.intuit.com/personal-taxes/online/free-edition.jsp. As do most of the other free online tax services, TurboTax uses an easy to follow interview procedure in order to determine the proper forms to use, and calculates the proper taxes. According to TurboTax, "Easy Questions, Tailored to You — We ask questions in plain English and then put your answers on the right forms for you, including 1040EZ, 1040A, and 1040. TurboTax skips interview questions that don't apply to you, so you can finish your return faster." Also as most other major services, TurboTax guarantees the largest possible refund as well as audit support, if necessary. For those who start with the TurboTax free edition, but later find that one of the paid versions of TurboTax would be more advantageous, the free edition will prompt the user if a different TurboTax product would be better for them, and will automatically fill out the upgraded (paid) version with the information previously entered into the free version. TurboTax will check the return for accuracy, and then e-file it with the
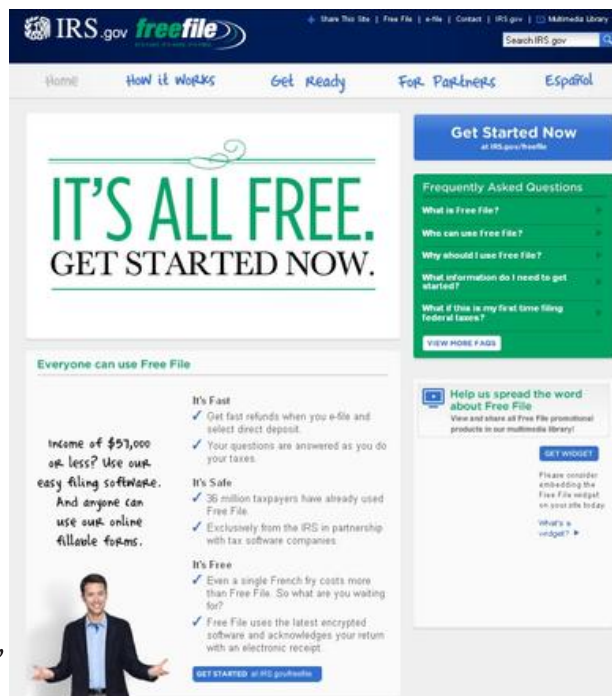
IRS, quickly getting the user a refund, if one is coming. Previous users of TurboTax can import last year's data into this year's product, speeding up the process. State tax returns can be completed, if necessary, for a nominal fee.

One of the more unusual free online tax services is FreeTaxUSA (freetaxusa.com), also listed online as "TaxHawk", an identical product and service. FreeTaxUSA differs from all of the other free online tax services in that it is explicitly free for everyone, not just those with an AGI of $57,000 or less. According the FreeTaxUSA website, "Our free service covers a wide range of federal returns, including investment, self employed, home ownership, rental income, farm income, and other tax situations." Unlike most of the other free products, this service is also available for those with other forms of income and expenses, including, "Capital Gains, Office & Business Expenses, Rental Income, Investment Income or Losses, Traditional & Roth IRAs, Retirement and Pensions, Military Income, Charitable Contributions, Gambling income, and Farm income". For those who may need additional priority support and services, a deluxe edition is available online for only $5.95. State taxes can be completed and e-filed by FreeTaxUSA for $9.95, FreeTaxUSA claims to have processed over 8 million free tax returns.

Another unusual, but very popular free online tax service, TaxACT, also offers free online tax preparation for everyone, including both simple and complex returns without the income restrictions (taxact.com). According to the TaxACT website it is, "The most complete free tax filing solution for everyone! It's true! FREE to prepare, FREE to print, FREE to e-file - no income

or age restrictions. Get the fastest tax refund possible with free e-file. Handles simple AND complex tax returns — supports 1040, 1040A, & 1040EZ, and includes all e-fileable IRS forms to handle all filing statuses & life situations." Another somewhat unique benefit offered by TaxACT is not just that it is available for free online preparation, just like all of the other free products, but it also offers the complete program as a free download, such that it can be completed offline on the computer, rather than online in a web browser. TaxACT offers guaranteed accuracy, guaranteed largest refunds (if eligible), and audit assistance. Users of either the free online or free downloaded versions can also complete a state tax return for a fee of $14.95. For families with college age children, or adults contemplating a college education, TaxACT also offers a "College Student Financial Aid Worksheet" which enables the user to easily complete the FAFSA (Free Application for Federal Student Aid), which is a requirement to get financial aid at almost all colleges and universities. For those who may need additional services, TaxACT offers a Deluxe Federal version for online use or download for $9.95, and a bundle with both the Deluxe version and state program for $17.95 (download or online). For the extra $3, those living in states that have a state income tax may find the Deluxe bundle advantageous over the free version plus the state filing.

These are but a few of the dozens of such products available. Several of the products are in the process of being reviewed and evaluated by the community of users at Gizmo's Freeware (www.techsupportalert.com/best-free-income-tax-filing-software.htm). The online reviews and rating are by necessity incomplete, as many of the 2012 free services will not be available until January 22, 2013, and some of the services evaluated were the 2011 versions, not the 2012 versions. Of the handful of 2012 versions reviewed and evaluated, they were early versions, and not necessarily the latest builds available, as the publishers constantly update and revise their software.

With dozens of free online tax services available to the 100 million taxpayers with an AGI of $57,000 or less, and at least two free services (including one with free downloadable software) available to everyone regardless of income or family status, the old necessity of paper and pencil tax forms is now virtually obsolete.

Extending the Life of Your XP PC

by Dick Maybach

When you first got your PC with Windows XP it was blazingly fast and its hard disk was huge. But now, maybe 10 years later, it has slowed, perhaps drastically so, and its disk is nearly full. The cause of the disk-space shortage is probably obvious, you've stored thousands of photos, songs, and documents, and installed many programs. But what about the speed? Unlike you and I, electronic hardware doesn't slow down as it ages.
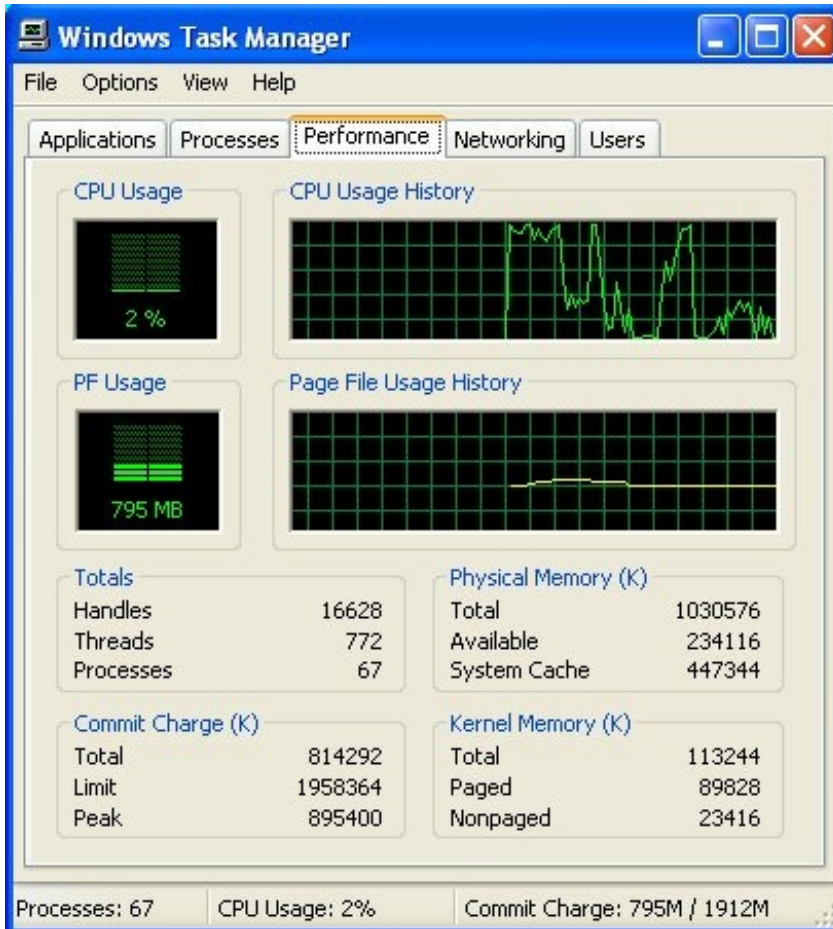
Hopefully, you've kept your software, especially your anti-virus program, up to date and have avoided downloading files from questionable sources. If not (or if someone who uses your PC is less careful), run a full virus and malware check and update Windows and all your applications before you try anything else.

At the time you bought your XP PC, 500 Mbytes of RAM was plenty, but the patches and enhancements you've added over the ensuing years means that the XP you now use is much different than the XP you originally bought. In particular, 500 Mbytes of RAM is now woefully inadequate. To check your RAM use, simultaneously press the Control, Alt, and Delete keys, select the Task Manager button on the Window that pops up, and then select the Performance tab.

I did this on my laptop and, as the screen-shot shows, found that with no applications running except for my virus checker, it was using about

Above: Windows XP Memory Usage

814 Mbytes of RAM (see the Commit Charge box). Fortunately, this PC has 1 Gbyte of RAM (as shown in the Physical Memory box). Note also that the Commit Charge limit is nearly 2 Gbyte. The second Gbyte is provided by the swap file; when Windows needs more memory than you have physical RAM, it moves some data from RAM to a swap file on your hard disk to make room. If this happens more than occasionally, the situation is called thrashing, which results in Windows slowing to a crawl as it continually moves data from RAM to disk and back again. If your XP PC has only 500 Mbytes of RAM, it will begin thrashing as it boots, and will be frustratingly slow. The only fix for this is to increase RAM to at least 1 Gbyte. Removing programs, defragging, and other such measures will not improve the situation at all, despite what fraudulent TV ads say.

Instead of adding RAM, you could switch to Linux, although for an old PC you will have to use a lightweight distribution, such as Xubuntu. (Mainstream Linux distributions, such as Ubuntu, require modern display controllers.) The only difference between these and the mainstream cousins, such as Ubuntu, is that the displays are simpler; that is, you lose some of the visual bling that the software vendors think you want; both types support all the same applications. The screen-shot on top of the following page shows Xubuntu's resource on the same laptop.
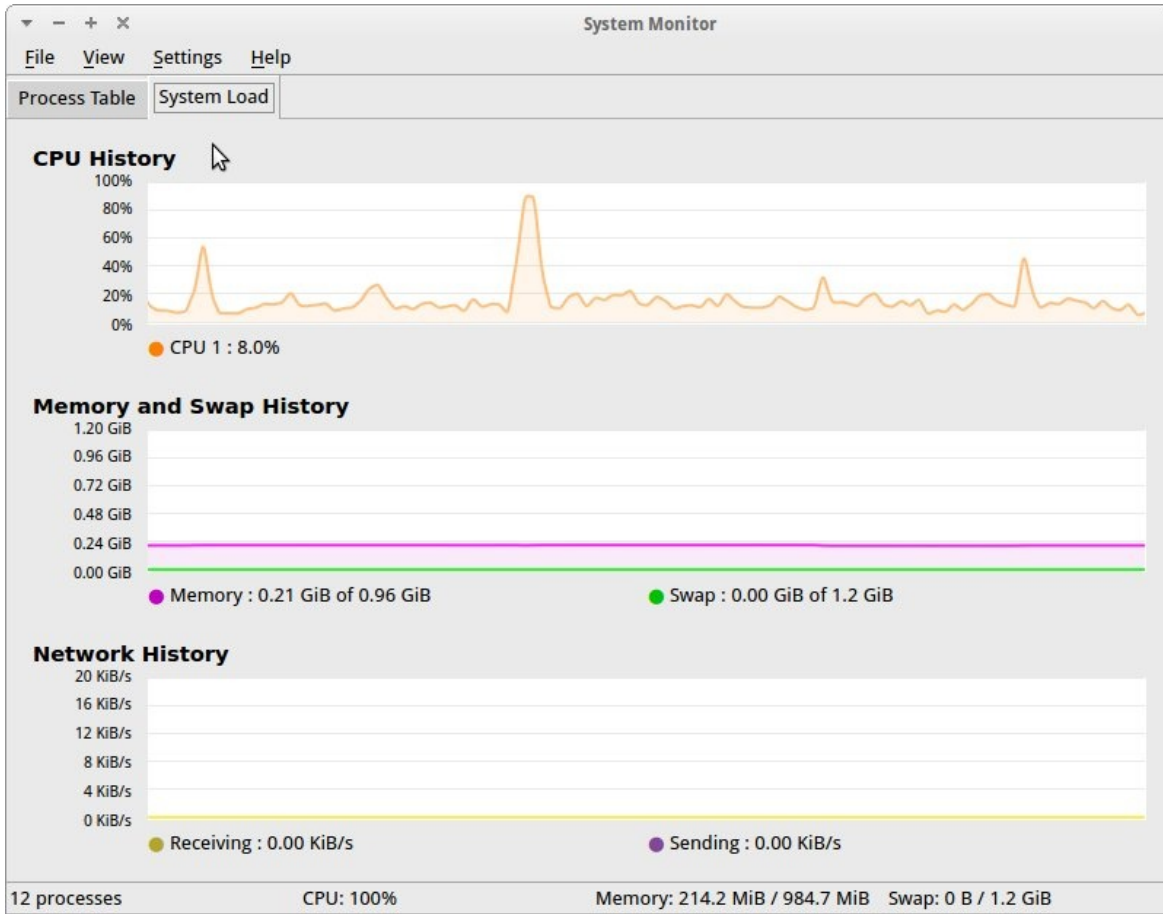
Note that only 210 Mbytes of RAM are in use, compared to XP's 814 Mbytes. Linux thus provides a way to extend the useful life of old PCs by many years. This approach is especially attractive for laptops, whose hardware is difficult to upgrade.

If you want to keep using XP, you have little choice but to increase the amount of its RAM. Beyond this there are other steps you can take, although their effects on performance will be much smaller. Before you do any of the following, back up your entire PC. If you haven't already, use your favorite anti-virus software to get rid of any malware, use Microsoft Update to bring the system up to date, and update the drivers. Then look at the installed programs with the sequence Start | Control Panel | Add or Remove Programs. Highlight each in turn to see how much disk space it occupies, how often you use it, and the date you used it last. Ask yourself if you really need it, and if not click the Remove button to remove it. This will free disk space and may speed up your PC if the program has a module that resides in RAM. As the screen-shot on the bottom, next page, shows, I haven't used Adobe Reader for over five years and I could recover 86 Mbytes of disk space by removing it.
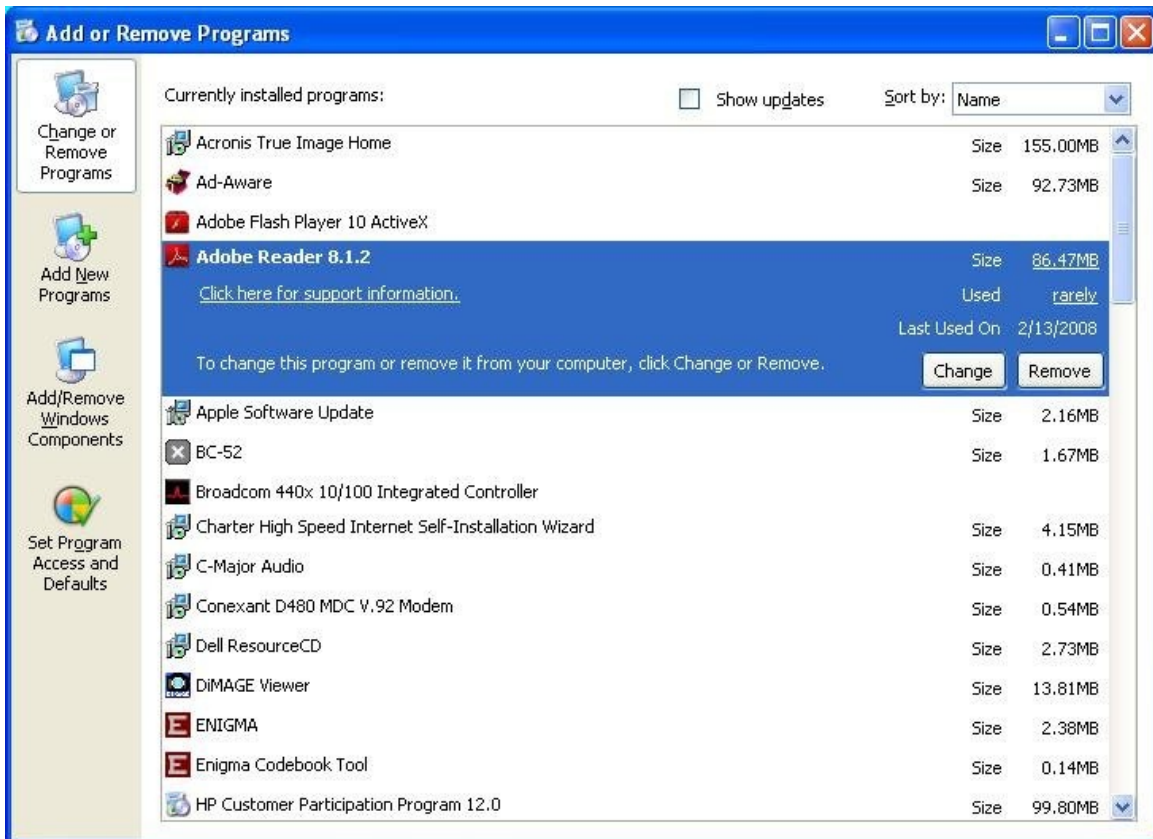
You can clean up a drive with the following sequence: Double-click on Computer | right-click on the desired drive | select Properties | click on the Disk Cleanup button.
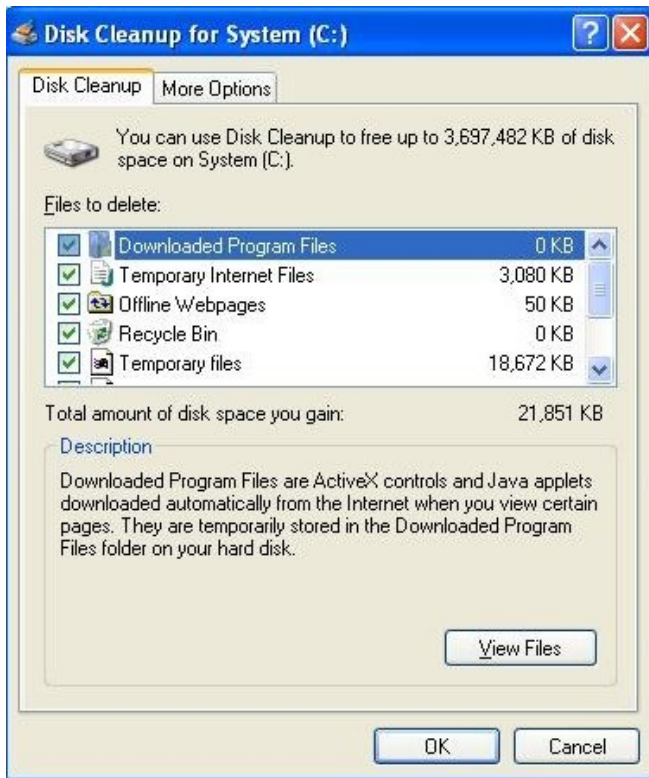
Above: Xubuntu Memory Usage   **Below:** Reviewing XP Applications

Above: XP Disk Cleanup

The screen-shot above shows the result on my laptop.

As you can see, I can recover almost 22 Mbytes of disk space by performing the checked operations. (Although it doesn't appear in this shot, I could recover almost an additional 3.7 Gbytes by compressing old files, which I prefer not to do.)

You may gain some speed by disabling some of the visual display effects. Navigate Start | Control Panel | System | Advanced tab in the Performance box click on Settings and uncheck everything except
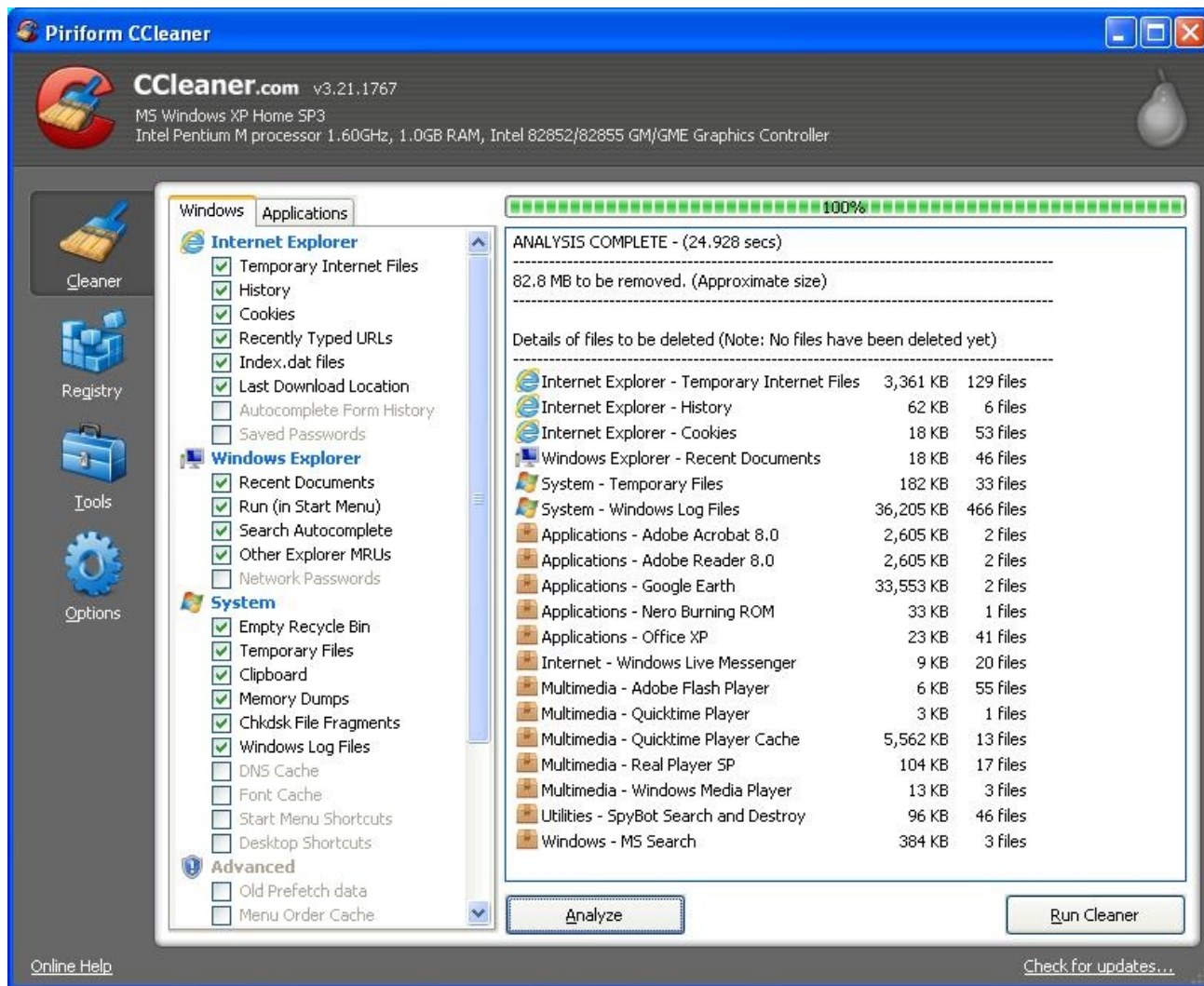
• Show shadows under menus,

• Show shadows under mouse pointer,

• Show translucent selection rectangle,

• Smooth edges of screen fonts,

• Use drop shadows for icons labels on the desktop, and

• Use visual styles on windows and buttons.

The following will recover an impressive amount of disk space, but do it only if you have a recent back-up that you know to be good. Move to the directory C:\Windows and make the hidden items visible by clicking on Tools (in the menu bar), selecting Folder Options, selecting the View tab, and the selecting the Show hidden files and folders item. You will find a large number of directories whose names begin and end with $ and include "Uninstall" somewhere in between. These allow you to back out of patches, but it is most unlikely you will ever have to do this, especially if your system is running well. (My laptop had 339 such folders, occupying over 250 Mbytes.) You can delete them and recover the space, but be very careful not to delete anything else, in particular, directories whose names begin and end with $ but don't include "Uninstall". It would be prudent not to empty the Recycle Bin for a few days, until you're sure you haven't broken anything.

CCleaner (http://www.piriform.com/CCLEANER) is a clean-up tool with a good reputation. It takes a more aggressive approach than does the disk cleanup procedure discussed above. There is a free version, but read the installer screens carefully as it will install a Google toolbar unless you uncheck the appropriate box. The first time you run the program, click on the Analyze button to see what it will do; the screen-shot on the following page shows the effect on my laptop. (I had earlier performed the Windows Disk Cleanup described above.)

It claimed to find almost an additional 83 Mbytes of disk space that could be freed, although it removed only about 80 Mbytes. The program also includes tools to clean up the registry, uninstall programs, manage system restore points, and wipe disk drives, and will also show what programs run at startup. For more information see http://www.howtogeek.com/113382/how-to-use-ccleaner-like-a-pro-9-tips-tricks/. Finally, a different company has developed an add-on, CCEnhancer, http://singularlabs.com/software/ccenhancer/. On my laptop, this add-on allowed CCleaner to find 10.7 Mbytes of additional files. However,

Above: CCleaner Analysis

CCEnhancer requires .NET 3.5, which uses several hundred Mbytes; if you don't already have this installed, forget about CCEnhancer as what it can recover is only a small fraction of the space .NET will occupy.

I haven't mentioned defragging because I've never found that it improves performance by any detectable amount. I'm not saying it's a bad idea, just that you shouldn't expect any performance change.

Also consider a hardware approach to increasing disk space. In particular, USB hard disks are inexpensive and easily installed on both desktops and laptops, and although they are much slower than internal hard drives, they are entirely satisfactory for storing data that you don't access frequently.

Inserting International Letters into Word Documents

by Nancy DeMarte

Columnist, Office Talk, Sarasota PCUG, Inc., Florida
September 2011 issue, Sarasota PC Monitor
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In our global society, languages have become more blended. English, for example, has adopted many words of different origins, some of which include special diacritical marks over the letters, as in the French word passé. Occasionally words can actually be misunderstood without a special mark over a letter, such as the difference between the "résumé" we provide when looking for a job, and "resume", meaning to begin again. It helps to know how to insert these diacritical

marks when using Microsoft Office. Word provides two fairly easy methods to add these marks: the Symbol dialog box and keystroke combinations.

The Symbol dialog box (formerly called the Character Map) is easy to find in Word. It can be useful but also a bit tedious when you're in the middle of composing a document. It provides both international characters and other symbols, such as the Euro symbol (€) or Pi (π). To use this dialog box in Word 2007, click the Insert tab, then Symbol to view a few common symbols. Click the one you want to make it appear where your cursor was flashing. Click Symbol, then More Symbols, to open the full dialog box. Click a letter or symbol, then Insert, and it's done. This dialog box contains every symbol and international letter that Office has to offer, but inserting one may involve moving between different tables of fonts and symbol types before you locate the one you need. It is worth spending a few minutes exploring this box, though, if only to see what's available. Once you insert a symbol using the dialog box, it will appear with recently used characters and symbols in a row near the bottom of the box for easy access in the future.

Although the Symbol dialog box method is the best way to insert a symbol, there's an easier method of inserting international letters using a combination of keyboard strokes. This method involves pressing the Control key (Ctrl) on the keyboard at the same time as a punctuation or symbol key, then releasing these keys and pressing the key of the letter that needs the

diacritical mark. Let's use the example of the acute é. First be sure your cursor is flashing in the spot where you want the character to appear. Press the Ctrl key and the apostrophe key at the same time. Release them and type the letter "e", which will appear with its acute mark in place, é.

When learning this method, it helps to have a chart of the appropriate keys and corresponding diacritical marks nearby. The system is so logical that before long you won't need to refer to the chart except for unusual marks. The chart below gives you many of the ones you might need:

International Character	Press these keys, then release and press the letter.
à, è, ì, ò, ù	Ctrl + ` (grave accent key)
á, é, í, ó, ú, ý	Ctrl + ' (apostrophe key)
â, ê, î, ô, û	Ctrl + Shift + ^ (caret key)
ã, ñ, õ	Ctrl + Shift + ~ (tilde key)
ä, ë, ï, ö, ü, ÿ	Ctrl + Shift + : (colon key)
å	Crtl + Shift + @
æ or œ	Crtl + Shift + &
ç	Crtl + , (comma key)
ð	Crtl + ' (apostrophe key)
ø	Ctrl + / (forward slash key)
¿	Alt + Ctrl + Shift +?
¡	Alt + Ctrl + Shift +!
ß	Ctrl + Shift + &

A few tips about this chart:

1. Many of the diacritical marks resemble the keyboard symbols that are used to create them, which makes them easier to remember.

2. Occasionally the Shift key is included in the procedure. This is because the keyboard symbol is the top one on the key and needs the Shift key to select it, as it would if it were a capital letter.

3. To get the upper case version of these letters with their marks, such as É, merely press the Shift key while pressing the letter.

If you find that you type in languages other than English on a regular basis, Word 2007 and 2010 offer quite a bit of help. You can see the list of the languages which have editing tools installed in Word by clicking the Office button (File in
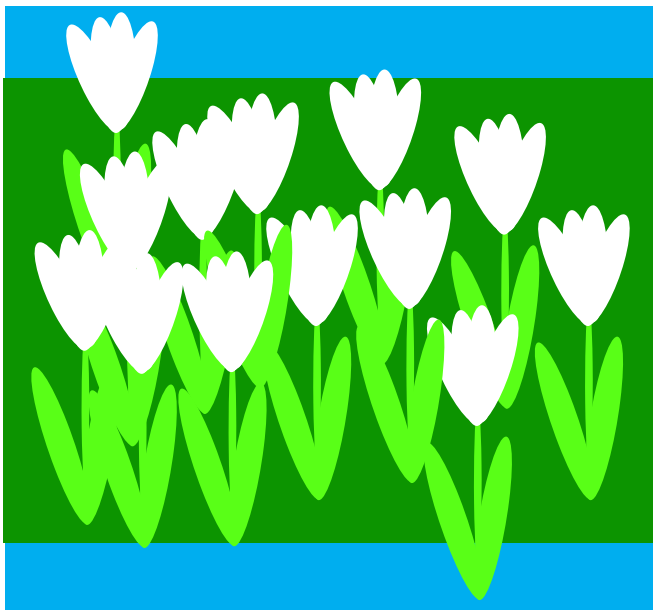
2010) and selecting Word Options. Click Popular in the left pane and select the Language Settings button. I found, for example, that limited editing support is provided for more than 200 languages on my computer, including six dialects of French, five of Chinese, and twenty-one of Spanish.

If you need more tools in another language, you can download free Language Interface Packs or purchase Language Packs for about $25, both of which provide extra editing tools for the language of your choice. Other options allow you to change the keyboard to a different language layout. To do this, open the Control Panel and put it in Classic view so all the icons are visible. Click the Region and Language icon, and then the Keyboards and Languages tab. English is the default, but you can add other languages from this dialog box. You can also customize formats for specific systems which differ among countries, such as currency and measurement, using the Format tab in that same dialog box.

If you are interested in exploring more about using Word in a language other than English, here is a link to get you started:
http://office.microsoft.com/en-us/support/change-the-default-language-for-office-programs-HA010356057.aspx.

Meantime, clip the chart included in this article to use the next time you need to type an "international" word.

Micro Center® In Store Clinics

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Signing up in advance reserves a seat, recommended as space is limited. This can only be done at a store, either at the Tech Support or Customer Support area.

February – March 2013 Schedule

Start Time is 2pm local unless otherwise stated.

Feb 16 & 17: NO CLINIC

Feb 23 (11am): BYOPC Workshop (pre-register)

Mar 2 & 3: Troubleshooting

Mar 9 & 10: Data Recovery

Mar 16 & 17: Multiple Monitors

Mar 23 & 24: Backup and Archiving

Notes from previous clinics are available online at http://www.microcenter.com/understand_tech/index.html.

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http://www.patacs.org/arlingtonmeetings.html

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Technology & PC Help Desk
4th Wednesday (3/27), 7 p.m. ET

Board of Directors
3rd Monday (3/18), 7 p.m. ET

Fairfax Meetings
(with OLLI PC User Group)

Osher Lifelong Learning Institute (OLLI)
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http://www.patacs.org/fairfaxmeetings.html

General Meeting
3rd Saturday (3/16), 12:30 p.m. ET

Online-Only Webinar
http://www.patacs.org/webinarpat.html

2nd Wednesday (3/13), 7-9 p.m. ET