The NCTCUG Journal

Social Networking and Seniors
By Hewie Poplock

"Hewie's News & Reviews" (www.hewie.net)

There is a new report that shows that Internet users 50+ have nearly doubled in just the past year, from 22% to 42% in 2010. The survey goes on to say that almost half of Internet users 50-64 and about 26% users age 65 and older now use social networking sites.

While email and online news are still more appealing to older users, these people are now using the social sites and are repeat users, at that. The report goes on to say it shows that one attraction to seniors, and others as well, is reconnecting with people from their past. It also states that older adults are more likely to be living with a chronic disease and are more likely to seek out online support with others afflicted or with medical professionals.

I am in the "older adults" category, as are many of my friends. Although I am more technically savvy than most, I am still seeing many people from my past and present in my age group using Facebook. I also must say that I have many friends who resist this new social stuff.

I am amazed that many of my friends, who have resisted a lot of the Internet hoopla and used AOL for many years because it was easy, are using Facebook and doing so daily. Some are very passive and are mostly lurkers. Others have immersed themselves in social networking and have renewed friendships and have become closer friends to many that they only occasionally see in person.

I have never played any of the games on Facebook and "hide" the references to Farmville, Mafia Wars, and such. I don't post that I went to a movie or had stopped at McDonalds on the way home, but do not mind when my "friends" do. I do enjoy seeing pictures from my friends, hearing that my real estate

Inside

Discovering Windows 7 – Part 4

By Neil Stahfest, Librarian, Tacoma Area PC User Group, Washington
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This month we're going to look at my favorite new Windows 7 features, file search and libraries. I confess, I used Windows 7 like Windows Vista for almost two months before I became aware of these features.

If you've used previous versions of Windows, one the first things you will notice in Windows 7 is that there is no "Search" function listed on the Start menu. Instead, when you click on the Start button, a search box appears directly above the Start button, the normal Start Menu items above it. In addition, any time you open an Explorer window, a search box appears in the upper right-hand corner.

Libraries are a new Windows 7 feature. They make it easier to find things by keeping track of similar files, no matter where you store them. By default, Windows 7 has four libraries: Documents, Pictures, Videos and Music (the Videos library doesn't appear on the Start Menu but we'll address that at another time).

To find a document, I can click on the "Start" button and then "Documents". This opens a window which shows my Documents library as shown below.
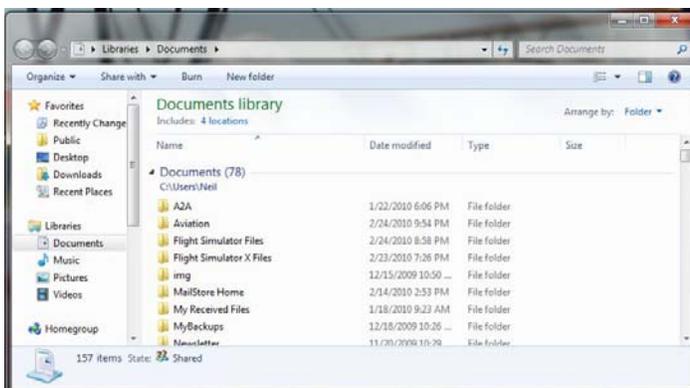
I could look for the document I want by opening folders but Windows 7 gives us an easier way. In the upper right corner of the library window is a search box. As I start to type the name of the document I'm looking for in the box, the list in the main window changes to reflect names that contain the letters or words that I have typed.

As I type more letters, the search is refined and fewer names appear as the search criteria is refined. Note that the letter or word that I have typed appears high-lighted in the list of files. I also have the option of adding search filters to restrict my search a range of dates, file size, etc.

In my example we see that a number of files match my brief search criteria, "win". I could click on each of these files to see which one I want but Windows 7 gives us an easier way. I can point and click once on a file to highlight it, and then click on the "Preview" button in the upper right corner of the search window to see what's inside of the file without actually opening it.
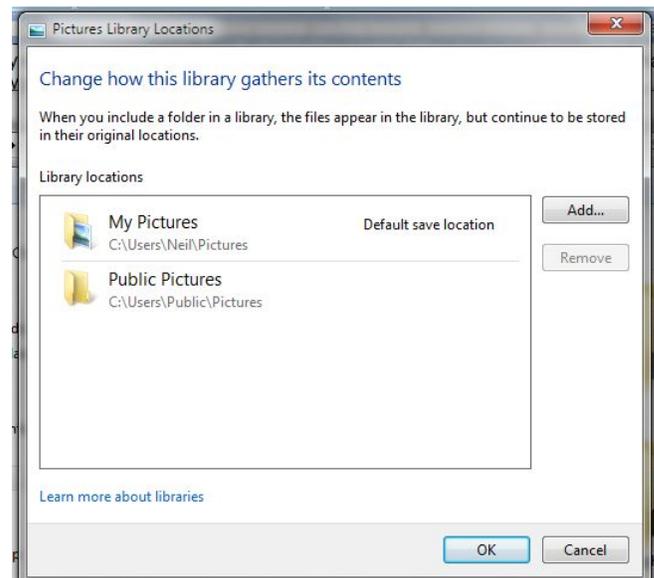
By now I think you're starting to see the value of libraries to find files. But suppose you have folders that are not in one of your libraries? For instance, I have folders of pictures stored on an external hard drive.

All I have to do is click on the "Start" button, click on "Computer" and go to the icon for my external hard drive. After I click to open the hard drive, I select the folder containing my pictures and right-click. In the window that appears I select "Include in library". Among the library choices that appears I select the "Pictures". Now the pictures on my external hard drive are included in my "Pictures" library and any search of the Pictures library will include them.

You can change where a library saves files and the order that it searches them. Just click the "Start" button and then one of the library names, such as "Pictures". In the library window, above the file list and next to "Includes", click on "Locations". A new window will open, in this example called "Picture Library Locations". From here you can select click on buttons to add or remove folders. Digital cameras often include image editing and storing software when you purchase them. Many times create new folders to store the pictures from your camera. This "Add" button allows you to include your camera's pictures folder in the Windows 7 library so that they are easily searchable. In ad-

dition, if you right-click on a library folder, you can set it as the default folder, where all new related files will be added. You can also change the order in which the listed folders are searched.

You may have noticed in the step above, in addition to selecting one of my default libraries, one of the options was to create a new library. Can you see how you might use this? Suppose you had a folder for Genealogy records. You could select that folder and create a Genealogy library. Similarly, you could select a folder which appears in your Pictures library that contains Genealogy related pictures add it to your Genealogy library. Now you can access the Genealogy pictures through either your Pictures or Genealogy library.

As you can see, libraries are a very powerful and useful tool. They provide an easy way to find the files you use most frequently without imposing a rigid organization structure. Next time we'll look at more ways you can find files and how to create new libraries.
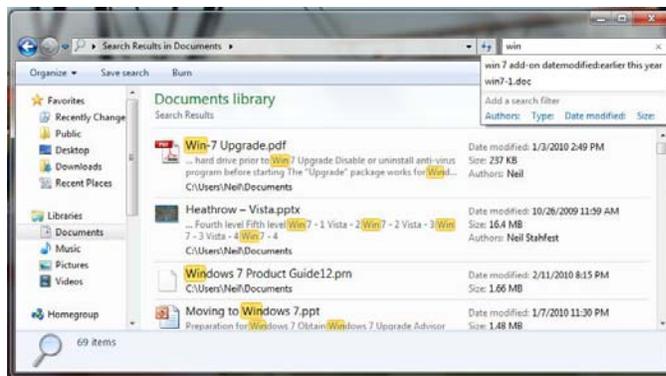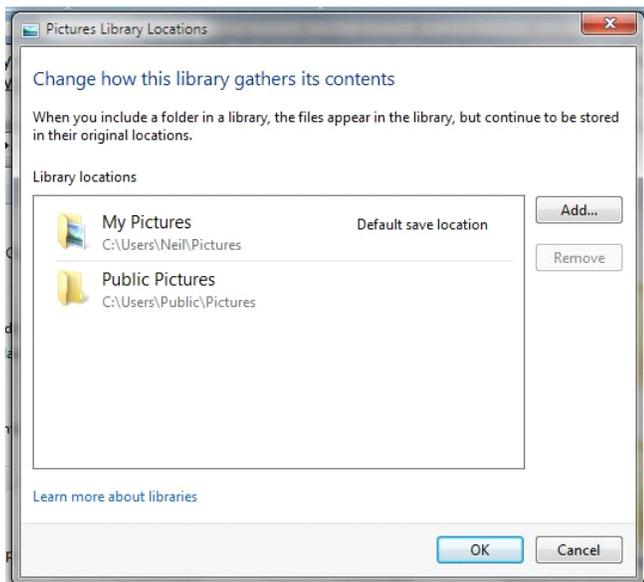
Truly Deleting Files[1,2]
Lorrin R. Garson, NCTCUG

Background

When a file is deleted from a disk drive, even deleted from the Recycle Bin, data in that file remain on the disk drive. The deleted file is marked as "deleted" in the master file table (MFT) and clusters allocated to the deleted file are marked as "free" in the file $BitMap (each cluster being nominally 4 KB). Until these clusters are over-written by another file or process the data are recoverable in part or whole. Thus "deleted" personal or sensitive information may be accessible to those with less than honorable intentions.

There are numerous programs and services available to recover "lost" data; for example, **BringBack** (see http://www.toolsthatwork.com/bringback.htm), **Recuva** (see http://www.piriform.com/recuva), **R-Studio** (see http://www.data-recovery-software.net/), **Ontrack Data Recovery** (see http://www.ontrackdatarecovery.com/), **Data Recovery Services** (see http://www.datarecovery.net/), and **ABC Data Recovery** (see http://www.abcdatarecovered.com/). Of course these tools and services can also be used by individuals seeking to acquire personal information for nefarious purposes.

Baring completely overwriting a disk drive [for example **Darik's Boot and Nuke**, see http://www.dban.org/; **Shredit**, see http://www.mireth.com/pub/siwe.html; and **cyberCide Data Destruction**, see http://www.cyberscrub.com/en/]—and/or physically destroying the drive—how can a user be reasonably assured that sensitive information has been truly deleted?

Below are listed 11 programs that offer secure "cleansing" of deleted files.

Specific Software

1.   See http://www.piriform.com/ for **CCleaner**. For a description and review, also see http://www.brighthub.com/computing/smb-security/reviews/32036.aspx. To quote from this latter site:

"The most important feature in CCleaner is the option to securely delete the files using different method (sic) and one of the welcome additions in CCleaner's features was provided earlier this year is the ability to wipe the free disk space in the hard-drive. Such feature is often found in commercial tools only!

"When you first install CCleaner, the program automatically configures to wipe the free disk space of the system drive (Drive C). If you have more than one hard-drive or partition, you should allow CCleaner to wipe also the free disk space of the non-system drives."

See the following for more information:

a. http://answers.yahoo.com/question/index?qid=20100310202948AAPe03D

b. http://www.dooyoo.co.uk/utilities/ccleaner/1040998/

2. See http://www.fileshredder.org/ for **File Shredder**. The following information is from http://www.fileshredder.org/fileshredder-help.php.

    "Shred Free Disk Space - This option will shred unused or free disk space across the whole disk volume. For instance, this option is very useful if you haven't shred your unwanted files regularly but instead you used regular windows delete command and now you want your previously deleted files unretrievable (sic). Those files now cannot be shredded by picking them since they are already deleted. This option will enforce shredding of everything you have deleted once using the regular delete command, whether it was yesterday or months ago."

3. See http://www.quickwiper.com/ for **QuickWiper**. To quote from this site:

    "QuickWiper is a disk and file wipe utility that allows you to wipe sensitive files in handy manner (sic). QuickWiper provides you with wipe free disk space function to wipe all previously deleted files, temporary files created by MS Office and other (sic). QuickWiper includes System Clearer that clears in one click Internet Explorer's cookies, history, cache records and typed URLs, temporary and recent files. QuickWiper has several security modes. You can use simple windows deletion, wipe files with single pass wiping or use most secure NSA erasure algorithm."

4. See http://www.cezeo.com/products/disk-redactor/ for **Disk Redactor**.   To quote from this site:

    "The functions that Disk Redactor performs are wiping all free unused space on your disks, and writing a big file with zeros to overwrite all old (deleted) files on your drive. After using Disk Redactor, all old data will be erased completely without any chances for its recovery.

    "Use Disk Redactor every time you delete files contain your confidential and sensitive data, otherwise this data can be easily recovered."

5. See http://eraser.heidi.ie/ for **Eraser 6.0.7**. To quote from this site:

    "Eraser is an advanced security tool for Windows which allows you to completely remove sensitive data from your hard drive by overwriting it several times with carefully selected patterns. Eraser is currently supported under Windows XP (with Service Pack 3), Windows Server 2003 (with Service Pack 2), Windows Vista, Windows Server 2008, Windows 7 and Windows Server 2008 R2.

    "Eraser is free software and its source code is released under GNU General Public License."

    For more information, see:

    a. http://www.snapfiles.com/get/eraser.html

    b. http://www.esoft.web.id/utilities/eraser-607-stable-secure-deletion-files-folders-and-empty-space.html

6. See http://ezinearticles.com/?How-to-Permanently-Delete-Files---Using-Windows-Secret-Built-In-Tool&id=1145950 on how to use **Cipher**, a Microsoft Windows utility to permanently delete files (among other functions). See the following for more information

    a. http://support.microsoft.com/kb/315672

    b. http://technet.microsoft.com/en-us/library/dd277319.aspx

    c. http://www.windowsecurity.com/articles/Using-cipherexe.html

7. See http://www.winclear.com/?hop=0 for **Winclear** ($37.00) To quote from this site:

    "Securely cleans spare and hidden data areas on your drives. Completely erase the contents of sensitive files and folders that you specify. Support FAT/FAT32/NTFS file systems."

8. See http://www.sneakyclean.com/ for **SneakyClean** ($67.00) To quote from this site:

    "Sneaky Clean works like an electronic shredder on your PC. Working deep below your Windows operating system, Sneaky Clean employs the exact same sector analysis technology as available in ultra-high-priced tools available only to law-enforcement agencies like the FBI. After identifying and analyzing the unwanted data hidden in your drives, Sneaky Clean destroys it with proven methods of secure disposal similar to US Department of Defense standards for destruction of classified material."

9. See http://www.whitecanyon.com/delete-deleted-file.php for **SecureClean** ($39.95). To quote from this site:

    "In order for hard drive data or a computer file to be permanently deleted, the information must be completely overwritten with a product like SecureClean. With SecureClean you can completely eliminate "deleted" computer files from your computer in a matter of minutes. SecureClean makes protecting yourself safe and easy"

    For more information,

       a. http://www.whitecanyon.com/deleted-files-let-10-2003.php

       b. http://download.cnet.com/WhiteCanyon-SecureClean/3000-2092_4-10205696.html

       c. http://www.softpedia.com/reviews/windows/Secure-Clean-PC-Review-40000.shtml

       d. http://www.softsea.com/review/SecureClean.html

10.   See http://www.crisystec.com/ for **Crisystec Sentry 3.0** ($99.95/year). Quoting from this site:

"Securely delete internet history by overwriting the data to a Standard Defeating US Depart-
ment of Defense file destroying standards, for destruction of classified data, that can stop both
software and hardware tools from recovering data. Once data is destroyed with Crisystec Sentry
3.0, it is gone forever and can never be recovered. Cleaning up the history of your activities can
be a time consuming process, having to manually remove each history file or entry - and it ac-
tually won't help! You Need Crisystec Sentry 3.0."

11.   See http://www.cyberscrub.com/topics/previously_deleted_files.php and http://
www.cyberscrub.com/en/ for **CyberScrub Privacy Suite 5.1** ($59.95) and other products.

"It is necessary to wipe files to ensure that previously "deleted" data is (sic) non-recoverable.
You may wipe a file securely using a file wiping utility on its initial erasure. In those instances
where there exist multitudes of previously deleted data, it will be necessary to wipe the hard
drive free space. This will result in such files being destroyed beyond retrieval or forensic dis-
covery. It is also beneficial to use a software program that will scramble file names and other
attributes. By performing this additional action, files are not only non-recoverable, but there is
no trace of other sensitive identifying information.

"Privacy Suite file wiping software allows you to wipe files and folders with methods that ex-
ceed standards set by the US Department of Defense (US DoD 5220.22). This program can run
from command lines, incorporates powerful scheduling capabilities and produces very detailed
log file reports. For a full list of features, please visit the Privacy Suite product page. You can
also obtain a free, 15-day fully functional trial of the program for your evaluation."

Other Sources of Information

1. See http://www.snapfiles.com/freeware/security/fwerase.HTML for a list of freeware for file/
document shredders and programs that erase deleted files.

2. See http://3d2f.com/tags/dod/overwrite/program/ for a list of 50 "overwrite programs" from
feedback@smartcomputing.com.

3. See http://www.redferret.net/?p=9261 for F.R.E.D. (**F**orensic **R**ecovery of **E**vidence **D**evice),
which is software used by law enforcement to recover evidence. Priced at $5,999+.

4. See http://www.guidancesoftware.com/computer-forensics-digital-investigation-law-
enforcement.htm? for Guidance Software's forensic tools (enCase). "Technology solution for
capturing, analyzing and reporting on digital evidence"

Microsoft's "Bing Maps" Takes On Google and Yahoo!

By Ira Wilsker

Obtained with the author's permission for publication by APCUG member groups; all other uses require the permission of the author.

Websites

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

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

When I first accessed Bing Maps beta using my Firefox browser, I was able to access several of the Bing Maps features, but Microsoft advised me that in order to make use of all of the rich features of the service, I would need to download and install Microsoft's free Silverlight software. Silverlight is application software that is a 5mb download and enables the display of enhanced graphics, video, multimedia, and animations. Silverlight downloaded and installed quickly on my computer, and while it adds substantial capabilities to Bing Maps, it is not a requisite to use the basic functions of Bing Maps. With Silverlight installed, I was able to access very high quality digital images that ri-

val Google's Streetview and Google's free standing Google Earth utility.

Microsoft calls its highly localized street images "Streetside", and offers very sharp and detailed street level and aerial images which can be viewed either as an image, an image overlaid with streets and other features, or as a more traditional street map. While localized Streetside images are not yet available for the entire country, they are currently available for many major cities. Bing Maps beta also automatically integrates with the countless images available on Microsoft's Photosynth imaging service, providing high resolution local images.

When first loaded, Bing Maps beta shows the current local weather, a local map, and some thumbnails of local Photosynth images (if available). Links on the page also display "What's nearby", restaurants, hotels, and current local traffic information if available in that locality. Clicking on a Photosynth thumbnail starts an animated "trip" which zooms over the region, zooms in on the precise spot on the aerial map, and opens the image. Once opened, the image can be manipulated, zoomed, and rotated giving a 360 degree image from street level. In some cities (about 100 so far, according to Microsoft), the downtown areas have been digitized allowing not just the 360 degree Photosynth image, but also a fully interactive and controllable 3-D image of the area, where the buildings and other features can be navigated as if flying through the canyons of structures.
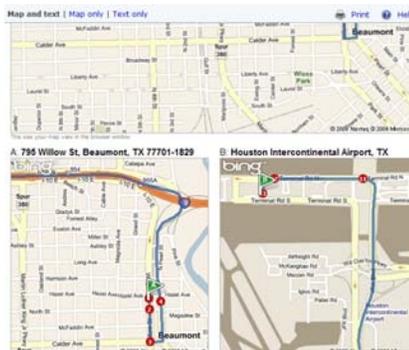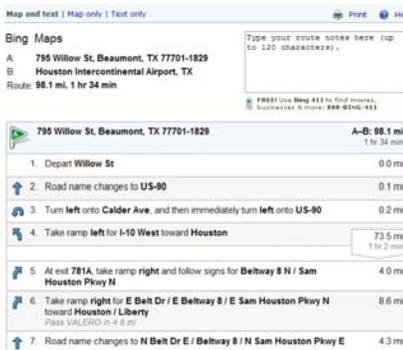
Another interesting feature of Bing Maps beta is real time traffic information, which shows road construction information and current speeds (color coded) on major roads in the larger cities. This traffic information integrates well into detailed driving directions, such that the traveler can visualize any road construction or other impediments to a speedy trip. When getting travel directions, the user can have Bing Maps determine the shortest route, the fastest route, and even produce round trip directions. Multiple way points can be added by clicking on the "add to route" link. Once a route is determined and displayed, Bing gives the user the opportunity to modify the route by clicking on "See best route based on traffic". Icons on the bottom of the page allow the user to selectively display live traffic information, email the selected route information, print a detailed routing, see "your places", or implement additional applications. Gas stations, hotels, restaurants, hospitals, shopping malls, and other points of interest can be selectively displayed on the maps.

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

visible landmarks to visually ease the finding of the turns on the route. One cute feature was intended to show if you passed your chosen destination; "Arrive at Houston Intercontinental Airport, TX on the right - If you reach Terminal Rd S, you've gone too far."

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

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

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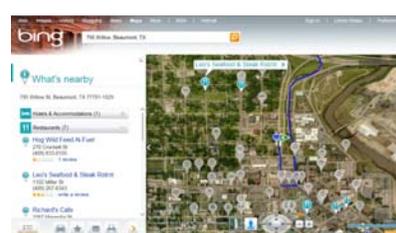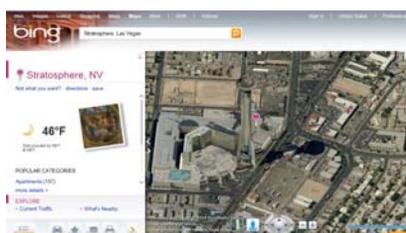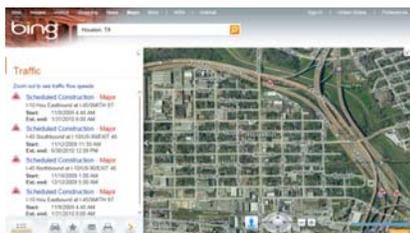
Solid State Devices (SSD)

By Vinny LaBash – Sarasota PC Users Group – www.spcug.org

Measuring the effect of SSD technology is more than the numbers game we play with conventional Winchester disk drives. What you experience with SSD drives centers on how certain tasks feel. Loading applications, boot up, shut down, and changing levels in your first person 3D shooter game are prime examples. Everything happens incredibly fast.

Examine the current state of SSD technology and you see a rapidly evolving technological landscape. Concerns about performance, longevity, and outright failure that plagued early solid state drives are fading. These issues are being replaced by how well manufacturers are optimizing the components of SSD technology. NAND chips, controllers, and cache memory are made by multiple suppliers. SSD vendors must take these separate components and merge them into a reliable storage device with good performance at a price that potential customers are willing to pay.

SSD manufacturers select a controller based on the controller's cost and capability, match it with one of several different kinds of cache memory, and marry the combination to either MLC or SLC NAND flash memory chips. Single Level Cell (SLC) holds one data bit per cell. Multi Level Cell (MLC) has greater capacity. Currently MLC data chips hold two data bits per cell.

Experience reveals that the future belongs to MLC based devices. Up until now SLC based technology offered faster writes, lower power consumption, and greater longevity. Still, Intel and other chip makers appear confident that MLC technology will become dominant in the marketplace. That confidence is backed up by the design of current MLC devices where performance measured against SLC based devices is becoming nearly indistinguishable. An examination of technology publications shows that reviewers of

SSD drives overwhelmingly prefer MLC gear.

Intel has been and continues to be a leader in this area. In the early days of SSD development, controller problems were so prevalent that Intel assigned a team of development engineers to redesign the controllers. A new generation of controllers came about which rehabilitated the technology. That too is about to change. Earlier this year Intel and Micron announced 25nm NAND flash memory production which means yet another generation of controller technology is imminent.

Why Performance Declines Without TRIM

It is important to understand how SSD devices handle a delete operation. (*Otherwise you may have difficulty comprehending TRIM, which will be described later*). No storage device, whether it is an SSD or traditional drive, has access to the operating system's file structure. Therefore, it does not know what data the OS has marked for deletion and is available for overwriting. Later on, when the OS wants to perform a write operation, this becomes an overwrite operation from the viewpoint of the storage device.

For conventional disks, this is the same as writing to an empty sector, but because of how an SSD must operate at the hardware level, an overwrite operation involves considerable additional overhead which can effectively cripple write performance.

An SSD stores its data in flash memory cells. These cells are organized and grouped into pages. Typical page capacity is 4 KB. These pages are further consolidated into blocks consisting of (typically) 128 pages or 512 KB of data. Early SSD performance slowed down over time because data can be erased only at the block level. An erase operation is theoretically possible at the page level, but because of the physical construction of an SSD device, erase commands won't work except at the block level. This is inherent in the design, and cannot be changed.

Note: By design, it is impossible to write to a NAND memory cell unless it is empty.

Any data in the block must be transferred into cache memory where it is then erased and rewritten to flash memory as empty pages. The actual operation is more complex, but a data overwrite is essentially a read, modify, erase, and write cycle. The memory and processor embedded in the controller handles the entire procedure and does not go outside the SSD. The process is commonly referred to as *write amplification*.

Example: You have 8KB of data. In a previous session the OS marked some of the data for deletion, and the OS now wants to overwrite the "deleted" data.

1. The OS sends instructions to the SSD controller to begin the data overwrite.

2. The contents of the entire block are read into cache memory.

3. The memory cache is now updated. Unneeded data is deleted, and the rest undisturbed.

4. The entire block is erased on the SSD.

5. The updated data in the cache memory is now written back to the block.

The longer the SSD has been in use, the greater the performance degradation because of the way data must be stored and modified.

TRIM

Without TRIM, performance declines because the operating system doesn't bother to inform the SSD when data is available for re-write, and the operating system doesn't actually delete the data. The TRIM command addresses the situation by working with the operating system to notify the SSD that data marked for deletion should be immediately erased. In other words, the TRIM command tells the SSD to delete data at the same time the user initiates the delete function instead of waiting for the OS to decide when to overwrite the "deleted" data.

When the operating system "deletes" a file, if TRIM is enabled, the operating system updates the file system and notifies the SSD via the TRIM command which pages need to be deleted. Then the SSD reads the block into cache memory, updates the cache, erases the block on the SSD, and then writes back only pages containing data which was not marked for deletion by the OS.

The delete is slow, but there is no performance hit for write operations because the affected pages are now empty, and write performance is what's important. TRIM improves performance only when you delete files.

The TRIM command acts as an interface between the OS and the SSD that tells the SSD when data should be erased. The SSD then performs the delete operation immediately after the OS marks the data for deletion. Since TRIM ensures that data is actually deleted immediately after the user deletes a file, traditional file recovery programs will not work on solid state devices with TRIM enabled.

Note: Windows 7, Windows Server 2008 R2, and some versions of Linux support TRIM. **Windows XP and VISTA do not, repeat, do not support TRIM.** However, a few vendors have included utilities that will enable the command with XP or Vista if the SSD supports the command. However, most early SSD devices do not support TRIM. Check with the manufacturer.

Partitioning and Formatting

While the physical structure of solid state devices is considerably different from traditional disk drives, partitioning and formatting operations appear virtually identical from a PC user point of view. What goes on under the covers should be of no concern to most users.

Defrag

In a standard disk drive, information is accessed by a combination of platter rotation and movement of read/write heads. Defragmentation takes all the sections or fragments of a file and positions them in one contiguous location. This minimizes seek time and speeds up disk operations.

Solid state devices have no moving parts. Performance is the same no matter where data is located. Therefore, nothing can be gained by defragging a solid state device. The additional, unnecessary read/write cycles may actually reduce the SSD's life expectancy. Therefore, defragging SSDs is not only useless, but may be harmful. Don't defrag an SSD.

Wear Leveling

Flash memory chips have a finite life cycle. This cycle is defined by approximately 10,000 write operations before the cell is subject to breakdown and no longer reliably records data. *Wear Leveling* is the process by which no flash memory cell is required to undergo significantly more write operations than any other memory cell on the drive. The process evenly distributes write operations among the available flash memory cells.

Wear Leveling affects the data capacity of solid state drives because some of the disk space must be reserved to carry out the leveling operation. The amount of reserved space varies by manufacturer and is known as **over-provisioning**. The longevity of an SSD appears to be directly proportional to the efficiency of *Wear Leveling*. Most manufacturers reserve around 7% of the SSD. Conservative vendors such as Mushkin reserve up to 13%. This can account for much of the discrepancy between stated total capacity and formatted capacity. The trade off could become an issue to SSD customers who may be unwilling to sacrifice storage space even for potential increased longevity.

Summary and Conclusions

There is no doubt that solid state devices will eventually replace conventional disk drives, but prices of solid state drives will have to decline significantly first. Until that day, expect to see hybrid systems consisting of an SSD boot drive, and traditional drives for bulk storage. Solid state drives have no moving parts. Therefore, they have considerable advantages over traditional drives:

1. They are very fast because seek time is greatly reduced.

2. Less likely to malfunction.

3. Smaller and lighter.

4. Generates very little heat.

5. Completely silent.

6. Consume far less energy.

Windows 7 Hidden Treasures, Part 2

By Sandy Berger, CompuKISS
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I recently gave you a look into the hidden treasures in Windows 7 — but that was just a peek. Here are even more of the great features in Windows 7. I call them hidden treasures because they aren't apparent when you are using Windows 7. You need a little map to find the treasures....so here it is.

The Taskbar

Windows 7 features a Taskbar at the bottom of the screen that is a bit different than the one you see in Windows XP or Vista. First, the icons are larger. Second you are able to easily "pin" icons to this Taskbar. Right-click any application and choose to "pin" it to the Taskbar. (You can also choose to pin it to the Start menu). Pinning an application to the Taskbar places the icon right there at the bottom of the screen where you can easily click to launch the program. You can simply drag and drop the icons on the Taskbar to rearrange the programs.

Another cool feature is that when you mouse over program icons on the Taskbar, you'll see thumbnail previews of each open program. So if you have four Word documents open at the same time, you can just hold your mouse over the Word icon on the Taskbar and see the first page of each document. If you hold your mouse over one of these thumbnails, you will get a full-screen preview.

Jump Lists

And there's more — right click on an icon on the Taskbar and you get certain options, depending on the program. This is called the Jump List because it lets you jump quickly to any place you like. For instance, if you right-click the Word icon, you will see a list of recently used Word documents. Click on any of them to open that document. It gets even better for some programs. For instance, if you right-click on the

iTunes icon on the Taskbar, you can play music without even bringing iTunes up on the screen. With Skype and other Instant Message-type programs, you can change your status and perform other related functions right from the Taskbar.

Magnify the Screen

For those of us with aging eyes, this feature may be the best one in this new operating system. Windows 7 lets you enlarge the type, everywhere, in all programs, without affecting the rest of the screen. Just click on Start and choose Control Panel. Then, on the right upper side, choose to view by Large Icons. Then choose Display where you will see a simple window where you can choose to increase the size of the text quickly and easily.

Customize

The customization options in Windows 7 are really great. Just right-click on any blank area of the Windows desktop and choose Personalize. Click on Choose your desktop background and you will be able to choose any or all of the pictures on your computer to use as a desktop background. You can also change the window color, the basic sounds that the computer plays, and the screen saver. Many of these options were available in previous versions of Windows, but Windows 7 makes them easy to change and to play with. The included themes, backgrounds, and screen savers are also much more fun than ever before. My desktop background consists of a few chosen pictures of my family that change every few minutes. I love the Bubbles screen saver that floats glistening colored bubbles over the screen. The ease of customizing Windows 7 makes computing just a little more fun.

Shake

Windows 7 has a lot to make computing a little easier and a little more fun. Want to focus on one window? Just place your mouse on the Title Bar at the top of the window, hold down the mouse button and shake the Title bar. All the other open windows on your desktop will be hidden. Shake again, and they will all come back.

Show Desktop

When you get in front of a Windows 7 computer, look for a small rectangular bar in the lower right corner at the right side of the taskbar. This small bar is a bit difficult to see, but it is always in the lower right-hand corner of the screen. Just put your mouse over it and all the windows will be hidden so you can see the computer desktop. Move your mouse off that bar and the windows will reappear. Click on the bar to get to the desktop quickly. Click on it again to make your windows reappear. It is a great, often-overlooked Windows 7 feature.

Other Features

Windows 7 also has what they call a HomeGroup that makes file and printer sharing between home computers much easier. And it has a better included backup program that is actually quite useable.

There are also many Windows 7 features that you won't necessarily see. These include a better built-in firewall, improved memory use, better power management, and support for speech and handwriting recognition.

All-in-all Windows 7 has some great new features. It just takes a little time and experimentation to find them. Be sure you take the time because the effort is sure to be worth your while.

Be sure to check out the first part of this article: Windows 7 Hidden Treasures for more tips on using Windows 7.

[NCTCUG Ed. Note: We didn't get Part 1.]

Droid or iPhone

By Corrine Goeke, Computer Club of Green Valley, Arizona
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The iPhone has been the smart phone of choice for the past couple of years. There wasn't much competition. The Blackberry had the business market conquered. The non-business users of the world had to settle for their Plain-Jane cell phones or the iPhone. The techies of the world were divided into two camps: those that loved Apple products and didn't care that Apple tightly controlled the hardware and software, and those that didn't like to be told what they could install (chances are a good majority of these people are also fans of open source software like Linux and Open Office).

Fans of open source software who want a smart phone can now rejoice! No longer do we have to stare enviously at iPhone owners. Google has introduced their Droid Operating System (OS) for phones (and soon to be on other devices)!

The Google Droid Operating System is very slick. It's designed to work on a phone with a touch screen. And

whereas the iPhone is limited to AT&T, the Droid OS can work on a variety of phones with a variety of carriers. In my area of the country (New York state), Verizon is the carrier of choice. We have long felt the smart phone drought, but no more. Since the beginning of the year, Verizon is offering phones from Motorola (Droid, Droid X and Droid 2) and HTC (Droid Incredible) that run the Droid OS. Sprint has the HTC Evo.

Ok, so you can now have a variety of phones on a variety of carriers. What's next? You have a variety of applications that can run on those phones! With an Apple iPhone, Apple decides what applications are allowed in their App Store. With the Droid Marketplace, anyone can write an app to put in the Marketplace app store. Sure, you get your good and your bad apps, but the Marketplace's peer review system allows the cream to rise to the top. And did I mention that many of these apps are free.

So, what can these apps do? Of course, we have the basics. E-mail (G-mail rules, but I also use it with my ISP's e-mail system). Your calendar (if you use Google calendar, you are in calendar heaven). A to-do list. But let me list what is running on my HTC Droid Incredible that is above and beyond.

- Mapping software that works off GPS outside and wireless inside

- Skype mobile, which enables my Green Valley, AZ-based parent to call my cell phone from her computer and therefore no long-distance charges

Washington Area Computer User Group

WACUG Meetings will be held on Jan 22 & Feb. 19, 2011 from 12:30 to 3:30 pm. WACUG will hold joint meetings with **OPCUG** [www.olligmu.org/~opcug/] It is anticipated that all meetings, except June, July, and August, will be held at the **Osher Lifelong Learning Institute** [www.olli.gmu.edu/] at George Mason University, 4210 Roberts Road, Fairfax, VA, known as the Tallwood Campus.

Topics

Jan 22: Organizing Your Hard Drive & the Best Backup Plan to Protect Your System from Failure — Live In-Person presentation by Gene Barlow, User Group Resources

Feb. 19: 2011 Consumer Electronics Show Highlights

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/

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(I plan on using this when my daughter studies abroad and needs to reach me when I am out and about.)

- A weather app that shows the weather at your current location (it uses the GPS to know where you are)

- Google Latitude that allows selected friends to see on their smart phones or computers your current location

- A geocache application that works with geocaching.com (yes, you can leave your GPS at home)

- The Google Talk IM client permitting the office to reach me (a little too convenient if you ask me)

- A camera and video camera, both of which will push content up to Facebook

- Google Googles takes a picture of anything and tells what it is (I can take a picture of a barcode in a store, and via a Google search see if there is a better deal elsewhere)

- News apps (local and national)

- A map of the sky at night that rotates as I twirl around looking at the sky

- A built-in FM radio

- I Heart Radio, an application that lets me listen to my favorite radio station even if it's across the country

- Google Listen, a podcast RSS aggregator Video via http://www.YouTube.com and http://www.tv.com

- Last but not least, games!

That's quite a list. You will notice that a lot of the apps have the word Google in front of them. That shouldn't be surprising. Between the Google apps and the apps written by others, you hold the world in the palm of your hand.

Oh yes, *the device will make phone calls, too!*

Of course, such power comes with a price. You can't just buy the phone and get all this connectivity. A data plan typically costs $30 a month above and beyond your normal cell phone fees. Plus the battery life on a smart phone could be better (all that power takes, well, power). But once you have dipped your toes into the smart phone water, you'll gladly dive into the deep end.

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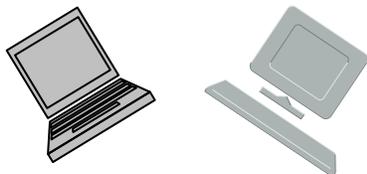
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Please send your change of address to the club address as soon as possible to avoid missing issues.

Thank You!

(Continued from page 1)

sales friend sold a home, hearing that another friend found a job, or a friend's daughter finished a charity race.

Each of us has our own interests and it is fun sharing them with your friends. I enjoy seeing what others do and what they are interested in. I can see what others in my age bracket find fun and interesting when using social networking. Being the careful and responsible computer person that I am, I always watch what I say and post to protect my information and the information of others. I also advise others to use the privacy settings that they are comfortable with and not to post anything that they do not want the whole world to see.

The report also says that social media bridges generational gaps. I totally agree. I see that grandparents and the rest of the family keep in touch, but all need to remember that what you share with your peers may not be items that you want to share with your family, your bosses, or your ex.

Various organizations that work with older adults, such as AARP, Older Adults Technology Services (OATS) and Project GOAL, have been actively promoting social media resources that are relevant to mature users.

February 2011

1st Wed. (2/2)
7 p.m. General Meeting

2nd Wed. (2/9)
Online-Only Webinar using Skype
See page 1 for information

4th Wed (2/23)
7 p.m. Internet SIG

3rd Monday (2/21)
7 p.m. Board of Directors

Meetings are at **Carlin Hall**, 5711 S. 4th St., Arlington VA: East off of Carlin Springs Rd, just south of Arlington Blvd/Route 50. See website for directions to post-meeting pizza gathering.

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