THE C.A.T.S. Eye

PRESIDENT'S CORNER

BRING YOUR LAPTOP WITH YOU TO THE NEXT MEETING!

The Chesapeake Area Technology Society (CATS)

New meeting location – Broadneck High School Media Center

For those who didn't know, we have had to change our meeting location to the Broadneck Senior High School, in the 2nd Floor Media Center. The facility is different than what we're used to at Severn River and because of their schedule, we've had to move the main meeting from the 2nd to the 3rd Wednesday of the month. There is an elevator for handicapped use at the end of the corridor for the main (1st entrance) to the school. The custodial staff has been very accommodating to us and will be available to operate the elevator for anyone who needs it on Wednesday.

HELP WANTED - Sort of:

We need some help in a couple of critical roles in our group. If you can help out with these tasks, it would be greatly appreciated.

The Chair for the Computer Refurbishing Special Interest Group (CRSIG) - After 8 long years, Fran Damratowski is stepping down from her position effective November 30. Karl Rickmond has generously offered to accept take the reins and continue the CRSIG.

Web Master - Mike 'Tony' DeLucia has chosen to step down from his duties. He has been our only Web Master for many years. He leaves big shoes to fill. Betsy Fravel has offered to learn web design and begin her apprentishship. She will begin to take over that roll in the future. If anyone else in the group has web design experience and has the time to making updates to the page, please let us know.

The Secretary - Joyce Shue has agreed to accept the position as official Secretary and continue her role as both Secretary and Public Relations person for the group.

If you have interest in these roles, please contact any member of the Board of Directors for more information.

Upcoming meeting topics

At the next few meetings we will have *significant* raffle prizes. For our *November 20th* meeting, we have four new, touch-screen, laptop computers available for raffle. In addition there will be two, 3TB internal hard drives, a 1.5TB external hard drive, and a 32 GB, USB 3 thumb drive. As you can see we will have **EIGHT** raffle prizes available. I hope many participate in the raffle. **BRING CASH!**

Microsoft Officially Releases Internet Explorer 11

by
Ira Wilsker

WEBSITES:

http://windows.microsoft.com/en-US/internet-explorer/download-ie
http://technet.microsoft.com/en-us/ie/dn269977.aspx
http://www.7tutorials.com/browser-wars-does-internet-explorer-11-deliver-browsing-performance
http://www.pcworld.com/article/2061156/best-parts-of-internet-explorer-11-for-windows-7-are-for-windows-8-users.html
https://en.wikipedia.org/wiki/Mosaic_%28web_browser%29

  Microsoft finally released the stable version of Internet Explorer 11. Actually, there were two public releases of Internet Explorer 11; there was an official release of the Windows 8.1 version on October 17, and a release for Windows 7 on November 7. Microsoft has made it clear that the newly minted Internet Explorer is for Windows 7 and 8 only, and will not run on older versions of Windows including Vista and XP.

  In the earliest days of what we now call the "world wide web" or "WWW", there was no Internet Explorer. While there was a slightly earlier Windows browser called Cello, which never gained any significant popularity, and an early Unix version of Mosaic that had a small following, the first successful Windows web browser was Mosaic, which was developed at the National Center for Supercomputing Applications (NCSA) at the University of Illinois Urbana-Champaign in late 1992. The Windows version of Mosaic was officially released to the public in early 1993, and was discontinued in 1997.

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www.chpcug.org/ **ChPCUG dues are $40 per year** **THE PRINTER** *November* *2013*

PRESIDENT'S CORNER - cont'd

November 20, 2013 – Mike Young will demonstrate the latest release of Microsoft Office, Office 2013. The latest features will be demonstrated and tips to take advantage of these features. You can review a lot of the features in a PC World article located at: http://www.pcworld.com/article/2012663/10-awesome-new-additions-in-office-2013.html

December 18, 2013 – This is our annual holiday meeting. We usually have food and drink at this meeting when we held our meetings at the Middle School. In our location at Broadneck High School we can't have food and drink in the library. CATS will host a buffet dinner for all members in good standing. It should be a great meeting! The meeting will take place at Cafe Mezzanotte in Severna Park. The website with directions is here: http://www.cafemezz.com/

As you can see we have a very full agenda over the next few months. I hope to see you all at the upcoming meetings.

Michael

Internet Explorer 11 - cont'd

Several of the creators of Mosaic, along with several of their students and staff, left NCSA and started a new company, Mosaic Communications Corporation. Mosaic Communications eventually morphed into Netscape Communications Corporation, which released an improved version of the Mosaic browser, widely marketed as Netscape. Another company, Spyglass, licensed the Mosaic technology and trademarks from NCSA, and produced their own browser with their own original code. In 1995, after seeing the potential for the explosive growth of the internet, Microsoft entered the fray by licensing the Spyglass version of Mosaic for a paltry $2 million (later increased by another $8 million), and started giving away the "new" Microsoft Internet Explorer to compete with the commercially available (paid) Netscape web browser. All versions of Internet Explorer through Internet Explorer 6 displayed the statement, "Based on NCSA Mosaic" whenever a user clicked on the "About" button on the menu bar. Starting with Internet Explorer 7, there was no Mosaic code used in Microsoft's browser.

As the popularity of the internet grew dramatically, Netscape earned a 90% share of the world browser market. Microsoft wanted Internet Explorer to be the dominant web browser, so Microsoft gave it away, and built in at the system level of all subsequent versions of Windows; as Netscape was a paid commercial program, it quickly lost market share to Internet Explorer, eventually dropping to only a 1% market share in 2006 (Source: en.wikipedia.org/wiki/Netscape). In 1999, Netscape was purchased by AOL, but not before releasing the source code for the browser, and created the Mozilla Organization. This code was revised and rewritten, and eventually became the very popular Firefox browser. AOL continued to develop its final version of Netscape Navigator 9 until 2007, effectively discontinuing it in 2008. Netscape only survives today as an AOL owned, discount internet service provider (ISP).

Today, while all versions of Internet Explorer maintains the majority of the browser market, with an estimated 55% market share (Source: thenextweb.com/insider/2013/03/01/internet-explorer-continues-growth-past-55-market-share-thanks-to-ie9-and-ie10-as-chrome-hits-17-month-low/), Mozilla Firefox is a distant second with 20%, Google's Chrome browser third at 16%, Apple's Safari at 5%, Opera at 2%, with the small remaining market share belonging to several less known browsers. Among Internet Explorer (IE) users, the older IE 8 and IE 9 combined make up about 45% of the browsers in use, with the newer IE10, and the older IE 7 each having about a 2% market share; the older and somewhat insecure Internet Explorer 6 that Microsoft has been warning users to upgrade from, has more than a 6% share of the entire browser market.

Now that Internet Explorer 11 has been officially released, it appears that Microsoft once again not only intends to maintain its market share, but also apparently wants to take market share from its major competitors. According to Microsoft (technet.microsoft.com/en-us/ie/dn269977.aspx), IE11 offers several changes and improvements not only over earlier versions of Internet Explorer, but also over its major competitors. Among these improvements are: faster and more efficient web browsing, even over slow connections; fast and fluid navigation with smart web page caching, prefetch and prerender, and faster search results; fast 2D and 3D displays with support for the newly emerging Web Graphics Library (WebGL) standards, with improved gaming and interactive performance along with hardware accelerated DirectX 9 (and later). According to Microsoft, " (users) ... will see a 9 percent performance improvement versus IE10, which is about 30 percent faster than competing browsers." This performance improvement has been corroborated on several other websites which tested the performance of IE11 against its leading competitors. In one such comprehensive test which disputed the IE11

supremacy, "Browser Wars: What Performance Does Internet Explorer 11 Deliver?", dated October 24, 2013, (www.7tutorials.com/browser-wars-does-internet-explorer-11-deliver-browsing-performance), that even though IE11 has substantially improved in terms of performance, Google's Chrome browser was overall faster than IE11.

The display on IE 11 has been improved to look better on any size screen, and includes side-by-side browsing, multi-monitor support, and enhanced pixel scaling for large screens. Many users of IE11 will immediately notice the enhanced compatibility with evolving web standards, other browsers, and popular websites; even older websites utilizing older obsolescent web standards display correctly on IE11. Now that touch screen devices are becoming very common, IE11 supports touch based devices, touch drag and drop, and other touch enhancements. IE11 allows up to 100 open tabs per window. Users of Windows 8 can pin websites to Live Tiles, which creates a seamless interface between apps (applications) and web apps. Now that VoIP (Voice over Internet Protocol) applications and devices are being widely used to make telephone calls over the internet, IE11 offers "Click to call" which makes phone numbers into clickable links for apps such as Skype; clicking on a browser link connects the voice call.

As IE11 is being released for multiple devices, IE11 can automatically sync with other devices, such that when IE11 is opened on other synched computers or devices, the user will see the same tabs, browsing history, typed URLs (web addresses), favorites and bookmarks, user configured settings, and passwords.

I downloaded and installed IE11 for my primary Windows 7-64 directly from Microsoft (windows.microsoft.com/en-US/internet-explorer/download-ie). On the download page the user is presented with a checkbox that is checked by default which says, "I would also like Bing and MSN defaults". Since I prefer to set my own defaults for search engines and other items, I chose to uncheck the box. The initial IE11 installer downloaded quickly, but had a minor issue on my computer, which will likely happen on many other computers; the IE11 installer did not like many of the utilities and applications currently running on my computer, and offered to stop them prior to continuing the installation, or I could manually exit them, and then continue installing IE11. The remainder of the install went smoothly, with the IE11 installer performing two system reboots, one of which displayed a boot progress screen similar to a monthly Windows update. After the second automatic reboot, all of my programs that the installer stopped prior to the install were back and functioning properly.

For the past few days, I have been using IE11 exclusively in order to better get a handle on it and its performance. I can definitively say anecdotally that it does seem to be faster than the IE10 that I had used previously, and it definitely has improved the displays of some web pages that I visit. All of my third-party add-ons, mostly security enhancements, were accepted without issue by IE11 and load and function well. My only issue with IE11 that I will find an add-on to resolve, is the appearance of the tabs at the top of the page which show the loaded websites. On IE11, unlike my primary browser, Firefox, or my secondary browser, Chrome, the tab for the currently viewed webpage is not adequately colored or highlighted enough to make it quickly identifiable among the other tabs. There is likely a quick fix for this, but I have not yet searched for it. Since many of the websites that I regularly access are Java based, I was interested in IE11's performance on those sites; utilizing IE11's integral Chakra JavaScript engine, those Java based pages loaded very quickly and look fine. One feature that I unexpectedly found, which I really appreciated, was that if a webpage displayed under a tab crashes, only that tab is effected; the

other tabs remain functional. I also found that there is an option in IE11 to enable "Start" with the tabs that were open when the prior session was closed, meaning that I can start where I left off in a previous browsing session. Another cute feature in IE11 is "Tab Grouping" where tabs are grouped by color. Tab grouping takes place when a link is opened from another tab; both tabs, and subsequent links from those tabs, will be the same tab color. Ungrouped tabs will always be light blue.

I found Internet Explorer 11 to be fast, reliable, feature rich, and highly compatible. Users of Windows 7 and 8 should strongly consider upgrading to Internet Explorer 11. Users of older versions of Windows, such as XP and Vista, can continue to use earlier versions of Internet Explorer, but should be aware that older versions still widely used, particularly Internet Explorer 6, are very vulnerable to attacks by hackers. If users of Vista and XP would like to continue to use older versions on Internet Explorer, rather than the more capable and secure updated competitors such as Firefox or Opera, they should go to microsoft.com/ie to download and install the latest version of Internet Explorer supported by their operating system. Users of Windows 7 and 8 can get Internet Explorer 11 from the same link at microsoft.com/ie which will automatically direct the user to the proper page. While I did not use Internet Explorer 10 very much in the past, preferring my newer versions of Firefox and Chrome, Internet Explorer 11 has proven itself to be worthy of consideration, and a very worthy competitor.

Recover Deleted Files From Most Media
by
Ira Wilsker

WEBSITES:
http://www.techsupportalert.com/best-free-data-recovery-file-undelete-utility.htm
http://www.piriform.com/recuva
http://www.powerdatarecovery.com
http://www.cgsecurity.org/wiki/TestDisk
http://4r-soft.com/undelete-navigator/
http://www.pandorarecovery.com/download/
http://seriousbit.com/undeletemyfiles/
http://www.undelete360.com
http://www.ubcd4win.com

As happens all too often, I get a frantic phone call for help from someone who has a dire computer problem. Recently these desperate calls for help involved computers hijacked by Russian extortionists, malware infested computers, computers failing to boot, and a myriad of other problems. Last Friday, I received a call from a highly distressed reader who had accidently deleted photos of her granddaughter's birthday party from her digital camera. "They were just simply gone" she cried to me. She explained that while reviewing the images stored on the memory card using the camera display, she " ... must have pressed the wrong button..." and deleted the photos. "Are they gone forever?" she asked.

Her problem, accidently deleting files from a hard drive, flash drive, or memory card is amazingly common. Often embarrassed by our own foibles, we may prefer to either quietly suffer the consequences, or try and do something to recover the deleted files. In her case, once she calmed down enough to follow

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Recover Deleted Files - cont'd

spoken instructions, I walked her through the process. Over the phone, I instructed her to download one of my favorite free recovery utilities, Recuva (www.piriform.com/recuva), and install it on her computer. Since the lost files were on a memory card in her digital camera, and not on her hard drive, there was no risk of accidently overwriting the files that she wanted to recover. Connecting her digital camera to the computer via its provided USB cable, her computer identified the memory card as a drive, assigned the memory card a drive letter (G: in her case), which allowed her to view it in Windows Explorer (or any other file manager). She ran Recuva, and I told her to click on "Next" a few times until she got to a window headed "File Types" and suggested that she click on "Pictures"; clicking again on "Next" opened a window "File Location", where I instructed her to click on "Browse" and then select the "G:" for her camera memory card. The next window started the search, which in a matter of seconds displayed the filenames of her deleted photos, with an adjacent checkbox to select those she wanted to recover. If she moved her cursor over the photo file name, a popup displayed the size of the file, and the likelihood of a successful recovery; since she had not overwritten any of the photos with additional photos, as they had been freshly deleted, Recuva labeled each of the photos as having an excellent chance of recovery. She checked all of the checkboxes, and clicked the "Recover" button. Recuva recommends that deleted files not be re-written to the same device that they were originally deleted from, so she selected a directory on her hard drive as a destination, rather than possibly overwriting deleted files on the original media. Within just a few seconds, all of her precious grandbaby photos were recovered, along with an admonishment from me to back up all of her critical photos and other files. After copiously repeated thank you's, she had her precious photos back. Total elapsed time from my answering her phone call to hanging up on a now happy grandmother was under five minutes.

While Recuva may be one of the most popular deleted file recovery tools available, and generally has an excellent reputation and reviews, it is not the only decent deleted file recovery utility available. The mega-software review website, Gizmo's TechSupportAlert.com has several reviews and recommendations for file recovery utilities at techsupportalert.com/best-free-data-recovery-file-undelete-utility.htm. While all of the recovery utilities listed can be downloaded for free to PCs (one of the top rated utilities has limited recovery capabilities in the free version, but unlimited recovery in the paid version), some offer additional versions for specialized purposes. Since there is a risk of overwriting desired deleted files on a hard drive, making them difficult or impossible to recover, I often recommend downloading and installing the portable version of a file recovery utility to a flash drive or bootable CD, rather than installing it to the hard drive. If the deleted files are on another device, such as the digital camera example above, there is no significant risk installing the utility to the hard drive.

When installed to, and run from a flash drive or CD, there should be nothing written to the hard drive, which may hinder the recovery of the deleted files. As a matter of personal practice, when I run Recuva or another file recovery utility from a USB flash drive, I select that USB drive as the destination for the recovered files, so as not to possibly damage any original files. For heavy duty recovery of a hard drive that has had a large number of deleted files that may need to be recovered, my choice is to use a bootable CD, rather than booting the computer into Windows; Windows constantly writes files to the hard drive, and not loading Windows may enhance the

probability of recovering deleted files. The free bootable CD utility from Ultimate Boot CD for Windows (ubcd4win.com) includes a version of Recuva that can recover most recoverable deleted files from a hard drive without risking overwriting them.

Some of the many other free deleted file recovery utilities, all of which offer varying degrees of strength and power, include Gizmo's top rated MiniTool Power Data Recovery Free Edition (powerdatarecovery.com). Though awarded as "Gizmo's Freeware award as the best product in its class!", as it is very fast, and has the highest recovery rate of any of the products tested by Gizmo's group of volunteer testers, the free version of MiniTool Power Data Recovery can only recover 1 GB data, which is normally enough for most users. Those who choose to use this utility to recover more than 1 GB of data will have to purchase the commercial version for $69.

Ranked number two on Gizmo's list of tested and recommended file recovery software is Recuva, as mentioned above. Recuva is unrestricted freeeware, and can recover an unlimited number of files. In addition to the PC downloadable version, as mentioned above, Recuva is also available in a free portable version that can be run from a USB flash drive, or from a bootable CD as part of the included suite of utilities on the free Ultimate Boot CD for Windows.

There are also several other free undelete utilities available which were not included in the Gizmo ratings, but have received top ratings from other online services. One particularly noteworthy is Pandora Recovery (pandorarecovery.com), which was top rated and recommended by another service that I routinely follow, MakeUseOf.com. I have used Pandora Recovery many times and it works very well on all of the media types that

contained deleted files. Pandora Recovery would be a worthwhile addition to any software library.

Another utility for recovering deleted files that has been well regarded in several of the technical blogs is UndeleteMyFiles Pro (seriousbit.com/undeletemyfiles), which calls itself, " ... a free profesional <sic> tool to recover accidentally deleted files from hard disks, USB flash drives, CF and SD cards and other storage media. Free - Absolutely free, no joke." A full featured recovery utility, UndeleteMyFiles Pro offers a File Rescue Wizard, Media Recovery, Deleted File Search, Files Wiper, and a Mail Recovery Wizard. While the program itself works well, some of the English spelling and grammar used in the program is not up to domestic standards, as the program was written in Chisinau, Republic of Moldova.

For those who like variety, another popular and free recovery program is Undelete 360 (undelete360.com). According to the publisher, "Undelete 360 can recover files deleted from computer hard drives, USB/thumb drives and memory sticks, the memory cards used in cameras, smart phones, and other devices, pen drives, and more. The program supports both file recovery and folder recovery." With a small but loyal following, Undelete 360 is the utility of choice to recover files and entire folders that were deleted. A program written in Russia, where it is a top-rated utility, this program is also popular in Europe as well.

There are still several other decent and free deleted file recovery utilities available, and a search on any of the many download services will result in lists of them, often along with a review and some user commentary and ratings. As with most other utilities, I have found that if one utility is unable to recover targeted files, that sometimes another utility may be able to complete the task.

from the Secretary's Desk....

The Board of Director's Meeting was held on Wednesday, November 13, 2013 in the Media Room at Broadneck High School. The meeting convened at 7:00 pm. In attendance were the following:

Mike Young, Joyce Shue, Mike Regimenti, Betsy Fravel, Kathy Walker, Sam Shepherd, Fran Damratowski, Karl Richmond and Dave Mauriello

Upcoming Meeting Topics

Tentative schedule of meetings topics. The meetings are subject to change or rearrangement:

- November 20 – Mike Young will present MS Office 2013
- December 18 – Dinner meeting at Café Mezzanotte. Dinner free to paid members with guests costing $35.
- January 15 – Best Buy demonstrating their products
- February 19 - Apple discussing and demonstrating Apple products
- April – TBD

SIGs

- Technology SIG – December 4th, 2013 Meeting – Social Meeting/Group Sites
- CRSIG – As of December 1st Fran Damratowski after numerous years as chairperson of the CRSIG is resigning. Many thanks to Fran for years of outstanding leadership.   Fran has faithfully provided status reports at each Board of Directors meetings plus an end of year report. The CRSIG has adopted a "Super Market" style of refurbished parts and systems. This means that the eligible individual can, for a donation, have either individual parts or a complete computer system. The eligible buyer must be approved through a social service agency in order to quality. All refurbished computer systems are installed with an Ubuntu OS. There have been numerous individuals that have been approved and selected a computer then fail to pick them up. Fran noted that there has been a decline in the number of people seeking PCs. The workshop location appears to be stable. Karl Richmond has generously volunteered his services to over as Chairman of the CRSIG group and run the workshop.

Finances

- The finances are stable. Bill Somers has resigned as co-Treasurer. Bill has been an excellent Treasurer and an asset to our group. Kathy will be assuming the duties however she needs someone to step up and help her with this position.

New Business

- There will be raffles at various meetings. At the November meeting the raffle will consist of 4 new laptops, 2 3TB internal hard drives, a 1TB backup drive and 32GB flash drive. The December meeting will have a raffle of several Kindle Fire HDXs and several Kindle Paper whites. The raffle for the January meeting has yet to be determined and the February raffle will be a Mac Book Pro, an IPad and an IPad mini. Stay tuned for future raffles. The price for the raffle tickets will be **one for $5 or three for $10.**

from the Secretary's Desk.... - cont'd

- There is a change to how you will be receiving the monthly newsletter. The November and December issues of The Printer will be the last ones to be mailed. **Make sure we have your current email address.** Starting with the January newsletter, you can download the newsletter from our web site. A reminder to view the newsletter will be sent with the meeting notification via Yahoo Groups. We have resisted this change for many years, but between the increasing costs of both printing and postage over the last several years, it was an inevitable descision

- The December 18th General Membership meeting will be held at Café Mezzanotte in Severna Park with dinner with soft drinks will be provided free to *paid* members. The buffet dinner will start at 6 pm and include a cash bar. Guests are welcome to attend, however they will need to pay for their meal and the cost is approximately $35. Those interested in attending need to contact Sam Shepherd via email at ssshepsam7@gmail.com with the number in your party. Respond to Sam no later than December 6. This change in venue is because of the nature of the facility at BSHS.

- Joyce has agreed to stay on as Secretary.

- Betsy Fravel is becoming the assistant web master.

- It was suggested that we use a previously recorded YouTube technology video from APCUG as a presentation at one of our meetings. Please let one of the officers know your thoughts.

The meeting was adjourned at 8:55 pm.   Respectfully Submitted, Joyce Shue, Secretary

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CD-R and DVD+–R Longevity: How Long Will They Last?

by
John Langill, Newsletter Editor, Southern Tier Personal Computing Club, NY
August 2013 issue, Rare Bits
jlangil1 (at) stny.rr.com

Although there are today many data storage alternatives, I'm sure that there are many such as me who in the past stored various kinds of information on optical media, CD-Rs in particular. To cite just two examples; I have scanned hundreds of family slides, organized the digital images, and saved them on CD-Rs. Similarly, I did the same with several hundred of digital photos from my two-month visit with my son and daughter-in- law in Australia in 2003. The purpose of doing so was to have a convenient form in which archive the digital images and to share them with other members of the family; while at the same time conserving space on the hard-disk—then a more precious commodity than it is today.

Thinking back 10 or more years, one may recall that a single CD-R then offered a relatively large data storage capacity in a form that could be easily and inexpensively mailed anywhere in the world—something that could not be accomplished via the Internet or with other "portable" media at the time.

While acknowledging that the images stored on these CD-Rs—and others even older—could now be transcribed to another medium, I confess that I'm reluctant to devote the time and effort to doing so at this point. Accordingly, the durability and life-expectancy of the CD-Rs that I created 10, 20, and even 30 years ago, has become an increasing concern.

In the early '90s when the first CD-R discs were introduced manufacturers said the media had a data life in excess of 40 years. In the late '90s when the first DVD-R discs appeared on the scene producers proclaimed a data life of at least 100 years. However, in the time since their introduction it

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How Long Will They Last? - cont'd

has been discovered that these early discs are susceptible to media "rot" (i.e., "bit rot") that can eat your information—audio, video, or data—in as little as two years after it is written. (According to research fairly recently conducted by J. Perdereau, CD-Rs may have an average life expectancy of not more than 10 years—Journal de 20 Heures, March 2008.)

Because CD-R and DVD+–R media is used to archive nearly everything today, it does make one worry; especially if these discs are the only repository in which your precious, and irreplaceable, family memories— photos and movies—as well as vital family, personal, and company data/documents are stored.

So where does the truth lie? Somewhere across the complete spectrum. Most people who successfully burn a disc believe they have quality media. Unfortunately that only tells you the disc will be compatible (able to be played) in the vast majority of CD or DVD players. More importantly all better quality CD and DVD burners include technology called over burn/under burn protection making "coaster production" a thing of the past. The basic construction of both disc technologies enable you to burn your data in a very precise, very controlled manner.

Test Options

There are only two foolproof ways of proving the data life of the discs you use:

1. Write a few CD-Rs or DVD+–Rs, then wait about 25-50 years and check if they still hold the correct data.
2. Use a CD/DVD analyzer that is specially designed to retrieve very accurate information about your media and your data after accelerated aging in test chambers where the discs are subjected to excessive temperature and humidity tests.

The first is typically impractical. Nonetheless, from personal experience I can attest to the fact that the first CD-R I eve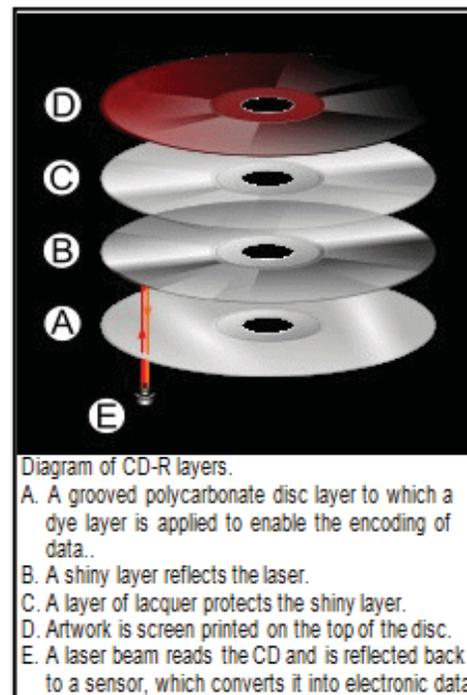r burned— selections from a vinyl LP album—plays just fine and the music still sounds great 25 years later. However, I have also had some CD-Rs become unplayable in just a matter of months. Fortunately, such occurrences have been few.

The second provides only theoretical limits and doesn't take into consideration how you use, handle, and store the media. However, even assuming proper handling, temperature and humidity can adversely affect the data-life of even quality media.

Between the CD-R discs produced in the early 1980s and today's double-layer DVD+-R discs there has been considerable progress in write performance, capacity, quality, and cost.

Following the test procedures of the International Standards Organization (ISO), quality media manufacturers have been able to predict data-life spans ranging from 50-200 years. But keep in mind there are wide differences between low-budget media manufacturers and quality media manufacturers. In addition variations in manufacturing methods, materials and processes/procedures can dramatically affect the data life of the media you use.

Or as auto manufacturers like to say... "Your mileage may vary."

Diagram of CD-R layers.
A. A grooved polycarbonate disc layer to which a dye layer is applied to enable the encoding of data..
B. A shiny layer reflects the laser.
C. A layer of lacquer protects the shiny layer.
D. Artwork is screen printed on the top of the disc.
E. A laser beam reads the CD and is reflected back to a sensor, which converts it into electronic data

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The Next Regular Meeting will be at The Broadneck Senior High School

Wednesday
November 20th, 2013

Meeting will be held in the 2nd Floor Media Room at BSHS.

It starts at 7:00 P.M. with club business and a short discussion period.

You're invited to a presentation
on
MS Office 2013
by
Michael Young

Members and their friends are welcome to come, ask questions and become enlightened.

How to Find: Broadneck Senior High School

BSHS is close to Cape St. Claire, MD. From Annapolis and points south, take Rt. 50 East towards the Bay Bridge. Take Exit 29 B (cross over Rt. 50) at **the light, turn LEFT on College Parkway, at next light , then RIGHT on Greenholly Drive**. **At the first light, turn Right on to the road that leads to the school and the Broadneck Public Library.** BSHS will be ahead and slightly to your left. (Of course, if you are coming from points North, you could turn left onto College Parkway) and follow it 4.1 miles & turn LEFT on Greenholly. The first entrance you see, is the **Main Entrance, the left door has been open at 7 pm.** Go through the second set of doors and follow the corridor to the staircase. The Media Room is on the second floor, just off the stairs. Signs will be posted to direct you to the **MEDIA ROOM** where we will be meeting.

The meetings are held at the BSHS in the Media Room.

The Chesapeake Area Technology Society

Chesapeake PC Users Group

1783 Forest Drive #285
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FIRST CLASS

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