

ACPCUG Newsletter

**Akron North Hill
Library**

August 1, 2005

**Back to old
Venue!!**

**Starts at 6:00PM Sharp!
Best Practices for Security by Frank Ramsey + Q&A + TBA**

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August 2005

Akron-Canton PC Users Group

We will be back at North Hill Library on Cuyahoga Falls Ave. for both August and October 2005. We are "assured" to be at the Main Library in December, thanks to Walt Ruthenburg.

Progress: Media Increases Capacity and Cost Balances Change, Too

By Art McRowe, newsletter editor, Akron-Canton PC Users Group

The CD is giving way to the DVD which is poised to give way to newer DVD formats and technologies.

OK, we know our hard drives are increasing in size rapidly! Thank heavens! Photo and video editing and storage of multiple copies really suck up those magnetic 1's 'n 0's. That's why it's imperative that our optical media technology keeps advancing, too. No doubt about it, CD's are giving way to DVD technology!

Fortunately, all the present new DVD player-recorders (for PC's) are remaining backward compatible

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with CD technology – being able to both read and write CD-R and CD-RW (CD write and CD rewrite disks). Not surprisingly, they usually are not optimized for these tasks and may be somewhat slower than standalone CD recorders. **But** they still work! **How much longer**, is the question I ask? Right now, DVD recorder-players use the same wave length laser light beam that CD’s use. But already Sony – etc. are pushing UV lasers (Blue beam) to increase capacity on a given disk. (This decreasing light wavelength is the same technique used for increased resolution in X-ray microscopy over optical (visual) microscopy.) Will shorter wavelength light still be able to read and write a CD? I suspect reading will prevail longer than writing capabilities.

I don’t know about you, but I have a significant investment in CD music and computer data archive and plain old storage!

With the price of DVD hardware today, even dual layer DVD read and write is hardware cheap! And while CD hardware is available for \$20, the DVD big name stuff is there on sale for less than \$60!

OK, today – what should we be using? The answer, my friends, is blowing in the ... spreadsheet next.

Recordable Optical Media Costs

Comp USA newspaper ad July 24, 2005 and www.compusa.com

Pack- age Count	Media Name	Brand	Speed	Disk Capacity	Capa- city units	Cost (\$)	Cost \$/gb
100	DVD+R or DVD-R	FMI	4X	4.7	gb	24.99	0.05317
25	DVD-R double layer	Memorex	2.4X	8.5	gb	79.99	0.376424
25	DVD+RW	Memorex	2.4X	4.7	gb	14.99	0.127574
50	DVD+R	Memorex	16X	4.7	gb	39.99	0.170170
100	CD-R	Memorex	48X	700	mb	17.99	0.257000
24	CD-RW	Memorex	24X	700	mb	8.99	0.535119

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OK, the purpose of this comparison is NOT to single out CompUSA. These prices are indicative of today's going rates – some sales, some everyday "street" prices.

Note: Speed: CD speed of 1X is what we listen to audio, 700 mb = 80 minutes play time. For data storage and reading, 48X is a whole lot faster! But not like DVD which was designed to push video movies along with audio. 1X for DVD is 4.7 gb = 120 minutes (just barely a movie with no extras). More modern DVD recorders are up to 16X speed for recording and reading data. But they frequently need faster recording media (i.e., more expensive) to reach those speeds.

Speed costs, rightfully there is a premium for speedy recording. Especially on DVD quantities, speed is appreciated.

Rewrite costs, but CD-RW is especially costly. Treasure your old CD-RW's, if you must. Why use anything rewrite? It's especially useful for data storage where you will be adding revisions and new files. Now you're smarter using DVD±RW.

DVD±R maximizes space vs. cost, especially if you go slowly. But even spiffy 16X is cheaper per byte than CD's.

Dual layer DVD is expensive and slow. It may never cut the mustard. Well, it does get a longer movie onto one disk, but will your regular TV-DVD player read it? If so, it can be worth the price. One disk per viewing is **very nice!**

But at 18¢ per disk, good old CD's are good distribution media for limited data, like lot's pictures to be printed at Wal-Mart or at relatives' printers after a family party, etc. Also, automobile CD players will be around for a long time. Have you seen ads for DVD audio in a car you can drive?

So there are many choices, the price break-points will keep changing. But the above chart is a way of making your choices in your best interests. That there are so many choices indicates that there are many needs to be filled. Just remember that your pocket-book is a moving target.

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Search Engine Tips and Tricks

By Richard Johnson, member of TUGNET, California.

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Part 2: Beyond Google

As helpful as is Google, it's a mistake to overlook the other search services. There's nothing wrong with turning first to Google (or another search service of your choice). It's a good idea, however, to pick out and bookmark at least a few competitors, for special situations. A good place to start is the search comparison chart at www.infopeople.org/search/chart.html.

Both MSN Search and Yahoo! Search have undergone major recent changes, and both merit special attention. MSN Search (search.msn.com) now affords access to Encarta Encyclopedia, with a two-hour "free pass" that will be renewed with every new query. Check out also its Near Me option (akin to Google Local), that will point you to services and events in your area or another area you specify.

Yahoo! Search (search.yahoo.com) has brought out My Web to track past searches. My Web will save both the links and the actual pages (so you'll still have access should the page be removed from the Web). Yahoo will organize these saved pages as bookmarks. For details, go to myweb.search.yahoo.com/myresults/benefits.

Many of the following search tools are in beta, and so may become even more useful after further development. All are free to individuals.

Comparing and Augmenting Search Results

You might be surprised to learn that if you compare the top ten results from any two search engines, fewer than half of those results will likely be found at both. An excellent way to see what either Google, Yahoo, or Ask Jeeves comes up with (that your standby didn't!) is to use the Jux2 tool, at www.jux2.com.

Yagoohoo!gle (yagoohoogle.com) presents side-by-side Yahoo and Google results.

Another way to go is to type in your query at Topic Hunter (www.topichunter.com), and then click on the names of any of the sixteen search engines Topic Hunter supports.

Copernic Meta is the free successor to what formerly was a fee-only download. A Windows Deskbar or browser toolbar will facilitate simultaneous searches on multiple search engines. www.copernic.com/en/products/meta

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Special-Purpose Search Engines

Shopping

When it comes to shopping, the Web can do far more than take your money. To help you decide how to spend it, a new search engine still in beta, Become (www.become.com), zeroes in on buying guides and product reviews (although you will find merchant links also, generally farther down).

Once you have a better idea of what to buy, you'll want to use one of the multitudinous price comparison sites. Pricing Central (pricingcentral.com), acts like a clearing-house, utilizing the resources of many price search engines. For books, music CDs, and videos, AddALL (www.addall.com) and Books Price (www.booksprice.com) figure in shipping costs for your location. AddAll has a slightly larger bookstore database, but Books Price will calculate costs for multiple purchases.

If you like to shop by catalog, take a look at Catalog City (www.catalogcity.com). For specials at local brick-and-mortar establishments, try Cairo (www.cairo.com) or ShopLocal (www.shoplocal.com).

Other Special-Purpose Engines

For straightforward answers to simple questions, check out Brainboost, at www.brainboost.com. Promoted as an "answer engine," Brainboost asks you for plain-English questions (not search words), and its results are answers, not links. (A link will accompany each answer, for further research.) Another popular tool for factual information is Answers.com (www.answers.com), which de-emphasizes links even further and gives more extensive answers. An optional free download lets you bring up Answers.com results by alt-clicking any word on your screen, on or off the Web.

For deciphering acronyms, you can't do better than Acronym Finder (www.acronymfinder.com), with definitions for over 398,000 acronyms. Optional tools (for various browsers) will allow you to view a definition almost instantly.

To take advantage of Amazon's Search Inside the Book capability, you may want to use A9 Search, at <http://a9.com>. (A9 also features search history tracking.)

For news there are many good choices. BBC News at news.bbc.co.uk is excellent for international news, as is World Press at www.worldpress.org. For old news (as early as 1990) without the fee charged by other sources, try The Seattle Times, at archives.seattletimes.nwsourc.com/web/index.html. For the most up-to-date news, AlltheWeb Advanced at snipurl.com/eljf is excellent, and will let you sort and filter results prior to your search. CNN.com (www.cnn.com) and the revamped Yahoo! News (news.yahoo.com) are good general-purpose news sources. Most or all of these allow you to set up news alerts to

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email you of new developments in issues of interest.

Toolbars

These days almost every search engine and its cousin have an associated toolbar for free download. In addition to the Copernic Meta toolbar (covered above), a few you might want to consider are:

Y!Q DemoBar. I really like this one, in part because it's small enough to fit easily on the same line as my Internet Explorer address bar. (To squeeze it onto that line you may want to “unlock” the IE toolbar, using the right-click menu, and shrink the address bar. You can adjust Y!Q's size, using its options menu.) The DemoBar's sole function is to enable context-based searching. Clicking it will yield results related to page text you've highlighted, optionally modified by text you've typed in its search box. yq.search.yahoo.com/splash/demobar.html

Earthlink Toolbar. This is available to anyone (not just Earthlink subscribers). Its major innovation is its Scamblocker option, to guard against phishing. It also offers a Google search box, a pop-up blocker, and clickable changing news headlines. Like Y!Q, it can be shrunk down to fit on the same line as your address bar. www.earthlink.net/home/software/toolbar

MSN Toolbar. Features pop-up blocking and search term highlighting. Can be expanded to implement desktop search and form filling/password management. toolbar.msn.com/default.aspx

A9 Toolbar. Gives you the ability to add notes to Web pages. Also includes pop-up blocking, search history tracking, online bookmark creation, search term highlighting, and site info. (Some have found it difficult to use.) toolbar.a9.com

Yahoo! Toolbar. The big brother of the Y!Q DemoBar. Includes the DemoBar's functionality, and in addition facilitates Yahoo's My Web (see above) and spyware protection. beta.toolbar.yahoo.com

Google Addenda

Overall, the best search engine is still Google. (See Part 1.) Here are nine more Google tips and tricks:

An adaptation of Google Maps will search for rental and for-sale housing around the country, in a price range you specify. For each result you'll be told whether a picture is available. Then if you choose you can link to the original listing (which is from Craigslist). Go to www.paulrademacher.com/housing.

Google's Search by Number feature will give you information about numbers you type in the search box. The most useful example of this was covered in last month's article--entering a phone number to use Google as a reverse directory. But other numbers can also yield valuable information. For instance, entering just the area code will bring up a link to a map of the area. You can also get information by entering UPS, USPS, and FedEx tracking numbers, Vehicle

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Identification Numbers (VINs), and even UPC codes.

The Google Calculator can do anything your stand-alone calculator can do, and a lot more. It's especially useful for conversions, by employing the operator "in." For example, to find the number of teaspoons in two cups, you'd type "teaspoons in 2 cups" [without the quotes] in the Google search box. For myriad other uses go to www.google.com/help/calculator.html.

The best way to use Google News is via its Advanced New Search, at snipurl.com/elhs. This allows you to sort by date, limit by news source or location, specify the date range, and easily modify your search in other ways.

When typing a phrase into the search box, as with other search engines, you enclose the phrase in quotation marks. To save yourself keystrokes when there's no text following the phrase, omit the ending quotation mark. (Google will fill that in for you.)

Google Maps (covered in Part 1) can be re-centered by double-clicking, but more useful is the user's ability to drag the map area--thousands of miles if necessary!

In using Google Local (also covered in Part 1), be sure to click on the links for the establishments of interest, to disclose useful data about them (which can vary considerably). Also: You can limit your Google Local searches as you please. For example, you might enter "restaurant inexpensive view," to find a low-cost restaurant with a good view.

Google's new My Search History will from any computer let you view by date or easily find anything you've ever searched for after signing up. Together with each of your past search queries you'll find the links you used from that search's results. (Cf. Yahoo's My Web, above.) For details, go to www.google.com/searchhistory/help.html.

Some of you who attempted to implement the minus sign as a stand-in for NOT, in accordance with the suggestion in Part 1, may have had a problem resulting from the line break in the printed article. This will be resolved if you make sure there's no space between the minus sign and the (following) search term to which it applies.

I've been asked why in Part 1 I described how to use Google to find a business but not a residence. The answer is that the syntax for locating a residence is rather complicated. You'll find it at www.google.com/help/features.html#wp. Three points, though: (1) The necessary elements must be typed in the order given. (2) Don't insert extra elements (like a street address, even if you know it). (3) In spite of what Google lays out, don't bother inserting commas between the elements. Note that both the business and residence search will include handy Google Maps links with your results.

Richard Johnson is a writer and editor, and founder/administrator of FREE FOR ALL The Skills Pool, a 29-year-old membership organization (<http://theskillspool.org>).

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First Phishing, Now Pharming

By John Pearce, Pikes Peak Computer Application Society, Colorado Springs, CO

First, there was phishing trying to collect personal information. A newer attack called pharming is trying to do the same thing in a more technologically sophisticated way. You need to be on guard but neither phishing nor pharming should keep you away from the Internet. Let's take a quick overview of both.

Phishing starts with an e-mail, typically from a financial institution, with a message that some dire consequences will happen if you don't immediately verify your account information. A web site link is conveniently provided for you in the e-mail. The provided link is to a web page that looks like the real web site but is actually a web site controlled by the bad guys. The fraudulent web page asks you to enter credit card and billing information or possibly user name and password information. You can imagine what the bad guys are going to do with the information they collect.

Pharming is a way for the bad guys to redirect your web browsing to a site which they control. Pharming is also known as DNS (Domain Name System) cache poisoning. DNS is what converts human friendly names like `webboard.apcug.org` to numerical addresses like `192.160.122.122`. The bad guys want to impact the largest number of Internet users possible so ISP's and large corporations are the most likely targets of pharming attacks. One goal is to download spyware or adware to your PC.

Protecting yourself from phishing attacks is as simple as ignoring the e-mail. All but one of the dozen or so phishing e-mails I have received have been from banks where I don't have an account. In that case, delete the e-mail and go on with your life. If you have an account with the financial institution and are concerned, use the telephone and ask to speak with their Internet security department. If you go to the web site to login, type the web site URL into the browser – do not use the link provided in the e-mail.

Protecting yourself from pharming attacks takes a little effort. Start by keeping your browser updated with all the security patches. Next, you should be sure the padlock icon is displayed on any page where you enter personal information such as username, account number, or password. The padlock icon indicates you are connected to the legitimate owner of the URL and the data you enter is protected by SSL encryption during transmission. The bad guys would have to know the private key of the site in order to

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make the padlock appear. You can view the security information by double clicking the padlock icon on your browser. You can also use a tool like SpoofStick to confirm the URL of the web page you're viewing.

Two other exploits are worth a quick mention. The first is an instant messaging worm that changes the content of the hosts file on your PC. This is effectively the same as DNS cache poisoning. The other exploit is domain hijacking which is done by manipulating the domain name registrars. Domain hijacking is what happened to Panix, a New York ISP, in January.

Being aware of phishing and pharming along with a little care and caution will keep your web browsing safe from the bad guys.

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Don't Fall for "Human Engineering"

By Ira Wilsker, APCUG Director; Columnist, The Examiner, Beaumont, Texas' Radio Show Host; Police Officer iwilsker@apcug.net

You receive the following urgent email from someone you will likely know with the subject line "Finally Captured! You open this intriguing email and see the message: "Turn on your TV. Osama Bin Laden has been captured. While CNN has no pictures at this point of time, the military channel (PPV) released some pictures. I managed to capture a couple of these pictures off my TV. Ive (sic) attached a slideshow containing all the pictures I managed to capture." Attached to the email is a file "Pictures.zip". Eager to see the proof that the number one most wanted person in the world has been captured finally, you click on the attachment. No photos appear, so maybe you click on it again. It is now too late, because that first click on the attachment rather than opening a zip file and displaying the photos, planted a nasty backdoor Trojan on your computer, Nibu.D. Through a process known in the industry as "Human Engineering", an innocent victim was tricked into installing unwanted software onto his computer. In this particular case, the Nibu.D backdoor just installed a "keylogger" intended to capture usernames, passwords, account numbers, and other sensitive information.

Nibu.D is also listed by Norton as a "bank info scarfer", a type of malware that explicitly looks for banking information when entered, and sends that information to parties unknown. If you were one of the countless victims of this trick, and have since opened the attachment and unknowingly installed Nibu.D, you have done online banking, checked your credit card accounts, logged onto EBay or other shopping sites, your personal information may have been compromised, and you may become a victim of identity theft.

Every day for the past several weeks I have received some apparently urgent emails seemingly from my internet service provider (ISP). They come addressed from "administrator", "support", "customer service", or some similar official sounding individual at the ISP. They carry dire warnings in the subject line that my email account will be or has been suspended for a variety of infractions, ranging from failure to follow an unspecified rule, sending excessive spam, or some other major infraction. The poorly worded message is "Once you have completed the form in the attached file, your account records will not be interrupted and will continue as normal" and has a 65k attachment "document.zip". Another slight variation refers to following directions in a file ranging from 43k to 65k in size with the file name "instructions.zip." I depend on my email, reading and sending dozens per day. Email is important to me, and since it is from my ISP, I go

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ahead and click on the attachment. Bad choice; one or more of the dozens of variants of the Mytob worm is now infesting my computer, possibly killing or deactivating my antivirus and firewall software, preventing access to antivirus and other helpful websites, and creating a multitude of new threats to my cyber safety. Once the computer is infected, Mytob searches the hard drive for address books, and sends infecting emails to addresses found, geometrically increasing its distribution and degree of damage.

Recently, variations of Mytob in aggregate have made it to the top of the threat lists compiled by antivirus companies. In one recent day, antivirus company Sophos reported that over half of all new virus infestations detected were variants of Mytob. Mytob is a product of a group of miscreants going by the name "HellBot", who have allegedly stated that they are trying to develop some type of "SuperBug", according to a recent article in Computerworld. On some days, several versions of Mytob have appeared; in recent months, slight variations have appeared so rapidly, that Mytob has spread more quickly than antivirus companies' ability to protect against it, leaving even recently updated antivirus software vulnerable to attack.

Mytob, first discovered in February, and its many variants, are especially nasty based on what they do. One factor in common is the ability, as mentioned above, to deactivate or destroy the antivirus software and firewall installed on the infected computers. It also blocks access to security websites that may provide information and utilities to kill Mytob. This malware may also prevent the running of the free online antivirus scans, which could (if allowed to run), detect and remove Mytob, making it a self-protective piece of malware. Some versions also lower or remove other security settings on the computer, making it even more vulnerable to attack. Some versions also may install spyware, adware, zombies, or other undesirable software, as well as broadcast over the internet that the infected computer is vulnerable to further attacks. Trend Micro, the provider of the online free antivirus scan Housecall (housecall.antivirus.com), and PC-Cillin antivirus software, has stated that some variants of Mytob use the infected computers as a source of revenue for HellBot by placing adware and spyware on the infected computer.

Nibu and Mybot are just two of the thousands of currently circulating viruses, worms, and Trojans. Netsky, Bagel, Sober, and their many variations are a major threat to our computing security. As the virus writers continue to make more productive (for them) and destructive malware, it is now more imperative than ever that we all keep our antivirus software updated constantly. Be suspicious about emails even from known sources,

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and check out any suspicious email from possibly known sources by checking directly with that source prior to opening the email or any attachments.

As I have pleaded in the past, we must be responsible for our own cybersecurity.

SOURCE: (NibuD)

<http://people.ists.dartmouth.edu/~gbakos/img/osamamail.jpg>

SOURCE: PERSONAL EMAILS (Mytob variants)

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Tech News **By Sue Crane,**

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AMD's Antitrust Suit Against Intel

Advanced Micro Devices complaint accuses Intel of maintaining its monopoly in the PC processor market by illegally coercing customers around the world into using its products. The 48-page complaint alleges that Intel used illegal subsidies to win sales, and in some cases threatened companies with "severe consequences" for using or selling AMD products. Meanwhile, hoping to win the support of U.S. legislators and average computer users, AMD is publishing full-page ads in 7 U.S. newspapers, explaining why it filed suit and encouraging readers to read the full text of its 48-page complaint. The AMD complaint is available online at http://www.amd.com/us-en/assets/content_type/DownloadableAssets/AMD-Intel_Full_Complaint.pdf.

Coming soon: 30Gb on a 1-inch drive

A Japanese university has shown a prototype 10GB 1-inch hard disk drive that packs data on the disk surface more densely than existing hard drives with an areal density--the number of bits per unit of disk surface area--of 138 gigabits per square inch. The drive uses perpendicular recording technology to achieve its higher areal density. The Japanese researchers project they will be able to boost the areal density of 1-inch disks to about 500-gigabits per square inch in 2007. This could enable 1-inch drives to have capacities as high as 30GB a few years from now. Currently, the highest-capacity 1-inch drives on sale store a maximum of 6GB of data.

Court Rules against File-Swapping

In a unanimous decision justices ruled: companies that build businesses with the active intent of encouraging copyright infringement should be held liable for their customers' illegal actions. The decision will likely reshape the Internet landscape in which file swapping has become commonplace.

Man vs. SuperComputer

Michael Adams, United Kingdom's strongest chess player, is the latest player to take on a supercomputer. Adams and the Hydra computer will play up to 6 games for a prize fund of \$150,000. Some experts are already predicting that Hydra will win the contest. But correspondence chess grandmaster Arno Nickel, who recently beat Hydra 2-0 in a correspondence match, has predicted that Adams could secure a 3-3 draw. According to the

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team that developed Hydra, it can calculate 200 million moves per second and see up to 40 moves ahead.

Tired of waiting for Windows XP?

Giga-byte Technology has stumbled upon a faster way to boot up PCs based on the Windows XP operating system.

iRam is a PC add-in card with four DDR DRAM memory slots, designed to be used as a PC drive. iRam uses DRAM to store information, data can be retrieved up to 60 times faster. The iRam holds up to 4Gb of DRAM in four memory slots. The card fits into a standard PCI slot, which provides power, and it uses a SATA (Serial ATA) connection for data transfer. If the PC is unplugged, the iRam has an on-board battery for emergency power that can last up to 12 hours. The iRam will be available in July.

Laptop Batteries Recalled

Batteries in some notebook computers from Fujitsu Siemens can overheat, with a risk of fire. The company has recalled the batteries in some of its Amilo notebook computers, and will replace affected batteries free of charge.

No IE7 for Win 2K

According to an unnamed employee, Microsoft will not be releasing IE 7 for Windows 2000 as this would involve a lot of work for an operating system that is in the later stages of its lifecycle and some of the security work in IE 7 relies on operating system functionality in XP SP2. Win 2K users argue that Microsoft is committed to provide extended support to Windows 2000 through 2010. Microsoft was also criticized for building a Web browser that cannot run independently of the operating system. IE 7 will be available in beta this summer, offering improved security features, basic tabbed browsing and improved standards support, including support for CSS 2 and PNG transparencies.

Digitally Enhanced Photos May Be "Too Good"

Kacie Powell, a photographer for Centre College in Danville, Ky., tried to get some digital photo shots printed at Wal-Mart, but employees said they looked "too professional." She ended up signing an affidavit that included pictures of college employees who were authorized to print her pictures. When a colleague whose portrait was included among the authorized photographers went to Wal-Mart with some candid shots from graduation, she got turned down too.. Photo Labs, fearful of being sued by professional photographers, are in a tough spot: should they anger their customers or risk a lawsuit? Don't be surprised if your digitally enhanced personal photos

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are turned down by WalMart and other fast-photo labs.

Do the walls have ears?

The experimental system--which consists of a series of sensors under a baby's mattress and a camera mounted on a wall--will monitor a child's heart rate, temperature and movement; stream video of the infant; and even take pictures. Captured data is sent to a parent's PC. In another experiment, researchers have tagged all of the items in a person's house with RFID sensors that effectively will tell a remote computer whether the occupant has moved a spoon or turned on the television. Though it might sound Orwellian in the abstract, the system is being designed to provide relatives or professional caregivers information on the daily habits of the elderly.

\$100 Computer

A little-known company called Novatium plans to offer a stripped-down home computer for about \$70 or \$75. Adding a monitor doubles the price to \$150, but the company will offer used displays to keep the cost down.

Porn gets its own domain

The Internet Corporation for Assigned Names and Numbers (ICANN) that oversees Internet addresses has approved a new online neighborhood specifically for pornographic Web sites: the .xxx domain. Proponents say this will help parents screen out the porn sites for their children, but other groups argue that it's not a reliable safeguard until its mandatory.

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Scrapbooking Hobby/Craft Rescues Baby Boomer Memories By Gabe Goldberg, APCUG Advisor and Columnist, AARP Computers and Technology Website

Pull Quote

If you've collected a box of unorganized pictures; if you're falling behind in preserving your and your family's memories; if your photos suffer from being folded, fading, cracking, and being badly mounted -- the hobby and craft of "scrapbooking" can get you organized and preserve/share your memorabilia.

>>>>>

As a baby boomer, I'm hardly unusual in having a large box of photographs in my closet. Also likely common is my photos' diversity: fading Polaroid baby pictures, travel shots, family gathering commemorations, images of people and places I can't identify, some professional photography, and quite a lot of etc. In addition, I have a few photo albums -- created when my parents thought I was cute and when I worked to record and remember vacations.

But the years have generated a lot of unorganized pictures, and I'm falling further behind in making sense of them. Worse, the photographs suffer from improper storage: being folded, fading, cracking, sticking together. Even the ones supposedly preserved in albums are being damaged by invisible hazards.

An antidote to my generation's mistreating photographs and neglecting family histories may be "scrapbooking". This inclusive term can mean anything from arranging pictures in scrapbooks (what albums are called when they contain pictures) to using computers. Whether high- or low-tech, it includes rescuing pictures from hostile environments. Old-style photo albums with adhesive corners or sticky pages can damage pictures. Scrapbookers use acid-free archival-quality paper and supplies (photo-safe adhesives and pens), aiming to produce material that lasts for generations.

Some people come to scrapbooking with organized materials, with pictures already sorted and documented. Others are in my camp, with a chaotic and ever-growing stash of family snapshots. Either way -- and especially if starting from scratch -- there's a fleeting opportunity for this, as memories and generations are lost.

I'm told that most scrapbookers are women, many of whom start as girls,

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assembling books about friends and activities, then continue as young mothers recording their childrens' growth, and as grandmothers making scrapbooks about their extended and extending families. But technology also draws men into the hobby, especially with improving capabilities and lowering costs of digital equipment such as scanners, cameras, and printers. Pixifun's [<http://pexagontech.com/pixifun/>] child- and budget-friendly kits for creating keyrings/magnets/stickers/badges/CDs include software and parts for creating instant photo keepsakes.

Scrapbookers develop unique styles and personalities, matching goals and resources available. Some keep things simple, using pictures, decorations, and a little labeling to tell visual stories. These scrapbooks are great for documenting oral history and reminiscing. They can follow themes such as genealogy, school events, family milestones, travel, etc. Beyond pictures, scrapbooks can contain anything meaningful, such as mementos, postcards, clippings, cartoons, tickets, etc. This can be supplemented by decorations made with tools such as circle-cutout tools, edge scissors, and lettering stencil templates; accessories including colored and patterned pages, border trims, themed stick-ons; and stamped images. Some enjoy feeling connected to the past by producing final works from physical memorabilia rather than working with images.

Scrapbookers call telling a narrative story "journaling", finding this a way to create meaningful and long-lasting collections. Examples are keeping chronological scrapbooks of and for family and children, and creating time-capsules for events such as the new millennium. Pages can combine photos, captions, and decorative material so that each tells a visually appealing story. Alternatively, some people build pages with single images surrounded by cutouts, stickers, decals, lace, etc. -- less interested in telling a story than creating a picture. There's no rulebook, no single right way to scrapbook!

Scrapbooks can be wonderful gifts, conveying connections and feelings beyond those of any store bought gift. A dedicated scrapbooker I know is happy that her children will be able to leave home with their own history books.

Higher-tech approaches include using a digital camera or scanning original images into computer files, using photo-editing software to improve their visual characteristics or create effects such as the antique look, creating photo-montages blending multiple scenes, and producing "scrapbooks" on printed pages, CDs, or the Web. This technique

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protects precious -- and often fragile -- records, while allowing viewing and handling easily recreated digital replicas. And we've all seen "mini-scrapbooks" produced by technology: photo collages used as family holiday cards. Digital technology lends itself to producing multiple scrapbook copies -- for wedding guests, for example, or even as commercial ventures.

Techno-scrapbookers often use Adobe [www.adobe.com] Photoshop Elements and Photoshop software products; the vendor features kid- and adult-friendly tutorials. Click the link and search for "scrapbook". Other popular software includes Corel photo products [www.corel.com], Macromedia Dreamweaver [www.macromedia.com], and Pinnacle Systems Studio 8 [www.pinnaclesys.com]. As photo capture/editing/printing demands increase, so do hardware requirements. One 20-year veteran scrapbooker suggests a flatbed scanner with minimum 600 ppi (pixels per inch) without interpolation; a slide scanner for negatives and slides; 80 GB hard drive; 512 MB RAM or more; high-end graphics card with expandable non-shared memory; CD/DVD burner and minimum P4 processor. She uses a multimedia PC, digital camera, and camcorder to go beyond photo basics, adding design touches like antique finish and repairing defects such as tears and scratches.

Useful resource sites are Scrapbooking Top50 [www.scrapbookingtop50.com], Stamping Top50 [www.stampingtop50.com], and Digital Scrapbooking [www.digitalscrapbookplace.com]. Stores frequently mentioned are Michael's and Craft Country.

People discover scrapbooking by accident or design -- some take classes at community colleges or recreation departments, others discover commercial sites such as Creative Memories [www.creativememories.com] or see friends' scrapbooks. Whether your taste runs to scissors or scanner, paper album or CD, narrative or decorative scrapbooks -- get out those picture boxes and preserve those memories!

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Windows: Better Safe (Mode) Than Sorry

By Gabe Goldberg, APCUG Advisor and Columnist, AARP Computers and Technology Website

Though the Windows operating system isn't usually dangerous, it includes a special "Safe Mode". This is a handy way to boot a PC to investigate and fix problems. You may have read advice about when to use this, and even how to run it. But scarce and fragmented Safe Mode information can make it sound more exotic than it is.

Windows XP books' indexes provided surprisingly few entries for "Safe Mode". I found the best coverage in two O'Reilly books [www.oreilly.com], "Windows XP Pro: The Missing Manual" and "Windows XP Home Edition: The Missing Manual". Naturally, Google found a gazillion hits. But they're mostly "just the facts" writeups targeting people who already know "what" and "why" and just need "how" information. So this article provides background for this built-in Windows facility.

Over the years, as it became more powerful and reliable, Windows grew significantly from its slender 1992-era Version 3.1 self. There's no free lunch; learning new tricks required more software. But that complexity gets in the way when problems occur. Just as doctors rarely diagnose patients through heavy winter coats, Windows needs to shed layers to expose problems' causes.

Safe Mode slims Windows down, only loading and running specific pieces needed for basic operation. So your video display looks strange in Safe Mode because Windows doesn't load the monitor's specific driver program. This lets you recover from problems caused by buggy drivers you may have just installed. There are other restrictions: you likely can't get online and may not be able to print. But Safe Mode lets you perform tests, fix problems, and install/uninstall programs.

If you think your PC may have a virus or spyware, it's worth installing the antidote in Safe Mode, since some malware prevents installing anti-virus software. If installed anti-virus software can't remove a virus, Safe Mode may let it succeed. (Some experts recommend always running virus/spyware scans under Windows in Safe Mode.) If defragmenting your hard drive [www.aarp.org/learntech/computers/howto/Articles/a2004-06-16-defrag.html] never finishes, Safe Mode may remove programs that keep interrupting it. And it lets you erase files that Windows normally says are in use (though only do this when you're sure what you're doing).

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Windows XP defines two kinds of user accounts: "administrator" and "limited". An administrator can install/remove software, change settings, etc., while a limited user can only run programs and use facilities. Even if only one account is defined, a secret companion called Administrator is available. Booting in Safe Mode lets you access this account, handy when normal accounts won't work -- for example, uninstalling software that doesn't want to leave.

Enter Safe Mode by repeatedly pressing F8 as your PC boots, just after BIOS information displays; then select Safe Mode from the options list. Leaving Safe Mode is simple -- just reboot via the Start button and your usual procedure; Windows will return looking normal again, not holding a grudge for being run in diagnostic Mode.

Here's an important point: It's worth practicing booting into Safe Mode when you're relaxed and your PC is working properly. Consider running a PC in Safe Mode to be like starting your car's engine with the hood up at a service station. It's routine; there's nothing alarming about it. But just as you wouldn't want to open the hood for the first time (Where **is** that latch release?) when something is wrong with your car, you shouldn't first use Safe Mode when you're already worried about a PC problem.

And a PS: It's sometimes hard picking between a dozen competing books on a topic. A helpful technique for evaluating choices is searching for a few topics -- like Safe Mode -- in the books' indexes and judging them on coverage.

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Dual-Core Processors Are Coming!

By Timothy Everingham, Member of TUGNET, California

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Both Intel and Advanced Micro Devices (AMD) are screaming, "Dual-Core Processors are Coming." They say they are the future of microprocessors for computers. With both companies planning to introduce these processors in the next few months it is important to understand the significance of this development.

So what is a dual-core processor? Basically it is two microprocessors on the same integrated circuit or chip. Having more than one processor in a computer has been around for a long time. It is normal for servers to have them. Multiprocessor workstations (high end desktops) are used mostly for scientific, engineering and digital content creation for TV and movies. Dual-core is not Intel's hyperthreading that is on its Pentium 4s, which lets the operating system think it has two processors rather than one. In a dual-core processor there are two actual processors, each one having its own L1 & L2 caches.

Why are we going to dual-core processors? One of the main reasons is heat. The higher a processor's clock speed, the more heat it produces. The 3.6 GHz Pentium 4 did have heat problems. Of course what we have been doing is just put more than one processor on a motherboard to increase performance beyond what you can get with a single processor (The general rule has been that adding a second processor improves computer speed by 60% over a single processor of the same speed). However, to make this more cost effective, similar, use less space, and reduce power requirements putting two processors together on one chip is better. This is especially true in the desktop and notebook markets. As we move to high-definition TV resolution video on computers the need for the average computer to have very high processing speed will appear, leading to dual-core processor computers being dominant a few years from now. But can you upgrade your current system to a dual-core processor? If you have an AMD socket 939 motherboard you can upgrade to an AMD Athlon 64 dual-core processor with only a BIOS upgrade. The same is true for AMD Opteron socket 940 motherboards for Opteron dual-core processors. Intel said last fall that some Intel LGA 775 motherboards would be able to use their dual-core processors, called "Pentium D", but they now say the first generation of them will have to use a modified LGA 775 socket. This of course means getting a new motherboard.

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For an application program to take advantage of multiprocessor systems both the operating system and the particular application you are running have to have the ability to use more than one processor (multi-threaded program). If the operating system is able to take advantage of more than one processor, but the applications you are running are not; you may get different applications running on different processors, but each will only use one processor. Windows 98 & ME are designed for only one processor, so they can only use one processor even though there are two processors on one chip, real or virtual. Windows XP Home can use only one processor chip, but up to two processors on that chip. Windows XP Professional is designed to use up to 2 processor chips and up to 2 processors on each chip. Novell's SUSE Linux is already ready for dual core processors, and Red Hat Linux soon will be. Both are multithreaded and multiprocessor chip operating systems.

Most current multithreaded application programs are mid-high end scientific, engineering, CAD/CAM and digital content creation programs. This includes video editing and 2D and 3D animation and image creation/editing programs. However there are some home applications that already have this multi-treading capability, such as the Adobe Premiere Elements video-editing program. The first programs for the home user to go multithreading should be content creation/editing, multimedia, and games. There seems to be an expectation by Intel that the transition over to most programs being multithreaded will be three years from now. However, some software companies base the licensing fees of some or all of their programs by the number of processors using the program. The question then becomes will software companies start charging licensing fees per processor core on the current per processor chip? Right now it looks like the trend says no. Microsoft has already said for its programs that are licensed on a per processor basis it will continue doing so and not go to a per processor core basis. Also to consider in upgrading both Intel and AMD systems you may have software you have to activate that logs the system components. Upgrading processors and motherboards can cause these programs to say that this is now a new computer you are running the program on, which you are not authorized to do, and refuse to run. This could include your operating system. Check with your program's publisher/manufacturer to see what their policy on this is. Home and office use policies effectively have been known to be different.

So when will these marvelous dual-core processors appear? For Intel it will be the second quarter of 2005. For AMD it will be mid-2005 for the high

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level Opterons and second half of 2005 for the desktop Athlon 64s. As normal the price should originally be high, but then drop significantly over time.

We are moving this year to dual core processors. They will improve the speed of computers, and reduce the related heat and power requirement issues. They will be originally for those high-end power users, but over the next few years they could easily become the norm. They will be in a computer store near you later this year.

Timothy Everingham is CEO of Timothy Everingham Consulting in Azusa, California. He is also Chair of the Los Angeles Chapter of ACM SIGGRAPH. He is also part-time press in the areas of high technology, computers, video, audio, and entertainment/media and has had articles published throughout the United States and Canada plus Australia, England, & Japan. Further information can be found at <http://home.earthlink.net/~teveringham>

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ACPCUG Club News

OLDER VENUE! AKRON North Hill Library

Maps & Description on ACPCUG Website, www.acpcug.org

NOTE TIME is 6:00PM Sharp! This is because we get kicked out at 8:30 PM.

FROM North or South on Rt. 8 freeway: Exit *West* on Cuyhoga Falls Avenue. Head west ca. 2/3 mile, library on right side (north). Take street east side of library and turn left into parking lot. (If you hit Main St., come back 200+ft).

Upcoming Computer Shows:

No Peter Trapp Shows in 2005 announced yet.

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