

THE NEWS MAGAZINE OF THE ALAMO PC ORGANIZATION

PC Alamode

TECH ISSUE

www.alamopc.org

July 2006

\$4.00

Back up awareness month
page 37

Improving PC performance
page 46

End PC annoyances
page 55

General Meeting:
page 9





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Alamo PC Organization

Alamo PC Organization is a non-profit organization whose mission is to increase its members knowledge and effective use of personal computers through presentations, instructional programs, other membership services and access to the expertise of other members.



To register for a Class, Study Group or Sr. Comp classes call:

Registration number **210.736.0080**

If you **didn't receive your issue** of *PC Alamode* or have questions about your **membership** e-mail:

membership@alamopc.org

If you have questions about Alamo PC call:

Learning Center number **210.736.0700**

If you have comments about classes call

Linda Bianchi **210.226.2460**

If you have questions about advertising call

Joseph de Leon
send e-mail to editor@alamopc.org

Please send change of address and other correspondence to:

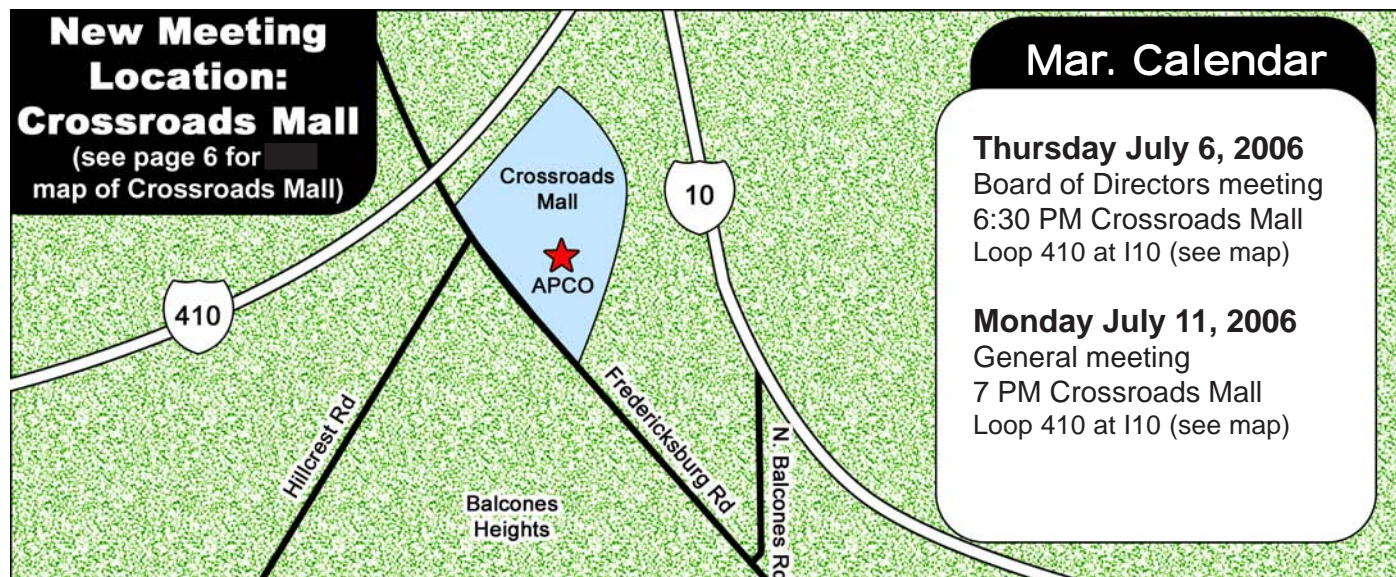
Alamo PC Organization
PO Box 65180
San Antonio, TX 78265-5180

Meetings

Monthly program meetings are normally held the second Monday of the month. Meetings are held at the Crossroads Convention Center (across from the Learning Center) located in the lower level of Crossroads Mall, Loop 410 at the intersection with I-10 starting at 7:00PM. Open to all members and the public.

The Board of Directors meets normally on the Tuesday prior to the monthly General Meeting. The BoD meets at the Alamo PC Learning Center located in the lower level of Crossroads Mall, Loop 410 at the intersection with I-10 starting at 6:30PM. Any changes will be announced via the Voice Mail/Hot Line (736-0700) and on the Calendar of Events. Open to all members.

New Meeting Location:
Crossroads Mall
(see page 6 for map of Crossroads Mall)



Mar. Calendar

Thursday July 6, 2006
Board of Directors meeting
6:30 PM Crossroads Mall
Loop 410 at I10 (see map)

Monday July 11, 2006
General meeting
7 PM Crossroads Mall
Loop 410 at I10 (see map)

Tech Issue: hard drives and operating systems

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PC Alamode

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Featured this month

Hard Drives

- Back up Awareness Month** *Ira Wilsker*
Overwrite hard drive *Stephen Elderkin*
Hard disk disasters *Dick Maybach*
To defrag or not defrag *Carey Holzman*

Operating Systems

- Improving PC performance** *Kevin J. Vella*
Back to the future *Marjorie Tucker*
Windows XP Housekeeping *Dick Maybach*
Do a clean sweep *Marc Saltzman*
Essential Processes *Vinny La Bash*

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PC Alamode (ISSN 1065-3708) is published monthly by the Alamo PC Organization, Inc., PO Box 65180, San Antonio, TX 78265-5180, an independent association of personal computer users, founded in January 1983, and incorporated in January 1984 as a 501(c)(3) non-profit organization. COPYRIGHT © 2006 by Alamo PC or the author. All rights reserved. No part of PC Alamode may be reproduced or transmitted in any form or by any means — mechanical, electrical, or otherwise — including, but not limited to, photocopying, recording, or information storage/retrieval, without express written permission from Alamo PC. However, unless otherwise indicated, articles may be reprinted by other user and education groups provided the articles are reprinted unaltered and the publication acknowledges the author thereof and PC Alamode. Articles, programs, reviews, and advertisements are compiled without verification of accuracy or applicability to a specific task, computer, or other equipment. Comments or claims are made solely by the individual author and do not necessarily represent the views of Alamo PC or of any other Alamo PC member. Trademarks have been used at random within the publication and are hereby recognized as such.

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PUBLICATION SUBMISSIONS: Please check with the editor regarding submitting ads. **Deadline for submissions is the first of the month preceding publication.** e-mail to:

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Quarter pg.(3 ¹ / ₂ " w x 4 ¹ / ₂ " h)	74	72	64	62
Bus. card (3 ¹ / ₂ " w x 2" h) **	43	41	39	37

*Consecutive months

**To be paid in advance

product reviews

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End PC Anoyances *Gabriel Goldberg*
Digital Photography Techniques *Gabriel Goldberg*

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- Mouse from hell** *Ann Moore*

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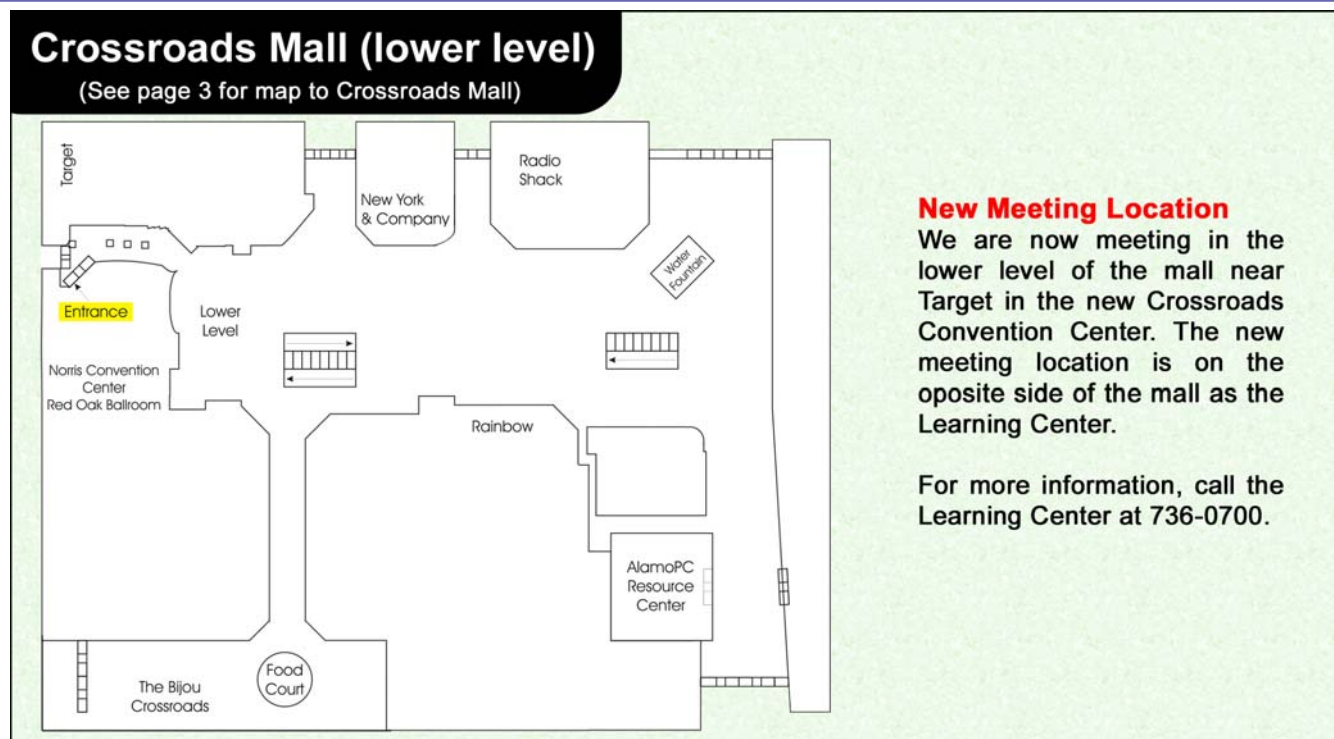
Learning Center, Crossroads Mall

736-0700

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For Study Groups and Classes, phone: 736-0080 or 736-0700



PC Alamode Links List



Garden Helper

<http://www.garden-helper.com/>

Find everything you need for your gardening needs this season with GardenHelper.com.



Clip generator

<http://tools.fodey.com/>

Create your own zany newspaper clips by filling in a headline and several paragraphs of a “breaking news” story.



Last month was Backup Awareness Month. Do you remember when the last time you backed-up your data? APCUG brings us a great article about BAM. Have a look at page 37 for an understanding of why you should back up files.

Photo Contest

APCUG is sponsoring a photo contest. You have until September 30 to enter your photos in this contest. The kick-off event for the 2007 Annual Conference will showcase the talents of member group photographers. Somewhere inside of all of us is a creative genius just waiting for the chance to grab the spotlight and we want to give you that chance. There will be multiple chances to win, professional judging and our own “Photo Idol” chosen from our Conference attendees! So, grab those cameras and start shooting!

Joseph de Leon, Editor

[<editor@alamopc.org>](mailto:editor@alamopc.org)



Joseph de Leon, Alamo PC

Joseph has worked in the graphics industry for 8 years and teaches graphics and web classes at San Antonio College.

President's Message

Bill Klutz

"Mid Year Actions!"

At the June General Meeting, David Steward provided an overview of Windows Vista. It was to try and fill the interim void the Microsoft representative left during the May meeting, because her computer wouldn't cooperate. Those present seemed to enjoy the event, since a number of questions were asked about the program (primarily its capabilities and new features).

Each year when the first day of July rolls around it reminds me that we have finished the first half of the year, and we are starting the second half. I am sure it will bring other thoughts to mind for many others. At least two significance things should be planted in the minds of Alamo PC members.

This year the July BOD meeting falls on Tuesday, July 4th. In an effort to allow anyone who might want to attend the meeting to have an opportunity, the meeting has been moved to Thursday, July 6th. The following announcement is on the alamo PC website (homepage: www.alamopc.org), but I will repeat it in case you missed it: **HOLIDAY RESCHEDULING** ⇔ Because the regularly scheduled date for the July Board of Directors Meeting falls on July 4, the meeting has been rescheduled to Thursday, July 6th. The meeting will be held in the Learning Center at 6:30 pm. All members are encouraged to attend.

July is also Alamo PC's annual month for nominations for Board positions that are vacant or expiring. The Elections Committee will try to seek members willing to serve at the BOD level, but since we have operated with vacant positions since Oct 2005 (despite numerous pleas from me in past messages), it would appear the task may prove to be difficult. Each member also has a stake in this process. They are responsible for identifying individuals willing to serve at the BOD level, and will be given the opportunity to submit names at the July General Meeting. (The July General Meeting will be held in the Norris Conference Center office area, near Target). There will also be an opportunity for floor nominations, from those present. Once the list of individuals has been identified, individual biographies will be submitted for inclusion in the August PC Alamode. During August, the online election process will be conducted to determine the list of Board members for the coming year (Oct 2006 - Sep 2007).

Once again I ask each member to commit to being just a little more actively involved with the Alamo PC Organization. This is OUR organization, and if WE want it to continue, WE must continue to be a member and try to participate at some level.

One of the great benefits that members often overlook is the classes that are offered. Consider taking advantage of this benefit by enrolling in one or more of the classes. (If a class you would like to have isn't on the list, make it known to the people at the Learning Center. They will put it on the "Wish List" of classes that people have requested. When several people express interest in a subject, the search begins for an instructor.) Remember, one membership entitles one family member to vote, but it entitles each family member in the household to enroll in one or more of the free classes during the time the membership is current.

Keep in mind that a membership also entitles each household member to receive help with computer problems (general, software, and/or hardware). The "Help Numbers" near the back of the PC Alamode magazine are being updated to have a current list of people willing to help. Often this help can be accomplished telephonically. Hardware, and some software problems, are usually best satisfied through the "Doctor Is In" assistance (each Fri morning from about 9-12). Remember, someone must bring the computer to our Learning Center (lower level of Crossroads Mall, near the Mall entrance from the underground parking spaces that are accessed from Fredricksburg Road). The person must also be able to tell one of the "Doctors" about the problem, and stay with the "sick" computer while an attempt is made to fix the problem. As always, there are no guarantees given, but generally a "well" computer leaves for home. Although the service is free to members, donations are accepted. Keep in mind that these donations help the "Doctors" purchase additional diagnostic equipment, and some supplies, to help fix "sick" computers at considerable savings to the member. (They have also made purchases of equipment for the organization to benefit everyone.) The "Doctors" volunteer their time and conduct training sessions for "Doctors" on most Monday nights. This helps them become better at their job, and makes for more "well" computers and very happy members.

I am sad to say we are not retaining members at the level we need. If you do not choose to renew, please let us know "Why?" (Send an E-Mail to membership@alamopc.org), or to me through the organization account president@alamopc.org or privately wlklutzjr@juno.com. Also, if you have anything (comment, question, statement, concern), please make someone aware of it (preferably me). I welcome all communications, especially those on how we can improve the Alamo PC Organization and increase member interest! If membership continues to fall, the BOD will have to address changes that the organization will be required to make, if we are going to continue to have an organization. Remember, this is our organization. If you want to have your voice heard, attend a BOD meeting, General Meeting, write or call someone.

Visit the Alamo PC Learning Center

Media Center

Learn all about computers with hundreds of books and dozens of video tapes. Enjoy our large selection of techno-fiction.

A comfortable seating area is available.

Call (210) 736-0700

July Program

David Steward

A program has not been confirmed for July.
Please visit [<http://www.alamopc.org>](http://www.alamopc.org)
for more information.

News Brief

Internet used for Fun

Nearly one-third of American Internet users go online just for fun rather than to check e-mail, read news or use a search engine according to Deborah Fallows, senior research fellow at the nonpartisan Pew Internet & American Life Project, which examines the social impact of the Internet. A survey of 1,931 Internet users found 30 percent of respondents said they went online "for no particular reason" on the previous day. The survey also showed that 34 percent of online men were surfing for fun on an average day, compared with 26 percent of women. The Survey said that sending or receiving e-mail ranked highest with 52 percent of Internet users saying they did this on a typical day. Using a search engine ranked second with 38 percent, while reading news online was third with 31 percent.

**THE DOCTOR
... IS IN**

EACH FRIDAY FROM 9:30 TO 12 NOON
DIAGNOSE YOUR SOFTWARE & HARDWARE
PROBLEMS

TROUBLESHOOT MAJOR APPLICATIONS
TROUBLESHOOT HARDWARE, RUN TESTS

SOLVE O/S MYSTERIES
PROVIDE ASPIRIN AS
NEEDED

MAJOR SURGERY
ACCOMPLISHED BY
OTHER FACILITIES

ALAMO PC
RESOURCE
CENTER



Alamo PC Organization now offers members private or semi-private tutorials

- Keyboarding/Typing
- Basic Computer Skills
- Microsoft Word

Rates for one student

\$35 per hour
\$300 for 10 hours

Rates for two or three students

\$20 per student per hour
\$150 per student for 10 hours

Enjoy private instruction on days and at hours
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Call or visit the Learning Center to register
(210) 736-0080

News Brief

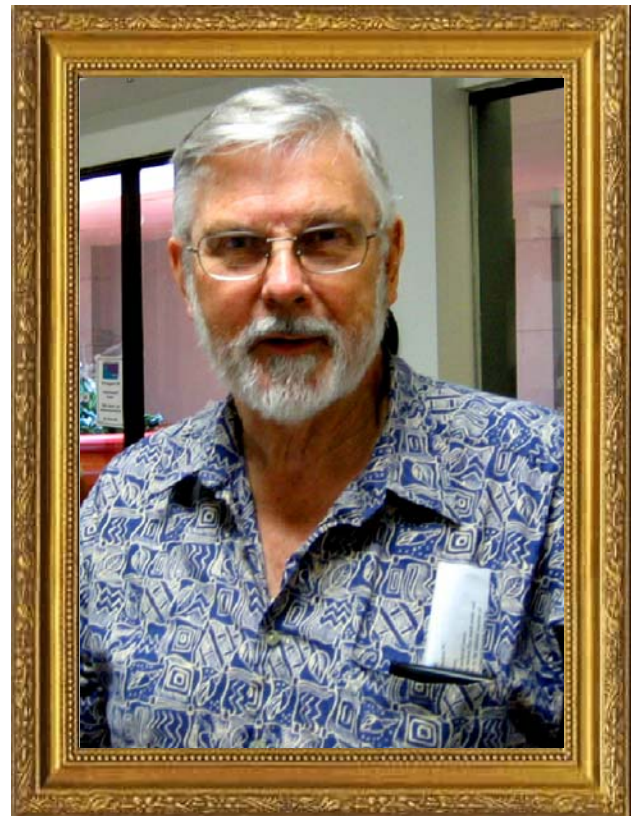
What's Your "Brain Age"?

If millions of Japanese are to be believed, it is the secret to a happy and healthy old age as millions of them take up Nintendo's brain training. Players have to complete puzzles as quickly and accurately as possible, including reading literary classics aloud, doing simple arithmetic, drawing, and responding rapidly to deceptively easy teasers using voice-recognition software. The player's "brain age" is then determined. The first in the English-language series of games, Brain Age, is due for its US release on April 17, followed by Big Brain Academy in May. Brain Training for Adults, a package of cerebral workouts aimed at the over-45s, is said to improve mental agility and even slow the onset of dementia and Alzheimer's disease and also proves addictive to over-45s anxious to ward-off old age.



Volunteer of the Month

Myron Hayes



ComputerFest is a collection of local and statewide dealers under one roof offering rock-bottom prices on all your computer needs. All of our dealers are independent wholesalers, so each conducts business separately. Most of the dealers will accept credit cards, but with cash you can usually get the best deals. And new products are almost always backed up with a warrantee, so you and your wallet can always feel comfortable with your purchases.

What you can find at the show:

New Complete Systems
New Hardware
Newest Software Titles
Printers, Monitors, Scanners
Ink-Jet Recharge Kits
Imaging Devices
Internet Services
Used Hardware
Multimedia Upgrades
Shareware
Diagnostic Equipment
Cables & Connectors
Bare Bone Systems
Computer Related Books
Refurbished Systems, Monitors

Location:

Live Oak Convention Center
8101 Pat Booker Road
San Antonio, TX.

Show Dates and Times:

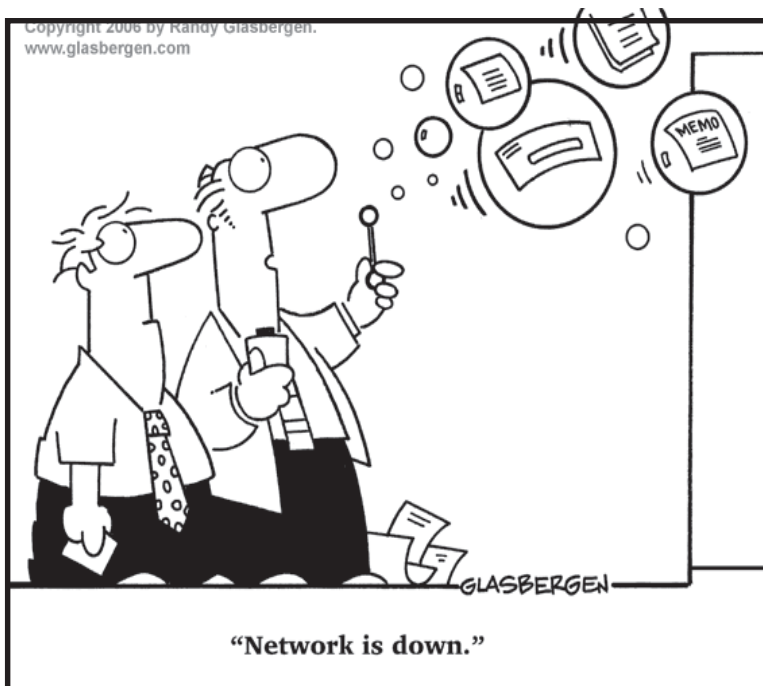
July 29, 2006

more info at <http://www.pcshows.com/>



Funny Bytes

Ken Nash & Randy Glasbergen



News Brief

Is there a chip in the house?

When Daniel Hickey's doctor suggested he have a microchip implanted under his skin to provide instant access to his computerized medical record, the 77-year-old retired naval officer immediately agreed. "If you're unconscious and end up in the emergency room, they won't know anything about you," Hickey said. "With this, they can find out everything they need to know right away and treat you better." Some doctors are welcoming the technology as an exciting innovation that will speed care and prevent errors. But the concept alarms privacy advocates. They worry the devices could make it easier for unauthorized snoops to invade medical records. VeriChip Corp. is selling kits containing scanners and the large-bore needles used to insert the chips, and recommending that doctors charge patients about \$200 each. At an academic computing conference in Pisa, Italy, researchers plan to demonstrate how it is possible to infect a tiny portion of memory in an RFID chip with a virus.

Volunteers Wanted

Call the Learning Center to volunteer to assist ongoing classes. For more info, call 736-0700.



From the Deals Guy

Bob (The Cheapskate) Click, Greater Orlando Computer Users Group

This column is written to make user group members aware of special offers or freebies I have found or arranged, and my comments should not be interpreted to encourage, or discourage, the purchase of any products, no matter how enthused I might sound. Bob (The Cheapskate) Click <Bobclick@mindspring.com>. Visit my Web site at <<http://www.dealsguy.com>> for past columns and some interesting articles.

We just finished working the SAP Sapphire Show <<http://www.sap.com/sapphire>> that was combined with the ASUG (Americas' SAP Users' Group) <<http://www.asug.com>> show with about 14,000 attendees. Very few major companies were not represented. I was told that attendees paid anywhere from \$1600 to \$2400 depending on the Sapphire Show category they registered for. Fortunately, I was watching the computers for registration. They had food daily for their staff and I was invited. In July we might work a Microsoft show that will be one of the largest trade shows ever held in Orange County Convention Center.

*Do Your Homework!

Below are some announced freebies and I am passing them on with reservations since I have not tried any of them. I asked my proofreader, Bob Clyne, to just take a look at the announcements and will include some of his comments. The first product might pique your interest, as it did his, but be sure to look it and the others over thoroughly before you make your decision to try them. I have edited out much of the announcement text so go to their Web sites listed for more complete information.

*DVD Copying Anyone?

ShrinkTo5 has released version 2.02 of ShrinkTo5 GUI, a new DVD copying engine distributed at no cost to anyone. This application lets you copy and shrink your favorite DVD disks in brilliant quality, which is complemented by a surprisingly high processing speed. You can copy an entire DVD, copy the main movie only, or copy its content elements selectively. The output can be saved to the hard disk drive as an ISO image or compressed and burned onto one DVD disk. The best thing in copying DVD disks with ShrinkTo5 is that it no longer involves tedious and sometimes confusing configuration. ShrinkTo5's AI chooses the perfect balance automatically.

DealsGuy Note: Bob Clyne says the free version contains Adware; WhenU to be specific and recommends against it. He also says the \$19.95 version, containing no adware, is available from Download.com and you can try it for three days before you have to buy it. He suggests getting the Machinist2.dll before getting ShrinkTo5 if you intend to copy encrypted DVDs. The program will not work on encrypted/copy protected DVDs i.e. most commercial DVDs, without the Machinist2.dll, which for legal reasons, they don't supply. The Machinist2.dll can be challenging to find, but he did find it a few places, some of which were WareZ sites.

Some of the features for ShrinkTo5 GUI are:

- Support for Machinist2.dll. The program has been modified to support new Machinist2.dll. Now, ShrinkTo5 has a unique ability to make DVD backups that cannot be handled by other DVD copying software like DVDSHrink.

- Free burner plug-in. The ShrinkTo5 GUI package comes with FoxBurner, a shell plug-in that allows you to burn directly from the Windows Explorer. You don't have to donate or download a burner separately.

- ISO Image. Along with burning onto DVD disks, copied images can now be saved as ISO images on the hard disk drive and burned onto disks later if the need arises.

- Auto-Repair. New ShrinkTo5 lets you automatically restore scratched and defective DVD disks so that their content can be accessed and copied.

- Dynamic Compression. The code of the dynamic compression rate has been enhanced, which now allows users to get an even sharper picture.

- Built-in Player. New ShrinkTo5 features a built-in player that allows the user to view selected video tracks. This gives you more control over the copying process.

Read more information about ShrinkTo5 GUI at <<http://www.shrinkto5.com/software.asp>>

Watch the online tutorial demo at <<http://www.shrinkto5.com/gTour.asp>>

ShrinkTo5 is available as Basic and Professional. Both versions run under Windows 2000/XP. The Basic version is available as a free download from <<http://www.shrinkto5.com/software.asp>>. The Professional is available as a three-day trial. The price of the Professional version is \$19.95 download, or \$24.95 plus S&H box USD. Both versions are compiled without DeCSS. To enable ShrinkTo5 to decrypt CSS, users should download "Machinist2.dll" from the Internet.

Product page link: <<http://www.shrinkto5.com>>

Download link: <http://www.shrinkto5.com/_data/ShrinkTo5AdFree.exe> (4.77 Mb)

E-mail: <info@shrinkto5.com>

Postal address: ShrinkTo5.com, 2005, Fritz-Windisch Str. 11, 40885 Ratingen, Germany

Phone: 02102 146205

Fax: 02102 146206



Do Shield Laws Extend to Bloggers?

John Brewer, Computer Club of Oklahoma City

John Brewer practices law in Oklahoma City, is a member of the Governor's and Legislative Task Force for E-Commerce, and enjoys issues relating to eBusiness and cyberspace. E-mail him at <johnb@jnbrewer.com>

The first amendment to the US Constitution contains a number of important personal rights. It reads as follows: "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances." Analysis of the amendment confirms why the courts have been given the task of interpreting the language through the years.

One of the important parts of the amendment is freedom of the press. In order to protect the press, approximately 31 States have enacted "shield laws." Journalists are protected by a qualified (limited) First Amendment right protect their confidential sources. Many of the federal circuits have held that a qualified privilege exists. However, journalists are frequently challenged to reveal their confidential sources. This privilege has received attention recently in the New York Times Co. v. Gonzales case that involves the phone records of Judith Miller. An interesting variation to this issue is whether Internet journalists have the same protection as print journalists. A recent case in California has examined this issue. The case involved some Internet web site and Apple Computer.

Apple brought an action in California alleging that persons unknown caused the wrongful publication of secret plans on the World Wide Web to release a device that would facilitate the creation of digital live sound recordings on Apple computers. In an effort to identify the source of the disclosures, Apple sought and obtained authority to issue civil subpoenas to the publishers of the Web sites where the information appeared and to the email service provider for one of the publishers. The publishers moved for a protective order to prevent any such discovery. The trial court denied the motion on the ground that the publishers had involved themselves in the unlawful misappropriation of a trade secret. A California Court of Appeals held that his was error because (1) the subpoena to the email service provider could be enforced consistent with the plain terms of the federal Stored Communications Act (18 U.S.C. §§ 2701-2712); (2) any subpoenas seeking unpublished information from petitioners would be unenforceable through contempt proceedings in light of the California reporter's shield [note: California has a shield provision in the State Constitution] and (3) discovery of peti-

tioners' sources is also barred on this record by the conditional constitutional privilege against compulsory disclosure of confidential sources. The Court of Appeals issued a protective order.

The Electronic Frontier Foundation is directly involved in the litigation. The following is extracted from the EFF web site. "The whole mess began in December 2004, when Apple filed suit against 20 unnamed and presumably unknown individuals, referred to in the court filing as "Does," for leaking confidential materials on an Apple product under development to several Web publications. As part of its investigation, Apple subpoenaed Nfox -- for communications and unpublished materials obtained by PowerPage publisher Jason O'Grady. A Santa Clara trial court upheld the subpoena in March of 2005 and the EFF appealed.

"In a 69-page ruling, the 6th District Court of Appeal ruled that bloggers and webmasters are no different in their protections than a reporter and editor for a newspaper. "We can think of no workable test or principle that would distinguish 'legitimate' from 'illegitimate' news," the judges wrote.

"Any attempt by courts to draw such a distinction would imperil a fundamental purpose of the First Amendment, which is to identify the best, most important, and most valuable ideas not by any sociological or economic formula, rule of law, or process of government, but through the rough and tumble competition of the marketplace," they wrote.

"Today's decision is a victory for the rights of journalists, whether online or offline, and for the public at large," said EFF Staff Attorney Kurt Opsahl in a statement. Opsahl argued the case before the appeals court last month. "The court has upheld the strong protections for the free flow of information to the press, and from the press to the public."

"Apple argued its right to trade secrets trumped Constitutional rights, and it had exhausted other sources to determine the source of the information, even though Apple had not deposed employees who were in a position to know, Kevin Bankston, a staff attorney for the EFF told internetnews.com. The lower court decision agreed, and said Apple's trade secrets rights would trump any journalist's rights to source confidentiality.

"Bankston said the ruling is a win for anyone who uses email. "A lot of people will hear about this decision and think it doesn't affect them since they are not journalists, but it has a broader

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Continued on page 15

impact because of the number of email providers, particularly the number based in this district," he said.

"The court read Federal privacy law to forbid civil litigants like Apple from subpoenaing an individual's e-mail from e-mail providers. Instead, the court said civil litigants must subpoena you directly, and if you are a journalist, you can assert your rights of confidential sources.

"So they have to subpoena you rather than doing an end run around your rights and going straight to your e-mail provider," said Bankston.

If Apple chooses to appeal, the case goes to the state Supreme Court. Thus far, the sources for the original story have not been revealed, "and hopefully based on this decision they never will," said Bankston.

This is an interesting issue. The California case is far from over and this issue will continue to be litigated across the country.

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News Brief

Chips work hard with less power

Intel's new Core microarchitecture takes advantage of similarities to fuse certain types of x86 instructions into more manageable chunks. 3 new chips--code-named Merom (a notebook chip), Conroe (for desktops) and Woodcrest for servers)—are based on the Core microarchitecture. Intel has said all 3 chips will deliver significant performance increases compared with current chips--as much as an 80 percent improvement in the case of Woodcrest--while consuming less power. One way the new architecture makes this happen is through macro-ops fusion and micro-ops fusion. When the Pentium M chip that is the model for the Core architecture--was introduced in 2003, it used a technique called micro-ops fusion to glue pieces taken from the same instruction back together, reducing the overall amount of work the processor needs to complete a task. The new chips will also be able to combine separate large instructions that usually appear in pairs into a single instruction, known as macro-ops fusion, which increases performance, but also reduces the amount of power used by the chip. Merom is scheduled for the second half of the year. It's really a major change in clock and in the amount of time it takes to execute a sequence.

The Sony DSC-H2 Digital Camera: Twelve Times the Fun

Rob Rice, Computer Club of Oklahoma City

Rob Rice is a computer specialist working in Anchorage, Alaska. Rob can be contacted at <articles@isp.com>

Photographs can be like a good novel; they become more interesting as they get closer to the subject. But getting close can be a challenge. It was this challenge that caused me to go happily in search of a digital camera with a long zoom lens.

What to buy took some thought – what did I want to do with it and how much do I want to spend? I like to print my photos and the bigger the better. I can print a picture that is 13 x 19 inches with my Canon i9900. That means I need at least a six megapixel camera. Next, I want to photograph wildlife, particularly eagles, bears, and those cute little bunnies with the big feet! Of course this means I need as long a lens as possible so I can stay as far a way as possible. This also means that I will probably be hiking with it so it should not be too large or heavy. And finally, I want to be able to override the automatic functions, I want to be able to manually control the camera. After taking pictures for 33 years, I've become testy about how things look in the final results.

The three cameras that it finally came down to were the Sony DSC-H2, the Panasonic Lumix DMC-FZ7, and the Canon PowerShot S3 IS. All three have six megapixels and a long 12x optical zoom lens. All three also have image stabilizers which steady a picture when you have the camera zoomed in to a subject, this will help curb image blurring. And, all three cameras meet the size and weight requirements.

There were some awful temptations regarding the five megapixel cameras. Some outstanding cameras can now be picked up for a very good price. But I want to print large, so I stayed with six megapixels.

The first camera to be eliminated was the Canon, it was over \$100 more with its only significant advantage being its supe-

rior video taking capability. All three cameras can shoot quality video, and lots of it. But the Canon is just better at it, having stereo sound for example, as opposed to the mono sound of the other two. Still, I want to take pictures, so out it goes.

The Sony and the Panasonic both take really nice photos. Whether you want an up close and personal macro shot of a bug, or a picture as big as all outdoors, either camera will fill the bill. Cost is about the same; both have great color and very good detail. They are not too big and are easy to hold. Looking at the specifications, the Panasonic was the better camera. But in the end, Sony won the contest and the cash.

Why did Sony win? By the time you read this there will be numerous reviews of the Sony H2 and the other cameras that will be packed with tests, analysis and differing conclusions. Here, I will simply touch on some of the things that I looked closely at and try to explain why I purchased one over the other.

Build

For me, the Sony just felt better in the hands. It also gave the appearance of being a better quality construction, but whether it actually is or not, I cannot say. Yet, the warranty might give a clue – more on that later.

Lenses

The Panasonic 12x lens (35mm equivalent lens focal length of 36-432mm) is built by Leica, one of the finest manufacturers of camera lenses in the world and it shows. Performance is terrific.

The Sony 12x lens (35mm equivalent lens focal length of 36-432mm) is built by Carl Zeiss, another legendary manufacturer of camera lenses and a match for Leica. Performance is also terrific, but the Leica might beat the Carl Zeiss by just a hair, having seemingly less purple fringing on high contrast areas than the Carl Zeiss.

Image Detail

Both cameras offer exceptional detail, however, the Panasonic suffers from excessive noise in its images. Although it is not evident in every photo, in some, it becomes a real problem especially at the higher ISO settings. Image noise, resembles grain in a film negative with the important exception that it is not consistent nor as appealing as film grain can be. It muddies a picture and destroys detail. It can show up in the least desirable places, such as a clear blue sky, around the eyes or under a chin. In this area, Sony was a clear winner having much less of a problem with it including at the higher ISO settings. A photo taken at ISO 1000 still had enough detail to produce a respectable print smaller than 8 x 10.



Image Color

Both cameras produce excellent color. Nice saturation and photos that just pop. However, the Sony had a wider range, being able to take photos with color that matched the subject perfectly, or, photos that had a lively and brilliant color scheme.

Warranty

This was a deal breaker for me. The Sony has a one-year limited warranty. The Panasonic warranty is broken in to sections: Parts - 1 year, 90 days on labor. The CCD - 6 months, 90 days on labor. Rechargeable battery pack - 90 days.

ISO Ratings

Like film cameras, digital cameras use an ISO rating (International Organization for Standardization) to indicate light sensitivity. A digital camera's ISO rating corresponds to the speed ratings for photographic film. A bright sunlit scene on a white sandy beach would require a low sensitivity (a low number) to avoid overexposure. A candle lit scene in a dimly lit restaurant would require a higher sensitivity (a higher number) to avoid underexposure. An ISO rating of 50 would be a low number, while ISO 1600 would be a high number. ISO 200 (sometimes 400) is often said to be the closest thing to a "general purpose rating" available . . . ha! Not likely!

A higher sensitivity can also stop action without the blurring that you typically get with a lower setting.

The Sony DSC-H2 has ISO selections of Auto, ISO 80, 100, 200, 400, 800, and 1000. The Panasonic DMC-FZ7 has Auto, ISO 80, 100, 200, 400, and a special High Sensitivity Scene mode which allows for ISO 800 and 1,600

Shutter Speeds

The Panasonic:

Minimum Shutter Speed: 60 sec.

Maximum Shutter Speed: 1/2000 of a sec

The Sony:

Minimum Shutter Speed: 30 sec.

Maximum Shutter Speed: 1/2000 of a sec

Aperture Range

Panasonic:

Adjustable from f/2.8 to f/3.3.

Sony:

From f/2.8 to f/8, depending on zoom position.

Size

Panasonic:

Width: 4.4 inches

Depth: 3.1 inches

Height: 2.8 inches

Weight: 0.7 pounds

Sony

Width: 4.4 inches

Depth: 3.7 inches

Height: 3.3 inches

Weight: 0.9 pounds

Manual Controls

Panasonic:

Full manual controls.

Sony:

Full manual controls.

Recording Modes

Panasonic:

Records in JPEG, TIFF, and MOV file formats

Sony:

Records in JPEG, VGA (For email), MPEG.

Batteries

Panasonic:

Special Lithium ion battery pack.

Sony:

Two rechargeable 2300mAh NiMH (supplied along with a charger) or disposable Alkaline.

Conclusion

In the end, the Sony's great color, modest noise, good detail and respectable warranty sealed the deal. The Sony DSC-H2 feels and performs like a camera that has a lot of thought poured into it. The fact that the Sony has 30 megabytes of internal memory, a lens filter adapter, lens hood, rechargeable batteries and the charger suggests that Sony listens to their customer's feedback. I can say that so far, it has been a camera that still surprises me in its versatility and flexibility.

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News Brief

Intel shows it pays to love science

Started by Westinghouse in 1942, STS is the oldest, and generally most prestigious, national science competition for high school students. Intel took over the competition in 1998 as part of its overall effort to promote science education, for which it spends \$100 million annually. 40 students make the finals, plucked from 300 semi-finalists and more than 1,500 total entrants. Shannon Babb, 18, won top honors, which included a \$100,000 scholarship, for her research and remediation work on pollution. Yi Sun, 17, won a \$75,000 scholarship for his discovery of new geometric properties. Yuan "Chelsea" Zhang, 17, came in third place to win a \$50,000 scholarship. Zhang, from Rockville, Md., studied the plaque buildup of arteries that leads to heart disease. Students taking fourth, fifth and sixth places get \$25,000, while those ranking 7th through 10th receive \$20,000. The remaining 30 finalists receive \$5,000, and every finalist gets an Intel Centrino notebook computer.



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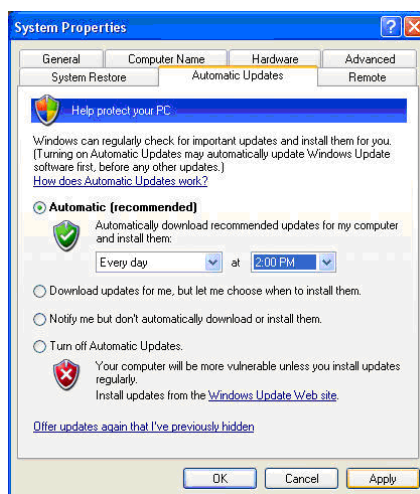


Bruce Cramer, Alamo PC

A+, Network+, Microsoft Certified Professional (Windows XP). Bruce is retired from the Army. He is the owner/operator of PC Pro Computer Services <www.pcpro4u.com> where he provides in-home/on-site computer services. He is a regular at the Doctors Is In on Friday mornings, at the Learning Center and has never met a piece of malware that he couldn't get rid of. Bruce can be reached by e-mail at <service@pcpro4u.com>. See his ad for PC Pro Computer Services on page 39.

FACT OR FICTION: Of all the misnomers I have heard none is more harmful to computers and computer users is the myth that Windows Updates are evil. It is good to be cautious but you don't want to be cautious to a point where you could be preventing your computer from getting much needed updates. In the June 2006 Issue of CPU (Computer Power User) magazine a large section was dedicated to an article entitled "Lock It Down, Secure Your PC from the Inside Out". In that article it was explained that "one of the most effective ways of avoiding malware infection is by enabling Automatic Updates." Face it Windows is the big Kahuna of operating systems; it comes with most every computer sold today. If you were a hacker, cracker or other computer no gooder trying to make a name for yourself who are you going to go after? A cute little Mac, that Penguin a.k.a Linux or Bill Gates and his Microsoft enterprise? Windows is a big target, fortunately they have counter measures but it is usually a response after a vulnerability has been found and that's where the updates come in. Bottom line is that the critical updates that Microsoft puts out are for your protection – take them, they're free.

WHAT TO DO: To see where you stand with Automatic Updates you can right click on the My Computer icon on your desktop. If the icon is not on your desktop click Start and then right click on My Computer. Then click on the Automatic Updates tab. Looking at Figure 1 you will see the settings for Automatic updates. If your computer did not come with Service Pack 2 (SP2), or you have not already installed it put it at the top of your list. This only applies to Windows XP users. If you are still running Windows 98 or ME your support has probably ran out. Microsoft states on their website <<http://www.microsoft.com/windows/support/endsupport.mspx>> that they will no longer provided updates or other support as of July 11, 2006.



If the button for Automatic is not set you should click the circle so that it is set for automatic. On some computers the update is set for 2:00 AM by default. Personally I do not recommend leaving your computer on all night. There are many schools of thought on this but my feeling is why? – So you can defrag, get automatic updates or other maintenance that you don't want to be bother with during the day? My feeling is that if something can go wrong it will and it will require your intervention to fix it. Some updates may require you to restart your computer and I wouldn't run a defragmentation while Windows is waiting for you to restart your computer. I don't think good things would happen if one of those fierce thunderstorms came rolling into your neighborhood in the dead of night while your computer was in the middle of a defragmentation and the power went out. Plus the dead of night is when the creepy crawlers are out – the hackers, crackers, sniffers and other no-gooders.

Bottom line is turn in on when you ready for the day and turn it off before you turn in – everybody needs a break.

JUST DO IT: So now that we have that out of the way let's say we change your automatic update time to something in

waking hours that is not going to bother your schedule. Dinner time might be good for some, when your home but don't have to use the computer. As mentioned earlier some updates require you to restart your computer before they can take effect. If you are going to shut your computer down for the night anyway this would be fine and by turning it on the next day a restart will be accomplished.

Automatic updates usually come out the 2nd Tuesday of each month. If there is a lot of malicious activity on the net look for more updates to come out at other times. You should be notified with a icon in your task tray to the bottom right of your computer screen. If you are really proactive and want to go out and see if there are actually any updates available that your computer hasn't yet told you about you

can click on Start and if your lucky you may see an icon at the top of the menu that says Windows Updates. If you don't see this don't worry you can go to www.windowsupdate.com, yet another option is to click on Start, then Control Panel. To the left you will see an icon for Windows Updates.

DON'T FORGET: It should go without saying but your antivirus program needs updating on a regular basis, I would recommend weekly. Most antivirus programs will do this automatically but don't leave it to chance make sure it is set to receive automatic updates. Don't stop there; your antispyware program should also be updated on a regular basis.

While this may seem like a lot of work, these updates can usually be done in a matter of minutes if you have a broadband connection such as cable or DSL. Dialup users will obviously have to spend more time accomplishing these important tasks.

For more information on Windows Automatic Updates go to <http://www.microsoft.com/athome/security/update/msupdate_keep_current.mspx>

Keep computing and be safe.

Windows XP, Part XIII



Bill Beverley, Alamo PC

Bill is retired military and an intermediate computer enthusiast who has been an APCO member for seven years. He has contributed for the past six years.

Although this article is another one with WinXP tips, Vista, its replacement, should be released in early 07. Vista has several new features. Security has been enhanced with a bidirectional software firewall and there's also full-disk encryption. Internet Explorer (IE) 7 gets a much-needed makeover, complete with tabbed pages and better privacy management. There's also the color-coded Address Bar that lets you know if a page is secured by a digital key, and new antiphishing features. For the first time, Microsoft is building high-end graphics effects into Windows.

Aero Glass interface <<http://www.pcworld.com/news/article/0,aid,122247,00.asp>> features visually engaging 3D animation and transparencies. Translucent icons add depth and context to the interface. You can hover your cursor over minimized programs that rest on the taskbar and be able to see real-time previews of what's running in each window without fully opening them. You will need powerful graphics hardware and a robust system to manage all of the effects. Vista does away with using IE to access Windows Update, instead utilizing a new application to handle the chore of keeping your system patched and up-to-date. The update-tracking mechanism is much quicker to display information about your installation. Key components, get their updates through this central point.

Over the years, one of the key reasons to upgrade versions of Windows has been the free software built into the new operating system. Windows Media Player gets a welcome update that turns the player into an effective MP3 library. The Windows Photo Gallery adds competent photo-library-management functionality to Windows. You can organize photos; apply metatags, titles, and ratings; and do light editing and printing. The DVD Maker application adds moviemaking capabilities to the OS. There are even some new games. Families, schools, and libraries will appreciate the tuned-up parental controls, which let you limit access in a variety of ways. Web filtering can block specific sites, screen out objectionable content by selected type, and lock out file downloads. You can also restrict each account's access by time of day or day of the week. You can even block access to games based on their Entertainment Software Rating Board ratings.

Windows Vista boasts a much-improved backup program that should help users avoid wholesale digital meltdowns. Microsoft also tweaked the useful System Restore feature, which takes snapshots of your system state so you can recover from a nasty infection or botched software installation. Vista boasts a re-engineered install routine, which will slash setup times from about an hour to as little as 15 minutes. Unfortunately there are several possible shortcomings to Vista. It undoubtedly will cost more than WinXP. Vista does not come with an antivirus software package, and it will be a major user of power resources. Finally, Vista will take you a few more minutes to learn how to use it.

CD-Rs

There may be some bad news for anyone who backs up data to CD-Rs. According to an expert at IBM Germany,

burned discs have a life span of just two to five years. CD-R makers typically claim a shelf life of five to ten years for unburned discs, but burning activates a heat-sensitive dye that quickly degrades. Even originally pressed CDs can fall prey to "CD rot," corroding due to heat and humidity. It appears that magnetic tapes are the best digital storage option lasting 30-100 years.

Lost Password

A lost password can be one of the most frustrating computer problems. Windows includes a hidden Administrator account that can be used for problems with other accounts. You can access it by restarting the computer into safe mode. First, restart the computer. As it starts, repeatedly press the F8 key (some computers instead require the Delete or Esc key). Instead of the familiar Windows screen, you'll see a text-only Advanced Options Menu. Use the arrow keys to select Safe Mode, Enter, and Administrator account. By default on most computers, it requires no password. Once logged in, you can change the password of the account you normally use. To make the change, click Start, Run. In the box, type "control userpasswords2" (without the quotes) and click OK. Select your normal account name in the list and click the Reset Password button. You'll be prompted for a new password. You can restart the computer and use the new password on your normal account. If you're completely locked out of your computer, you'll need software. Such services include Login Recovery<<http://www.loginrecovery.com/>>, FastCrack <<http://www.fastcrack.com/>>, and NT Password and Registry Editor <<http://home.eunet.no/~pnordahl/ntpasswd/>>. Each is free. They make use of boot disks that you can download to a floppy or burn to CD. Of course, you'll have to use some other computer to do the downloading. Once you've got access to your computer, set a new password through Windows. To do it, click Start, Control Panel. Double-click User Accounts and select your account and click "Change my password." You'll be prompted for a new password.

Quick Launchbar

To add more than three icons on the WinXP Quick Launchbar, you will need to right-click an empty spot on the Taskbar and click on the "Lock the Taskbar" entry to uncheck it. Now you can stretch the width of the Quick Launch area by putting your cursor on the knurl-looking divider between it and the rest of the bar. When the cursor changes to a double-headed arrow, hold down the right mouse button and drag the divider in either direction. When you're happy release the mouse button, right-click the Taskbar and lock everything back into place.

Radio

You can use WinXP to find some new favorite radio stations by double-clicking the IE icon on the Windows desktop to open the browser. Next choose View, Explorer Bar, Media. In the resulting WindowsMedia.com pane, click a featured radio station, or click the More Radio Stations link. Now click a Category of music. You can also click a link under the Editor's Pick heading or click a Listen Now link for one of the featured stations to go directly to a station. Click the link, which might be labeled Go Listen, Website, or just be the name of the station, for one of the stations. In the site that opens in a separate window, use the various tools and features on that site to control the music that's played there. To listen to another station, close the window of the station that you selected and click another category or another station link. To search for a station, enter a keyword in the Search text box and click the Search button. To display a comprehensive radio guide, click the arrow on the Media Options button at the bottom of the Media pane on the left and choose Radio Guide. Click an item in the Radio Guide to display more information, and then click one of two links: Add to My Stations or Visit Website to Play. If you add the item to My Stations, it is listed in the My Stations of Windows Media Player's radio feature so that you can play it with a single click.

Thumbnails Preview

WinMe/XP make it easy to look inside your graphics files. Instead of displaying a folder full of bland icons, Win Me/XP transform each icon into a thumbnail-sized preview of the file's contents. To turn on the previews, open the folder with the pictures, click View Web sites packed with extensive and reliable Windows guidance. To see the list of indexed sources, click Advanced Search. On the advanced page you can search all the Windows tips sites simultaneously or pick just one or two to hone your query.

Windows Screen Enlargement

To enlarge any window to its maximum projection, double-click on its title bar along the top of the window. The window will fill the screen and cover up all the other windows. To bring the expanded window back to normal size, double-click on its title bar once again. The window shrinks to its former size, and you can see everything that it was covering up. When a window fills the entire screen, it loses its borders. That means you can no longer change its size by tugging on its title bar or dragging its borders. If opposed to double-clicking on a window's title bar to expand it, you can also expand it by clicking on the window's maximize button, the middlemost of the three little boxes in its top-right corner. The window will fill the entire screen. At the same time, the maximize button turns into a restore button. Click on the restore button when you want the window to return to its previous size.

Zip Files


Compressed Zip files are treated as compressed folders in WinXP. To add files to a compressed folder, select the files, right-click, and choose Send To, Compressed (zipped) Folder. The Zip file appears as a manila file folder icon with a zipper on it. To copy and decompress files, you right-click the compressed

folder icon and choose Extract All. If you install a third-party Zip program, the "compressed folders" feature disappears, so you'll need to use your third-party program to manage Zip files.

In regard to your password you only use the 26 characters of the English alphabet. Your password is only 2 characters long. As a result, you have only 676 (26 to the power of 2) possible passwords. A password-cracking computer program can guess any password of this length that you create from two letters in a fraction of a second. If you choose your password from both lowercase and uppercase characters, numbers, the ten number keys, and the 32 special characters on your keyboard, such as the comma and the asterisk, then the number of distinct passwords increases to 9,216 (96 to the power of 2), which is still a low number. However, if you make sure that the password consists of at least 7 characters, then the number of possible combinations increases to over 75 trillion, or to be exact — 75,144,747,810,816 (96 to the power of 7). It would take a hacker over 2,300 years to try every possible combination if the password-cracking program tried 1,000 possible passwords every second. Using a very powerful computer that tried one million passwords every second, it would still take 2.3 years. If you change your password every month or two, the password will most likely be different by the time the hacker has cracked it.



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Excel 2003, power programming

by **James D. Duncan, CPA**

James is a member of the Computer Club of Oklahoma City and an expert in Access and Excel. He can be contacted at bj4duncan@aol.com

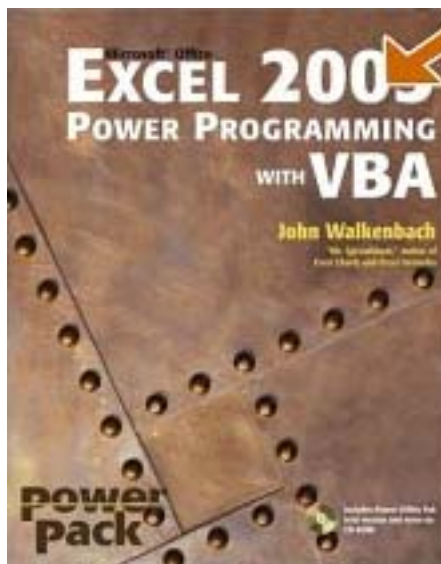
I had a chance to read up on “Excel 2003 Power Programming with VBA” by John Walkenbach while on the road. Reading in the car makes the long trips go faster. I took this code from his book.

Let’s create a macro that allows input of one column for names and the other column for amounts. We want to enter the name and then enter the amount. You can modify this for whatever description you need.

Click on Tools, Macro, Visual Basic Editor. Double click on This Workbook to open the code window to enter the code into. Then enter the following code:

```
Sub GetData()
Dim NextRow As Long
Dim Entry1 As String, Entry2 As String
Do
NextRow = Range("A65536").End(xlUp).Row + 1
Entry1 = InputBox("Enter the name")
If Entry1 = "" Then Exit Sub
Entry2 = InputBox("Enter the amount")
If Entry2 = "" Then Exit Sub
Cells(NextRow, 1) = Entry1
Cells(NextRow, 2) = Entry2
Loop
```

Move back to the spreadsheet and run the macro. You will get an input box that lets you enter the name.



Enter the name and press the Enter key and the next box lets you enter the amount.

Enter several names and amounts and then just press enter to exit the input loop.

And you have a quick, 2-column input for names and amounts. The book builds on these examples and adds additional code like validation.

Looking at another person’s code always gives you ideas and insights into things you can build for your spreadsheets. And I always make a mistake or two keying in the code so get to explore debugging and error correction too! Such is the path of life.

Love it or boycott it

Google Desktop 3 is a free, downloadable program that includes an option to let users search across multiple computers for files. The application automatically stores copies of files, for up to a month, on Google servers. From there, copies are transferred to the user's other computers for archiving. The data is encrypted in transmission and while stored on Google servers. The Electronic Frontier Foundation has urged consumers to boycott the software, warning that Google could be forced to turn over the data to the government.

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Shane Hicks, (certified certifiable)

Shane uses a PC. E-mail him at <shane@vpwn.com.>

I recently aided in configuring a Microsoft Exchange server that was being blocked from sending mail to several different commercial servers. I'm providing an outline of what was required, along with some explanations of WHY some things were required, so that some of you may be able to avoid spending three days on the phone with Microsoft Technical Support.

PROBLEM: The client's Exchange 2003 SP2 server stopped being able to SEND mail to particular domains. They could still RECEIVE mail from everyone, but they could neither reply nor send new mail to certain clients. They could send through their local ISPs e-mail accounts, using Outlook 2003. They could send mail internally. They could even send to certain outside domains (i.e., G-Mail). However, they could NOT send to any mail servers managed by Microsoft (such as Hotmail, MSN, or even MSSupport), AOL, or to Yahoo! When asked what might have been changed on the server to cause it to suddenly stop sending mail, the answer was "Nothing!" And that was actually telling the truth.

ANSWER: We quickly ruled out the Blacklist possibility by checking <openrbl.org>. If you are blacklisted, that means that your server has been marked as one that either originates SPAM or is known for relaying SPAM. Once you are on these lists, it's almost impossible to get yourself off. Your best hope is to contact the managers of each list and inform them that you've been listed incorrectly, or that you've solved the problem that got you blacklisted to begin with. Fortunately, when we checked the client's server here, everything looked good.

After that, it was a three step process:

1. Some servers require that the A record in the e-mail you send match the PTR record the receiving server queries when verifying your IP for sender verification. In this case, the client was hosting their own split DNS (which means that the internal network is managed as mycompany.local and the external records which are publicly accessible exist in DNS as mycompany.com). Upon investigation, we determined that the reverse lookup (PTR) was actually terminating at TimeWarner (their business ISP) and returning a rr.biz PTR record. We determined this by using DNS tools at <www.dnsstuff.com> and testing the Reverse Lookup of their server IP address. Not a match. I contacted TimeWarner and they updated the PTR record to point to the client's domain. The mail still wouldn't go...

2. Some servers are now using SPF (sender policy framework) which requires the addition of a new TXT record to any external DNS records for mail to be accepted by Hotmail, AOL, and Yahoo! (or anyone using SPF). I'll admit that I'd never seen this record before in my life and it's a weird looking thing. I made the TXT DNS entry for their domain. Even after that, the mail wouldn't go...

NOTE: You can learn about SPF and generate your own string for your DNS server by visiting: <<http://www.microsoft.com/mscorp/safety/content/technologies/senderid/wizard/>>.

3. Finally, we looked into the SBS default settings. SBS 2003 sets up the default SBS SMTP connector using EHLO. I like to call myself a "messaging specialist," but I've always run away from the really hardcore stuff like actually trying to understand the breakdown of individual packets and using Network Monitor to see what they're saying. Fortunately, the technician I engaged at Microsoft is not such a wuss. Using Network Monitor, he noted a particular part of the packet that was not going through to Microsoft servers correctly (a request for BDAT?) For some reason, Microsoft servers were bouncing my mail when I was using the default SBS SMTP connector. We deleted the default connector and created one with identical settings, using HELO instead of EHLO. At that point, all the mail that'd been stacking up in their mail queue for the last several days was delivered.

I know most of you would've recommended just using a Smart Host from the very beginning. A Smart Host is a known mail relay server that Exchange can be pointed to for SENDING mail. In theory, by pointing to TimeWarner's mail server, my client would be using a trusted mail server that the other domains would accept mail from. This was not the case. When I requested such service from TimeWarner (Austin), they acted like it wasn't possible with their system (and also made a lame attempt to get my client to pay an additional monthly fee for their hosted mail services which don't give the same functionality as Exchange). That didn't stop us from trying. However, pointing Exchange to smtp-server.austin.rr.com returned an error message stating they would not allow the client's Exchange server to connect. The Smart Host really wasn't an option.

At this point, it seems everything is running smoothly and e-mail is traveling just fine once again. I believe the problems were caused by ISPs tightening security due to all the SPAM and viruses going around. As long as new defense mechanisms are not employed by these ISPs, mail servers can be successfully configured following the above guidelines.

Student Practice Lab

Polish those new skills - A specific time period for students taking Alamo PC Courses to use Computer Lab (Classroom One) to practice their class assignments. Students may also make up missed class days, if the instructor has provided the course material to the individual. Seating is limited and on a first come, first serve basis.

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The Switcher



...the ongoing tale of a Man and his Mac Mac Tips

Shane uses OS X. E-mail him at <mac@vpwn.com>.

1. An Open Source Mac Website

Anyone whose read this article for any length of time knows I'm always out looking for sources of FREE software. Recently, I came across a site that claims to help you find the best of what's available for the Mac in the Open Source community. The site is called Open Source Mac, and can be found at <<http://www.opensourcemac.org>>. Here, you can find everything from browsers to instant messaging clients to e-mail clients. There are even word processors and other applications, along with some games for those that don't just work all the time.

2. G5 Optimized Firefox v1.5

If you prefer to use Firefox over Safari for your web browsing, and your Mac is based on the G5 processor, there is an optimized version of the popular open source browser made just for you. You can download it from <<http://www.beatnikpad.com/archives/2005/11/29/firefox15>>.

3. Increase system speed with a clean desktop

I tell Windows users this all the time. You need to keep your actual desktop as clean as possible. Why? Because OS X treats each icon on the desktop as a full-size Finder window. That means each icon is assigned a certain chunk of memory and that the system is constantly polling the icons properties to track its position and size. Once you have several of these on your desktop, your available resources to do other tasks can be severely diminished. What's the solution? I create a single folder on the desktop for related documents (i.e. My Documents) and then stuff all my working documents inside this single folder.

4. OSx86 Project under attack from Apple

Some may remember my February article discussing OS X running on non-Apple Intel-based hardware. At the end of the article, I told those that were curious to check out the forums at the OSx86 Project website <<http://www.osx86project.org>> to see an entire community of individuals dedicated to such pursuits. Recently, Apple sent the group a notice that they were in violation of the Digital Millennium Copyright Act (DMCA). For those that aren't aware, the DMCA is meant to prevent the release of technology designed to circumvent copyright protection. While the OSx86 Project claims that their efforts are all in compliance with the act, they've taken the forums down.

Also of interest: the OSx86 Project posted a message that Apple encrypted into the Trusted Platform Module (TPM), the technology that prevents the OS from being installed on non-Apple hardware, to any Mac hackers. The message reads:

Your karma check for today:

There once was a user that whined
his existing OS was so blind,
he'd do better to pirate
an OS that ran great
but found his hardware declined.
Please don't steal Mac OS!
Really, that's way uncool.

(C) Apple Computer, Inc.

5. Is Mac still secure?

Mac users often scoff at the problems Windows users face against viruses and malware. But, Mac security has fallen into question over the last several months with the release of three exploits to Mac OS X and a report from ZDNet that a Mac was hacked in less than 30 minutes.

The first is Leap-A, or Oompa Loompa. It's a potentially malicious program disguised as a simple image file (latestpics.tgz). If you click the TGZ file, the malware installs itself. Once installed, it does two things. It tries to send a version of itself to everyone on your iChat buddy list. It will also start infecting applications written in Cocoa. Each time you launch an infected Cocoa application, Leap-A will use Spotlight to find the four most-recently-used applications. If they're Cocoa apps, Leap-A will infect them as well. Most Apple software (i.e. Safari, Mail, Address Book, iCal, and Terminal) is written in Cocoa.

The second is found in Safari. It involves a preference setting that allows the Mac to automatically open "safe" files after downloading them. These files include movies, pictures, sounds, PDF and text documents, disk images, and other archives. If a script is renamed to appear "safe," the script will execute.

The third is a "proof of concept" called Inqtana.A, which exploits a flaw in Apple's Bluetooth security that was patched in mid-2005. To read the details on this exploit, go to

<<http://www.macworld.com/news/2006/02/17/inqtana/index.php>>.

Finally, ZDNet reported a Mac OS X system was hacked in less than 30 minutes.

<http://www.zdnet.com.au/news/security/soa/Mac_OS_X_hacked_in_less_than_30_minutes/0,2000061744,39241748,00.htm>

According to Dave Schroeder, Senior Systems Engineer at the University of Wisconsin-Madison, the report failed to mention an important fact. The goal of the reported contest was for a hacker to gain root privileges, the ability to do ANYTHING with the system. This was done in hours. However, anyone that wanted to hack the machine was given access to the machine through a local account. Schroeder points out that Mac OS X won't give such access to any external entities and doesn't leave access ports open by default.

So, is Mac OS X less secure these days? The bottom-line is that, as Mac OS X becomes more popular, it will become an increasing target for hackers. It only makes sense to take the proper precautions first. Keep your OS up-to-date, don't open unknown attachments or files that you aren't certain where they came from, and load an anti-virus program on your Mac. It's better to be safe than sorry!



Glossaries- A mini case study

Susan Ives, Alamo PC

Susan Ives is a former president of Alamo PC. She archives these columns on her Web site, <www.susanives.com/>. If you visit, you can cut-and-paste the code instead of retyping it from the magazine – the ultimate in lazy Webmastering!

I had a client who wanted an elegant way of providing definitions for medical terms on their site. This mini case study will not only introduce you to the design process but also give you fresh ideas that you can apply to your own site. To get the full benefit, make sure to view the examples on the Lazy Webmaster site.

Link to a glossary page:

A popular way of providing definitions is with a glossary. By using the name tag on the definition list and a target attribute in the word's link, the click takes the user right to the word's definition on a separate page.

In text:

hard word

In glossary:

hard word: blah blah blah

The Pros: This is easy to maintain – you just need one glossary, and changes are easy. The glossary can be used for multiple definitions, multiple pages and even multiple sites. The name-target code is unadorned HTML and will work in every browser.

The Cons: Going to another page breaks the reading flow. Some inexperienced Web surfers may not understand how to get back to their original place in the text.

Frames:

Using frames, or multiple HTML files displayed on the same screen, a glossary could be included on the same page as the article. I'm not usually a fan of frames, but this seems to be a sensible implementation of the technique. The same name-target convention described above would be used to include the entire glossary in the frame (although a huge glossary might need to be broken down into smaller files to load more quickly.)

The Pros: The definition shows up on the same screen as the defined word, not breaking the reading flow. You are working with one dictionary document – easy to create and maintain. You can use full HTML in the frame, including a graphics and links. The same format can be re-used for multiple pages.

The Cons: Some people get confused by frames, although this is fairly straightforward. The dictionary takes up quite a bit of screen real estate.

Tool tip:

This is a little-known piece of HTML code. You can use the <TITLE> tag in a link, like this:

hard word

When the mouse hovers over the word a yellow tool tip box will pop up containing the definition. The # in the link an-

chor is a null link – it won't take you anywhere, since the purpose of linking here is to activate the tooltip and not to take you to another page.

The Pros: The definition is contextual – it shows up right where the word does and the reading flow isn't interrupted. It is moderately easy to maintain. It is straight HTML and will work in all browsers.

The Cons: Each tip needs to be coded for each instance of the word. The tooltip box only stay open for about five seconds – not long enough to read a long definition. Many people will be confused by an underlined word that looks like a link and smells like a link but is really a definition. You can't use HTML within the tip – no line breaks, bold, etc. – which makes the text dense to read.

Dynamic HTML Tooltip:

DHTML is a generic name for client-side scripting, often JavaScript. You can see examples of DHTML tooltips at

* dyn-web.com
* help4web.net

The second example includes a generator that creates custom code for you.

The Pros: The definition is contextual – it shows up right where the word does and the reading flow isn't interrupted. The tooltip can contain custom colors and graphics.

The Cons: The coding is a nightmare, although using a page template would ease the burden. DHTML will not work with older browsers, or for those who turn their scripting off.

Popup Window:

We discussed the code for popup windows at length in the October, 2003 Lazy Webmaster. A link to a word activates a mini-screen containing the definition.

The Pros: The definition shows up on the same screen as the defined word, not breaking the reading flow. Once a definition popup is created it can be used for multiple instances of the hard word. You can use full HTML in the popup, including a graphic. It is moderately easy to create and maintain.

The Cons: Popups use JavaScript, and some people might disable Java in their browsers. Many people get confused by popup windows. Each definition has to be coded in a separate HTML document.



Times Change

Collected by Pim Borman,
SW Indiana PC Users Group, Inc., IN; <m>

Leafing back through old copies of The P-See UrGent, I notice that I started this monthly column in February, 1998. That makes this about the 80th installment – hard to believe. It started out as a discussion of things New, Best or Worst in the computer world, but much has changed since then. We are no longer impressed with incremental improvements in CPU performance. Arguments over the most proficient Web search engine have pretty well been settled for now. Discussions of viruses and other malware have grown way beyond the scope of this column. LCD monitors are no longer “prohibitively expensive, suffer from poor brightness, a narrow viewing angle, and relatively sluggish refresh rates.”

I began to look for long-range trends in computer technology. In my July-August 1999 column I mentioned the birth of a new Web search strategy based on evaluating hyperlinks to identify the most relevant Web sites for a given search term. I specifically described a search program, called *Clever*, that was being developed by the clever folks at IBM and was highly successful. Typically, IBM used it only internally and did not make it publicly available. As a footnote I added that a similar program, being developed at Stanford University, was made available in beta form. Its name? Google.com. IBM missed the boat again.

It is no coincidence that I read about Google in the June 1999 issue of *Scientific American*. The most interesting new developments with potential long-term importance are not first reported in *PC Magazine* or *PC World*, but in high-quality publications with a more general readership. I often find interesting developments reported in *The Economist*, the outstanding British weekly news magazine, as well as on the Web site of the BBC News. Other good sources are national newspapers such as *The New York Times*, *The Wall Street Journal*, and *USA Today*, but I don't get to read those regularly. As a sign of the times, the April 22nd issue of *The Economist* carries three full-page in-your-face ads touting the energy advantages of AMD Opteron processor-based servers (e.g. “You could've hired 250 engineers, 570 IT support people, 5,235 interns, and one new CIO with the amount of money wasted by non-AMD powered servers”). No mention of Intel (which is feeling the competition). David is starting to kick sand in Goliath's face!

On the other hand, *PC Magazine* is now mostly dedicated to gadgets, including a review in its May 9, 2006 issue of the Mercedes ML 350, which is loaded with electronics and sells for up to 70 thousand dollars. A 20-page review of Vista, not expected to become available until January 2007 at the earliest, reports that only 50% of current computers will be able to use it. Very few will be ready for the much-ballyhooed Aero Glass interface without upgrading their graphics capabilities.

PC World stays closer to specific computer topics, but how many “50 Best New Sites” and “Best Free Stuff” do we need? The most important contributions of these *PC Magazines* are their product evaluations. Otherwise, how would we have known that AMD managed to overtake Intel in CPU technology?

Wi-Fi Progress

In just a few years, as equipment cost dropped to affordable levels, wireless connections between computers in households have become commonplace. Several IEEE standards assure interoperability between different makes of equipment. The

most popular standard today is 802.11g, capable of connecting at speeds up to 54 megabits per second (Mbps). It is backwards compatible with the older 802.11b which operates at up to 11 Mbps. A third standard, 802.11a, operates at up to 54 Mbps and uses a different frequency range to minimize interference with other equipment. It is not often used.

The IEEE has almost completed work on a new standard, 802.11n, that should increase the transmission rate to a maximum of 540 Mbps. In anticipation of the new standard, several wireless connection providers have been marketing new products that provide faster connections over greater distances. According to *PC World* (February 2006) Netgear's \$180 RangeMax 240 Wireless Router and \$100 Notebook Adapter can connect at close range at about the same rate (100 Mbps) as a standard wired 10-100 Ethernet connection. The router has 3 antennas and transmits over 3 non-overlapping bands within the allotted 9.4 Mhz frequency band to achieve this performance.

The high speed may be useful when you use bandwidth-gobbling applications such as VoIP telephony, network gaming, or streaming audio and video. If you mostly use a wireless Local Area Network (LAN) in your home to share an Internet connection you have no need for premium high-speed wi-fi equipment. The fastest download speed available from my local cable provider, SIGECOM, is 6 Mbps with its premium Xstream service. At that speed, even the slowest 802.11b equipment is adequate for short distances. The 802.11g standard is preferred for connections at greater distances while maintaining sufficient transmission rates.

Since I bought a new computer I moved the laptop upstairs to my den at the other end of the house. As a crow would fly, if it were allowed inside and capable of penetrating floor joists and air conditioning ducts, the distance between the computers is about 35 feet. This is well within the range of 802.11g equipment in open areas, but due to the intervening obstacles I was unable to establish a reliable connection between my standard Netgear router and the Dell laptop with its built-in Dell-brand, 802.11g capable Wi-Fi adapter. I disabled that adapter and plugged in a standard Netgear wireless USB adapter (WG111v2) with the included USB cable. This gave me a strong connection to the router at the other end of the house, with a reported transmission speed of the full 54 Mbps. Although the cable allowed me to set up the adapter within several feet of the laptop computer, it was actually sufficient to Velcro the adapter to the lid of the computer so that it was roughly parallel with the antenna of the router. It goes to show that the quality of the Wi-Fi equipment can make a significant difference in the results when conditions are less than optimal.



The Graphics Guy

Lookin' sharp

Paul Vaughn, Alamo PC

Paul Vaughn is a freelance graphic artist, writer and web designer who has yet to object to anything smart. If you would like to see the Graphics Guy address a specific topic, email Paul Vaughn at <paulv@mac.com>.

There are a wide variety of scanners and digital cameras available to today's computer users, but no matter how good your scanner is or how crisp your original is, your scans will lose some of their sharpness when they are digitized. Even scans from high-end drum scanners can benefit from additional sharpening. Images can also lose some sharpness when they are printed to laser or inkjet printers that lay out dithered dot patterns. When an image is resampled, it will also lose sharpness. The main tool to use to counteract this blurriness is Adobe Photoshop's Unsharp Mask (or USM) filter (Filter: Sharpen: Unsharp Mask). I must point out that the Unsharp Mask filter will not make an out-of-focus image in focus, the best solution for that situation is to reshoot your photograph.

The human eye is very good at seeing edges of objects—sharp lines between two colors. The more contrast between the edges, the sharper the image appears to us. The way that the Unsharp Mask works is to analyze the tonal differences between adjacent pixels; the more contrasting they are, the more USM increases the contrast. This results in a "halo" around the edges which increases the images perceived sharpness. The USM can also have the undesirable effect of exaggerating textures, noise and JPEG artifacts. The filter offers controls to help strike a pleasant balance between sharp and hideously oversharpened. When sharpening you want to view the image at 100% to get the most accurate view of the effects.

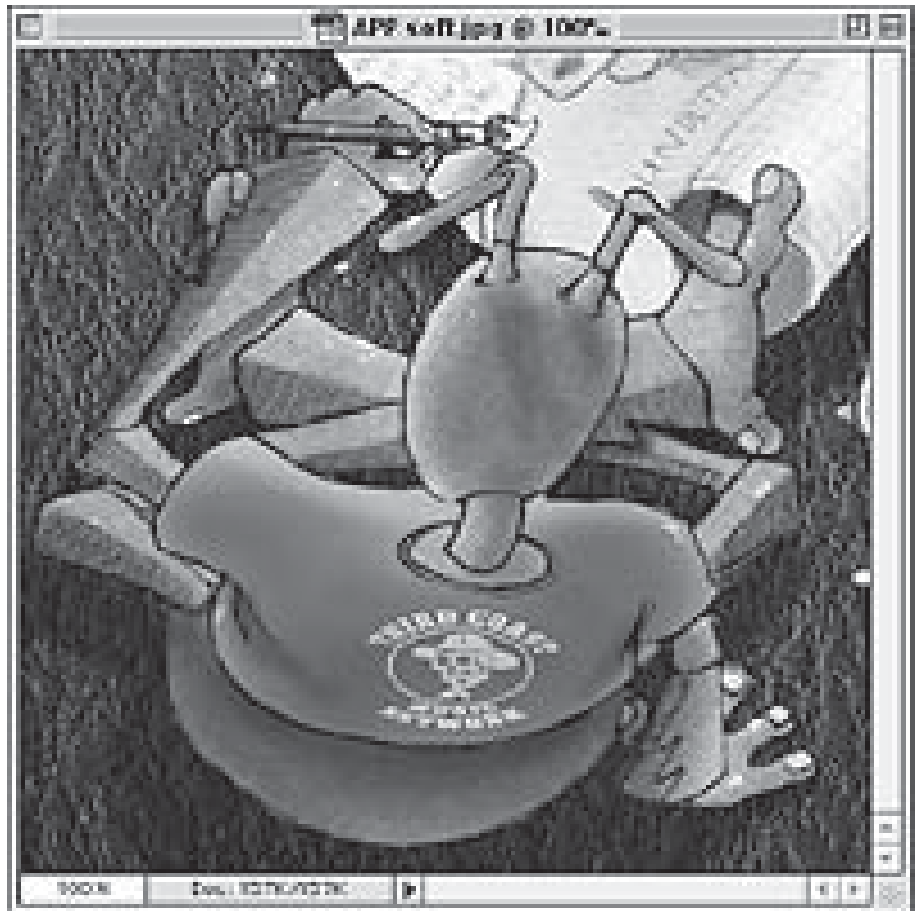


Figure 1

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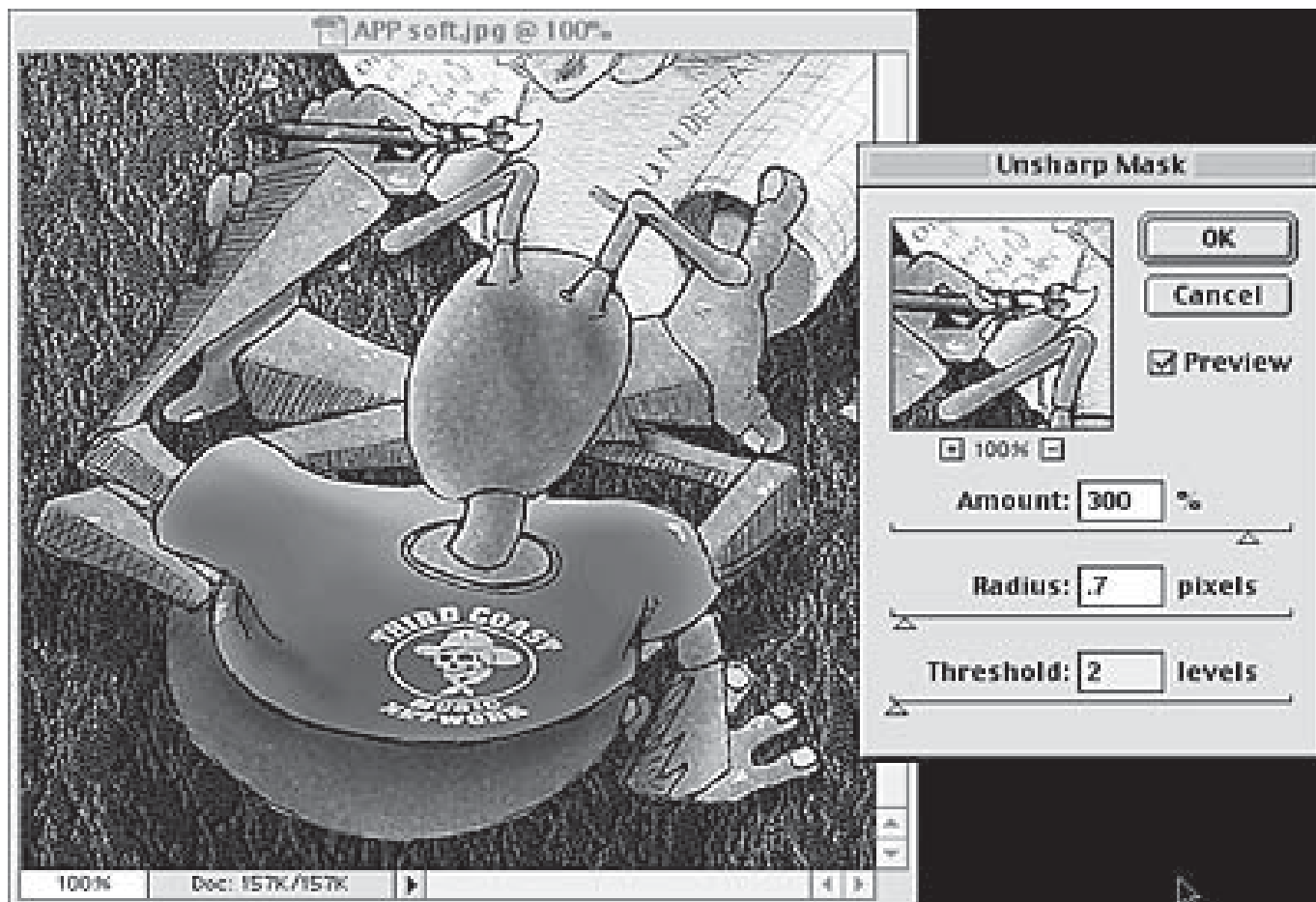


Figure 2

There are three controls in the Unsharp Mask dialog box: Amount, Radius and Threshold. Amount and Radius are inversely related. If you have a high Amount, you should lower the Radius, and vice versa. I like to start at a fairly high Amount like 200, and a lower Radius of about .7. For images that are going to be on the internet, I will use a setting around 300 and .3. The settings will change according to the resolution and characteristics of your specific image. Typically, I usually set the Threshold at 2. Threshold helps to prevent unwanted sharpening of noise, texture and artifacts. It basically tells USM to ignore pixels that are less than 2 tonal levels apart.

The Unsharp Mask is a powerful and useful tool. I use it every day for all of the images that I work on. Experiment with the settings to find what works for you. Use it and you will be pleased with the sharp looking results.

David's Essential Domains



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- 20 Page Site - \$12.95/mo
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Internet Explorer - Certificates

Ron Ingraham, Space Coast PC User Group

Ron is a member of Space Coast PC Users Group. Instructions in this column were created on a Windows 98 system. E-mail Ron at <ringram728@earthlink.net>



One of the main reasons for the use of certificates is to protect your computer from malicious software when you download programs from the Internet. "When you download or run programs from the Internet, you want to know that the program comes from a known, reliable source. That's why, when you choose to download a program from the Internet to your computer, Internet Explorer uses Microsoft Authenticode technology to verify the identity of the program. Authenticode technology verifies that the program has a valid certificate: that the identity of the software publisher matches the certificate, and that the certificate is still valid. Note that this does not prevent a poorly written program from being downloaded or run on your computer, but it does reduce the chance of someone misrepresenting a program that is intended to be malicious or intentionally harmful.

You can specify different settings for the way Internet Explorer handles downloading programs and files, depending on the zone they are coming from.

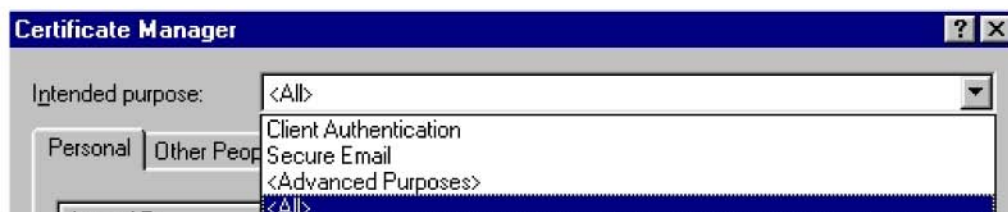
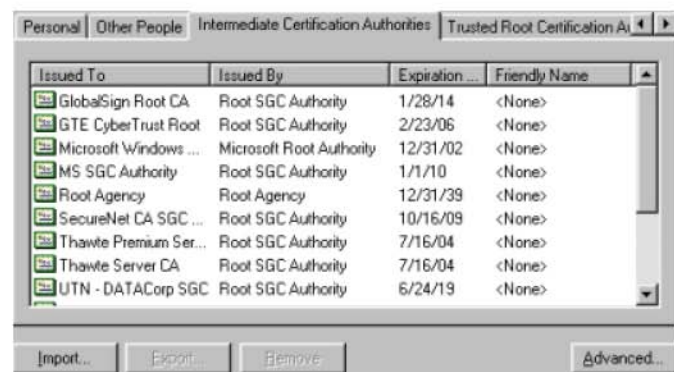
For example, you might be confident that anything you download within your corporate intranet is safe. So, you might set your security settings for your Local intranet zone to a low level to allow downloading with little or no prompting. If the source is in the Internet zone or the Restricted sites zone, you might want your security levels set to Medium or High. Then, you'd be prompted with information about the program's certificate before it is downloaded, or you might not be able to download it all. " (*Microsoft IE Help*)

When you click on the Certificates button you open the Certificate Manager seen at the bottom of this page. The first item of choice is the Intended Purpose. Clicking the down arrow at the right of the window produces the options seen.

Client Authentication has to do with certificates

generated by software publishers, such as Intuit for their Quicken programs. If you choose this option, you must Import the appropriate file from a Certification Authority. The various categories from which you may choose are Personal, Other People, Intermediate Certification Authorities, and Trusted Root Certification Authorities. See the Certificate Manager Export Wizard at the top of the next page. The Wizard is invoked when you click on the Export button. This initial screen provides definitions of some of the terms you encounter when using the wizard.

When you click Next, you're moved to the Select File to Export screen. Here you have the option to name a file to export, or you may browse your computer for the lists from which to choose. In my case, most of the files listed in the Intermediate list have expired. These were probably generated at the time I downloaded them from the Internet. The same is true

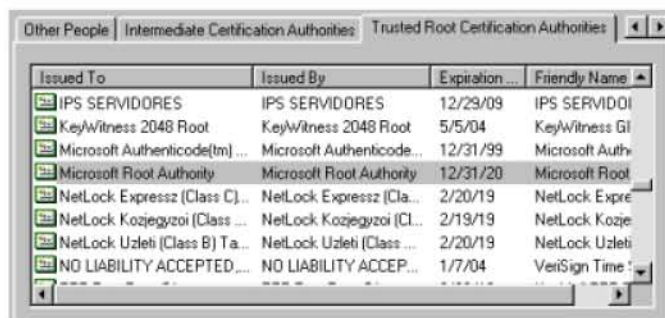


in my case for the Trusted Authorities list. I'm at something of a disadvantage here in that I don't personally use Internet Explorer as my

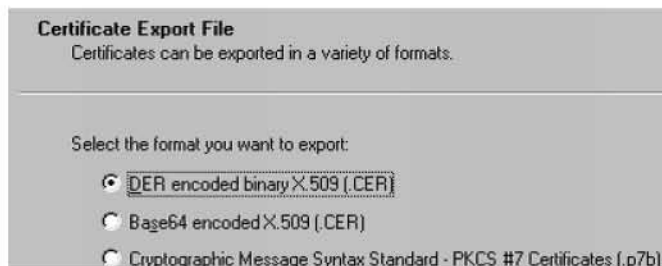


default browser. I have been using Mozilla, both as my browser and my email client. I did this to avoid many of the virus, worm, trojan problems associated with Outlook Express. As a result, I don't have the stored Certificates for Internet Explorer from which to generate the explanatory graphics for this lesson.

Let me digress for a moment. Mozilla, and I assume Netscape, have a much simpler approach to Certificates, and a much better Help menu explaining exactly how to use the features. Unfortunately they are enough different that the explanations would not transfer to this system. In any case, since I had no current files to



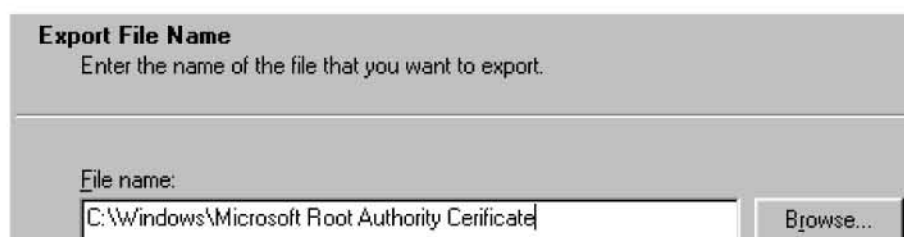
Import, I elected to Export the Microsoft Root Authority from the list above. As you can see from the example in the middle of the column at the right, certificates can be exported in a variety of formats. I elected to accept the default. It



personally felt the need to set them up for myself. I recall seeing some references to certificates when I download software from the Internet, but have never taken any direct action in that regard.

I have included this information to maintain the continuity of the PC 101 articles. If you need more information on this subject, check out the IE Help Index for Certificates. If you're using Netscape, by all means check out their help files.

Next month we'll look at the Personal Information area of Content. I hope I haven't wasted too much of your time and mine with this article. □



Optimizing Windows XP Media Center Edition 2005, Xbox 360 and Media Center Extender Networks

*By Bob Hewitt, Editor, The Journal of the Sun City Center Computer Club, FL
Former 21-year editor for United Press International
<rsh1916(at)juno.com>*

With Windows XP Media Center Edition 2005, Xbox 360, Windows Media Center Extender, and Windows Media Center Extender for Xbox, you can now enjoy media content in new ways in your home. Whether it's live TV, recorded TV, or music ripped from your collection of music CDs or downloaded from an online music store, you can broadcast digital entertainment throughout your home. Media Center Extender devices connect a Media Center PC with TVs and monitors in the home, so you can enjoy TV, photos, music, and movies on any TV in your house.

You'll need a Media Center PC running Windows XP Media Center Edition 2005 to operate the Media Center Extender. Also, you'll need a fast and reliable network to stream content from the Media Center PC to the Media Center Extender devices or to your Xbox 360; otherwise, the viewing and listening experience could be marred by connectivity interruptions and network dropouts. Microsoft recommends a wired network for best performance on a Media Center network. That's where you get the high data rate transfers needed for streaming live TV from a Media Center PC to a Media Center Extender.

However, using a totally wired Ethernet network just isn't possible for many of us. Your significant other may forbid wires in the living room, or your landlord won't allow holes drilled through the walls, or you're put off by the amount of work needed to run cables through the ceiling. That's when you need to go wireless.

My experiences using Media Center Extenders and helping other users with network connectivity highlighted the need for a Media Center Extender wireless networking guide. With the introduction of the Xbox 360 and built-in Media Center capabilities and accessory wireless 802.11a/b/g adapter, many people will be setting up wireless networks for the first time. In this column, I assume that you have a broadband connection. Although connecting the audio and video components from a Media Center Extender to televisions or home theater receivers will be easy for most people, I'll provide the basic rules for Media Center/Xbox 360/Media Center Extender networks. I'll also cover how to do the following tasks:

- Set up Media Center/Media Center Extender/Xbox 360 networks with a single 802.11a/g router
- Add wireless capabilities to an existing network using an 802.11a/g access point.
- Wirelessly enable an Xbox 360.
- Explain why 802.11a is the best choice for going wireless with Xbox 360.
- Super charge a wireless 802.11g Xbox connection with Super G.
- Create advanced segmented networks for multiple Extender/Xbox 360 environments.

I'll point you in the right direction to get more help too.

Use Wired 100 Mb Ethernet for Network Configuration

Mbps stands for megabits per second and measures the transfer rate of data over a network. Microsoft recommends a wired network that supports 100 Mbps (also called Fast Ethernet) as the best choice for a Media Center network. If you're a gamer and a Microsoft Xbox Live user, you probably already know that a wired 100 Mbps connection is the best option when split-second timing counts.

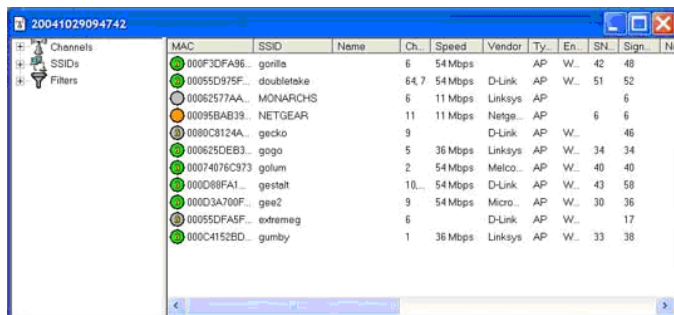
The ideal Media Center broadband home network starts with a router that minimally supports 100 Mbps Ethernet. Home routers sold today (both wired and wireless) all support 100 Mbps Ethernet. Media Center Extender, Xbox 360, and Media Center Extender for Xbox both support 10/100 Mbps wired Ethernet. Media Center Edition 2005 computers that are available in retail stores include a minimum of 10/100 Mbps-capable connectivity. By default, most home routers will assign an IP address to connected devices via DHCP. Just plug-in your Ethernet cables and using out-of-the-box default settings, standalone Extenders and Xbox 360 consoles should just work.

Planning a Wireless Media Center Network

Although wired Ethernet is recommended, Microsoft recognizes that many users may prefer wireless. The Microsoft specification for the standalone Media Center Extender therefore includes 802.11a/g dual band wireless. If you plan to use wireless, a router that supports both 802.11a and 802.11g is ideal. You can learn more about 802.11a and 802.11b in my earlier column on 802.11a Wireless Networking with Windows XP and about 802.11g wireless in Raising the Speed Limit with 802.11g Wireless Networking and Windows XP. The Media Center Extender comes with everything you'll need for making a wireless connection using both 802.11a and 802.11g.

You can also add additional access points to any wired or wireless router you already have and run them as separate access points using different SSID names and channels. There are some limitations to wireless connectivity that you need to consider before purchasing wireless equipment. The number of walls and/or ceilings that the wireless signal will pass through can be a limiting factor. The construction of your home may be a limiting factor. Modern wood structures are great environments for wireless networks. Older homes with chicken wire embedded in plaster walls are poor wireless environments. You'll also want to keep your wireless devices away from large metal objects, duct work for HVAC, and any electrical appliances that generate RF noise, especially microwaves.

The presence of an 802.11b device on a mixed 802.11b/g network will slow down your network. The 2.4 GHz band in which 802.11b/g wireless operates is also used by cordless telephones, microwave ovens, and other devices. Also, 802.11b/g has proliferated to the point that many neighborhoods are saturated with wireless access points and routers close enough to disrupt your own network. I use Netstumbler to try to find the best channel to configure on my wireless equipment. You can see how saturated my neighborhood is in the figure below.



MAC	SSID	Name	Ch.	Speed	Vendor	Ty.	En.	SN	Sign.	NI
000F3DFA86...	gorilla		6	54 Mbps	D-Link	AP	W.	42	48	
0005D975F...	doubletake		64, 7	54 Mbps	D-Link	AP	W.	51	52	
00062577AA...	MONARCHS		6	11 Mbps	Linksys	AP	W.		6	
00095B4B39...	NETGEAR		11	11 Mbps	Netgear	AP	W.		6	
0080C8124A...	gecko		9		D-Link	AP	W.		46	
000625DEB3...	gogo		5	36 Mbps	Linksys	AP	W.	34	34	
00074076C973	golum		2	54 Mbps	Melco...	AP	W.	40	40	
000D88FA1...	gestalt		10...	54 Mbps	D-Link	AP	W.	43	58	
000D3A700F...	gee2		9	54 Mbps	Micro...	AP	W.	30	36	
0005DFA5F...	extremeg		6		D-Link	AP	W.		17	
000C4152BD...	gumby		1	36 Mbps	Linksys	AP	W.	33	38	

You can view available wireless networks in the Media Center Extender as shown below, but you won't see an overview of all access points and channels without moving the onscreen cursor or by using the handheld remote to display each one individually. This feature works similarly to the

View available wireless networks command in Windows XP. If you have a wirelessly enabled computer, I highly recommend Netstumbler as a time saver.

You may already have laptops, PDAs, or other devices that use wireless on a home network. All the computers and devices share the wireless bandwidth of the wireless radio inside your wireless router or access point. 802.11a is not as widely used and over shorter distances of 20–30 feet, it has greater sustained throughput than 802.11g. For these reasons, 802.11a is the preferred type of wireless connectivity for the Media Center Extender.

Set up a Media Center Extender Network with a Router

The most important advice I can give you in this column is to segment your network to provide dedicated wireless connectivity between a Media Center PC and a Media Center Extender, the Xbox 360 or Media Center Extender for Xbox. If you have multiple Extenders that will be used simultaneously, you'll optimize performance by putting each device on its own dedicated network segment.

When you first set up a standalone Extender, it automatically checks connectivity first for a wired network. If none is found and wireless is available, you'll be presented with options to set up a wireless network.

The easiest way to segment a network is to use a single device dual band a/g wireless router. Use the 802.11a side for the Extender and the 802.11g side for computers, PDAs, and other devices. Because there are so few devices that support 802.11a other than computers and Extenders, this is a logical arrangement. This gives the Extender the entire available wireless bandwidth of the 802.11a channel. You'll be able to move large files around over the 802.11a side of the network and not impact streaming video over the Media Center network.

Important: If you use the built-in wireless of the Media Center Extender or the accessory 802.11a/b/g adapter for Xbox 360,

you'll need to disable any built in "super" or "turbo" modes on your router or access point.

The 802.11a/g wireless router that performed the best for me during the Media Center Extender beta and that I have used on my own home network is the D-Link DI-784. This is one of the most reliable routers I've ever used. It has every imaginable feature I could possibly need and an easy-to-understand interface. For a basic segmented network, I use the 802.11g wireless for computers and other 802.11g devices, and use the 802.11a wireless exclusively for the Media Center Extender. The D-Link DI-784 supports WPA-PSK on both the 802.11g and 802.11a sides, so I have great wireless security. I've been advised that the Linksys WRT55AG Dual-Band Wireless A+G Broadband Router Version 2 with firmware upgrade v1.61 or higher also works well, and it carries the Designed for Windows XP Media Center Edition logo.

Add Wireless Capabilities to a Network Using an 802.11a/g Access Point

No matter what you use as the base router on your home network, you can add one or more wireless access points (not additional routers) to provide dedicated network segments for one or more Extender devices. While most wireless is interoperable, there can be variables between vendors using different user interfaces. It's advisable to use products from a single vendor and from the same generation of products. This helps provide a consistent user interface for configuring equipment and the wireless capabilities should be the same. To prepare for this column, I asked D-Link to supply me with additional wireless networking hardware suitable for a multi-Extender environment. I found great performance, a consistent interface, and a great user experience mixing and matching the various pieces of equipment they provided.

I've used and tested two much newer 802.11a/g wireless access points plugged into various routers to provide dedicated wireless network segments for Media Center Extender devices. Both the D-Link DWL-7200 (which also provides power over Ethernet) and the DWL-7100 work well to provide 802.11a connectivity for Media Center Extenders. The 802.11g side can be used to provide connectivity for computers and PDAs. Both of these access points provide WPA-PSK encryption on both the "a" and "g" side.

Set up an Xbox 360 on your Wireless Network

While I've not had hands on experience with an Xbox 360 yet on my own network, I've attended workshops on Microsoft's Redmond campus and the information that follows is based on those sessions. The first step is to connect your Xbox 360 to your wireless network. To do this, navigate to the System blade, select Network Settings, Edit Settings, and then choose Wireless.

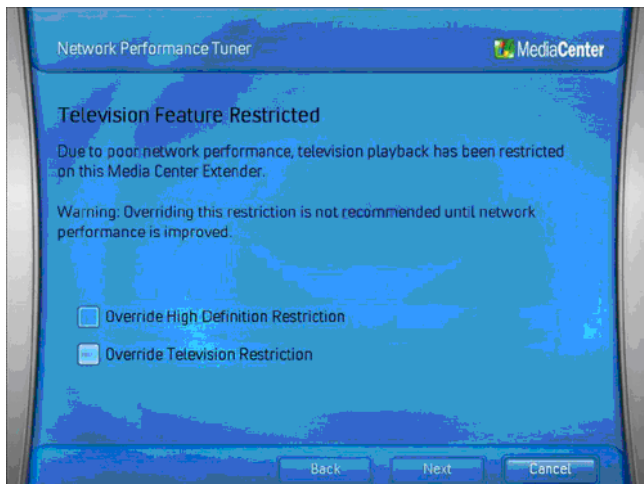


After your Xbox 360 is connected to your network, go to the Media Blade on your Xbox 360 and select the Media Center option (the green button). A check will be performed to ensure you have a solid network connection. An 8-digit setup code will be displayed, as well as information on where to download the necessary software for your Media Center 2005 computer. Write that code down and go to your Media Center PC and get and install the software.

Note: You can find the software at <http://www.xbox.com/en-US/pcsetup> (for the US). This download will contain everything you need to update your Media Center Edition 2005 to connect to your Xbox 360 (it will contain MCE 2005 Rollup 2, Xbox 360 images, service packs, and the Media Center Extender/Xbox 360 Extender setup and network performance monitor.) Follow the instructions and the wizard prompts to add the Xbox 360 as a Media Center Extender to your network.

Wireless 802.11a for your Xbox 360 is the best wireless option

Note that you'll need at least 22 mbps for an effective Xbox 360 wireless network. If the reported speed is less, the Network Performance Tuner application on the MCE host machine will display options that may help you improve conditions. The Xbox 360 will offer options as shown below. You will be presented with options to override the reported network restrictions. With the High Definition capabilities of the Xbox 360, you'll definitely want 802.11a connectivity, if at all possible. Microsoft's own 802.11a/b/g adapter should be an option to consider because it's designed explicitly for the new Xbox 360. I'm sure that the D-Link DGL-3420 I already own and use on my network will work quite well as I'm seeing 22-24 mbps throughput. Linksys has a logo'd wireless a/b/g gaming adapter that I understand works quite well, but I have not tried it myself.



Super Charge a Wireless 802.11g Xbox Connection

I don't allow network cables in my living room where my legacy Version 1.0 Xbox resides. To add wireless capabilities to an Xbox, an external gaming adapter or wireless access point client is required. I originally configured a D-Link DWL-G820 gaming adapter to use WPA-PSK, attached it to my Xbox, and associated it with the 802.11g side of the DI-784. (A newer gaming adapter, the <http://games.dlink.com/products/?pid=383&-DGL-3420> 802.11a/g, also works perfectly with my Media Center network).

I don't find 802.11g fast enough for Xbox Live gaming and I was not happy with the Media Center live or recorded TV performance of 802.11g wireless using the Media Center Extender for Xbox kit. I experienced some network congestion and drop-outs. Here is an explanation of network throughput versus maximum data rate to help you understand network performance.

For better wireless performance, I configured both the DI-784 and the DWL-G820 to use Atheros Super G modes. I've experimented with Super G with Turbo disabled, Super G with Dynamic Turbo, and Super G with Static Turbo. Static or Dynamic Turbo provides near wired network speed performance for me with between 40–44 Mbps throughput with bursts that add another 10+ Mbps. This also works with the DGL-3420. The Super G table below compares the various operational modes.

Turbo State	Capabilities
Disabled	Standard 802.11a/g support, no enhanced capabilities
Super A/G without Turbo	Capable of Packet Bursting, FastFrames, Compression, and No Turbo mode
Super A/G with Dynamic Turbo	Capable of Packet Bursting, FastFrames, Compression, and Dynamic Turbo. This setting is backwards compatible with non Turbo (legacy) devices. Dynamic Turbo mode is only enabled when all devices on the wireless network are Super A/G with Dynamic Turbo enabled
Super A/G with Static Turbo	Capable of Packet Bursting, FastFrames, Compression, and Static Turbo. This setting is not backwards compatible with non-Turbo (legacy) devices. Static turbo mode is always on and is only enabled when all devices on the wireless network are Super A/G with Static Turbo enabled

Table 1: Super G Operational Modes and Compatibility Matrix

Although Super G is totally interoperable between the various D-Link products (and should work with other vendors who use Atheros wireless radios and advertise Super G), this special mode won't work with wireless equipment powered by chips from others such as Broadcom or Intersil. As it turned out, my neighbors using channel 6 were far enough away that I had no interference and I was able to use Static Turbo with great success. Super G with Static Turbo uses channel 6 (as shown in the image below) and bonds with a small portion of both channel 1 and 11. Super G with Dynamic Turbo picks the best available channels with the least traffic.



Construct Advanced Segmented Networks for Multiple Extender Environments

If you don't happen to have an 802.11a/g router or are already using an 802.11a/g router for computers and devices, you can add wireless access points to any existing router to create multiple network segments. If you are going to use more than one Extender for Live and Recorded TV simultaneously (a Media Center 2005 computer can support up to five Extenders depending on the PC's hardware configuration), each Extender should really be on its own dedicated network segment. I've tested and used the equipment below and highly recommend it.

To add 802.11a and g segments to my network (in addition to the DI-784), I've successfully used these 802.11a/g access points plugged into my router:

- DWL-7100AP (supports WPA-PSK and Super G)
- DWL-7200AP (supports WPA-PSK and Super G and Power over Ethernet)

To add wireless 802.11g Super G, I've successfully used these access points plugged into my router:

- DWL-2100AP (Supports WPA-PSK and Super G)
- DWL-2200 AP (Supports WPA-PSK and Super G and Power over Ethernet)
- DWL-G800 in access point mode only (Supports WPA-PSK and Super G)

To provide wireless Super G for my Xbox or super connectivity for a standalone Extender:

- DWL-G820 (Supports WPA-PSK and Super G)

Note: You can also attach a wireless adapter, such as the DWL-G820 or DGL-3420, to the wired Ethernet port of a standalone Media Center Extender or Xbox 360, which will improve performance over standard 802.11g.

Basic Rules for Optimizing Media Center/Xbox 360/Media Center Extender Networks

Don't buy or use an obsolete router that uses a 4-port hub (as opposed to a switch) from an online auction for \$5. All modern routers use 10/100 switched Ethernet ports.

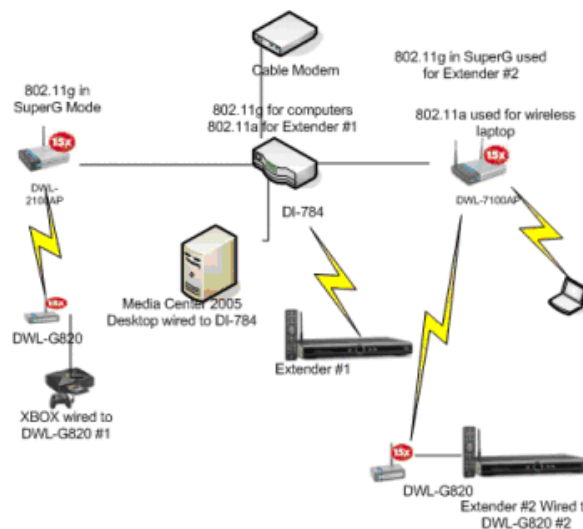
Use a 10/100 switch if you need to expand an existing network. Never buy or use a hub since a hub is slower than a switch. A hub needs to broadcast traffic through all ports. A switch learns what clients are attached to each port and optimizes network traffic accordingly.

Don't put both a computer running Windows XP Media Center 2005 and a Media Center Extender or Xbox on wireless connections. If you need to use wireless, it's best to use a wired connection on your Media Center Computer and use wireless on the Extender device. Remember, to wirelessly enable an Xbox to use as a Media Center Extender or for Xbox Live, you'll need to add an external gaming adapter.

Don't use wireless repeaters to cover large distances. Most wireless repeaters have a single wireless radio, which means they have to communicate in two directions. This divides your effective throughput by two.

Segment your wireless network. Although casual activities such as Web surfing won't significantly impact a connection shared

by computers and Media Center with Extender networks, intensive network activities like gaming and large file transfers can consume a large part of the shared wireless bandwidth. In my testing, I've experimented with segmenting and giving each Extender dedicated bandwidth. Below is a diagram of a three-Extender network where all three Extenders use wireless connectivity. (You can connect up to five Extenders to a single computer running Windows XP Media Center Edition 2005). Note that the Media Center PC is wired to the router so that only one end of the connections is wireless.



Experiment with different locations for your wireless router and/or access points. Changing the location by three or four feet may make the difference between network dropout issues and solid connectivity. Place the wireless device on a high shelf or attach it to a ceiling if your devices are on a floor above.

The position of the external antenna of a wireless device can make a huge difference. Experiment to find the best position. If you have a wireless device that has no external antenna, change the position of the device itself. Before putting any wireless router/access point/gaming adapter online, check the firmware revision and update to the most recent firmware available from the vendor.

Be sure to use WPA-PSK as the encryption method for Extenders if at all possible because it provides far more security than WEP. Don't let a sales person tell you that wireless security isn't as important for devices as it is for computers. These devices are still part of your network and if you don't use security or use weak security, you've provided an entrance point to everything on your network, computers with your personal data included. If you shop carefully, you'll find gaming adapters and access point clients that support WPA-PSK.

Getting More Help

For the best networking experience, Microsoft recommends using networking equipment that carries the Designed for Windows XP Media Center Edition logo. The list of networking equipment submitted for compatibility testing on the Designed for Windows XP Media Center Edition Logo Partner List is currently a short list, but is being updated regularly, so check back before making any purchases. Check with others who have already had experience or ask about specific network hardware and pose your Media Center networking questions in the Windows XP Media Center Edition 2005 newsgroup. You'll find quick and accurate answers from Media Center Edition MVPs and Microsoft employees. See you there!

Bang, Sparkle, Burst, and Boom

4th of July

Emily Sohn

Sparkling blue flashes. "Ooh!" Cascading streaks of red light. "Aah!" Sizzling green explosions. "Wow!" For many people in the United States, the Fourth of July means one thing: Fireworks. And they're not alone. "Every country, it seems, has a fireworks day," says John Conkling. He's a chemist and fireworks researcher at Washington College in Chestertown, Md. "People universally seem to get a deep satisfaction from watching fireworks," he says.

Viewer satisfaction demands serious science. All year long, researchers such as Conkling mix and burn chemicals in the lab to see what kinds of flames they can create. Now, with advances in technology and chemistry, holiday celebrations are more dazzling and colorful than ever.

People have been watching fireworks for more than 2,000 years. "There has been a really dramatic change in the appearance of fireworks," Conkling says, "from merely being devices that go up into the air and explode to the dramatic color displays we have today."

Gunpowder blasts

At its core, a firework contains a mixture of chemicals that burn well. These mixtures are produced in the form of gumball-sized pellets, which are held inside a cylindrical shell, or cartridge. Gunpowder at the bottom of the cartridge launches and ignites the firework. A special fuse delays the explosion until the cartridge is airborne.

Every type of firework is designed to burn for a certain amount of time in particular colors and patterns. The presence of different chemicals produces different colors.

National Park Service

Sodium compounds, for instance, produce a yellow flame when burned. Barium nitrate burns green, and magnesium and aluminum burn white.

If Conkling wants to make violet, he has to mix a red-producing chemical, such as strontium nitrate, with blue-producing copper salts. The more strontium nitrate and less copper that he uses, the redder the final shade will be.

"There's really no color that you can't make," Conkling says.

Bursting suns

When Conkling develops fireworks, he starts with what he already knows about how particular chemicals burn. Then, he puts materials together in his lab and ignites them under a ventilated hood. He alters proportions through a process of trial and error to get the result that he wants.

Certain chemicals, combinations of chemicals, and packaging strategies produce special effects. Fireworks that burn slowly, for example, leave trails behind them and look like strings of colored spaghetti. Quick burners look like bursting suns.

Some ingredients produce streaks of light that dart around like grasshoppers trapped in a jar. If materials are pressed tightly in a tube, blowing them up makes loud whistling noises. The addition of a type of chemical known as a perchlorate makes a big, loud boom.

"The sky's the limit, so to speak," Conkling says. "Imagination is the only limiting factor."

When lab tests are complete, companies make pellets of the new mixtures to try them outdoors before manufacturing them in large numbers.

Electronic control

One of the newest trends in fireworks, Conkling says, is the use of patterns. By arranging pellets in a flat layer inside the cartridge, researchers have figured out how to make fireworks that explode in the shape of hearts, Olympic rings, and other objects.

However, the shapes are clearly visible only from certain angles. "The biggest challenge is to get them oriented," Conkling says.

The only solution at this point is to launch three or four of each shape at a time. "When they burst, one is usually quite apparent to people on the ground," Conkling says. "People in other locations might see another one better."

Fireworks experts have also moved into the computer age. Instead of lighting fireworks by hand, which is dangerous, major shows now rely on electronic devices and cables to control the timing of the launches.

Computer programs also allow choreographers to set off explosions that match music playing in the background. Such touches are always big crowd-pleasers.

Studying fire

The more you learn about fireworks, the more you might appreciate the Fourth of July and other celebrations with the eye of a scientist. Fireworks at the National Mall, with a view across the Potomac River toward the Washington Monument and the Lincoln Memorial.

Fireworks at the National Mall, with a view across the Potomac River toward the Washington Monument and the Lincoln Memorial.

National Park Service

"I'm sure I view presentations quite a bit differently than many people," Conkling says. "I try to analyze everything. I love when I see something that I haven't seen before. Then, I try to figure out how they did that particular effect."

Even just studying fire and explosions can be exciting, Conkling adds. It's a great area to work in, he says. "I get a bang out of it."

For safety's sake, it's best to avoid experimenting with any type of flame or explosive chemical unless you're working alongside a trained professional. Lots of people end up in the emergency room every year with severe burns after launching their own explosives.

Instead, if you watch a fireworks show this year, try to focus on what you see and hear. After all, every bang, sparkle, burst, and boom is an amazing example of chemistry in action.



Tech Issue: *hard drives and operating systems*

Backup Awareness Month

By Ira Wilsker, APCUG Advisor; Columnist, The Examiner, Beaumont, TX; Radio & TV show host, iwilsker(at)apcug.net

WEBSITES:

<http://www.backupawareness.com>

<http://www.ntius.com>

<http://www.symantec.com>

<http://www.backupawareness.com/bestpractices.html>

In case you had not heard, June is Backup Awareness Month. It is not a federally recognized holiday, nor is it one acknowledged by resolution from some governmental authority, but an awareness service of one of the largest manufacturers of hard drives, the newly merged Maxtor and Seagate.

Sure, Maxtor and Seagate will benefit if we all rush out and purchase a large capacity hard drive so we can backup our critical data in the event of a hard drive crash, or other tragedy that can damage or destroy our computers. This is really more of a win-win situation, as there is a very valid need for timely and comprehensive backups of our data. Lessons still unlearned from Rita, Katrina, and Wilma, as well as other countless disasters, fires, thefts, and other debacles should teach us that if we have a good backup of our files, we can easily survive a catastrophic data loss, and be back in operation promptly.

Imagine in any business or other commercial environment how much information is stored on hard drives. Hard drives are electromechanical devices, and as such will indeed fail at some time. Murphy's Law dictates that a hard drive will always fail at the most inopportune time. Now imagine what would happen to that business or organization if suddenly all of its critical information was gone. No accounts receivable; no accounts payable; no client lists; no purchase orders; no employee or student data; no payroll and tax records; no correspondence; no records of any kind; and a plethora of other potentially devas-

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tating losses. Next imagine the time and cost that a company would incur if it had to rebuild that amount of information from paper records, if the paper records indeed exist. Can you conceive the utter devastation that a company would suffer with a catastrophic data loss?

Data loss is not just a corporate or organizational threat, but a personal one too. On my home computer, for example, I have countless family photos, tax records, family financial information, archives of correspondence and other important documents, music, bookmarks, address books, email, and other information that would probably be irretrievable in the event of a complete hard drive failure. I really do not think that the IRS would accept as an excuse the fact that my hard drive crashed, losing my financial records.

We can backup our data in many ways without any substantial expense, or we can utilize sophisticated backup solutions. Backing up can be as simple as copying critical files to CD, DVD, flash drive, or other storage media, using the integral copy function available on all computer operating systems. We can use software, such as NTI's Shadow or Backup NOW! to manage our backup functions to our chosen media, or we can use utilities such as Symantec's (Norton) Ghost, to make a bit by bit copy of our hard drive which can be copied to a new hard drive, making it a mirror image of the original, ready to go. Now that broadband internet connections are more of a rule than an exception, there are commercial services that will do online remote backup and storage at off-premise locations, secure and separate from the host or home location.

Seagate/Maxtor have published some "best practices" (www.backupawareness.com/bestpractices.html) defining the tasks necessary to insure the ability to recover our precious data. These practices can be summarized by the following tips (details on the website):

Develop a backup schedule – Make it routine, and not a task that we have to remember to accomplish. Most modern backup software and utilities either backup in real-time (NTI Shadow), or can be scheduled at predetermined times (NTI Backup NOW!).

Back up everything – it is not necessary to waste time sorting data, as the speed of backup utilities, hardware, and hard drives, as well as the large capacity of new hard drives, make it unnecessary to determine what to backup

Give yourself room to grow – The rule of thumb listed on the site recommends that the minimum size of backup drives (or other media or storage solutions) should be at least double the current size of the hard drives being backed up.

Back up automatically – Referred to in the industry as "Set it and Forget It", is a viable adjunct to backing up on schedule. Some real-time off-site backup services use a high speed internet connection to automatically back up all new data to an external location. Many software utilities are almost transparent, and perform backups automatically, and unattended.

Rotate backups – Use more than one drive or other system for backup. There are always risks that the backup itself can be damaged or otherwise flawed, and there is safety in redundancy. It is a good practice to store at least one current

backup physically away from the location being backed up such that a catastrophe (fire, flood, etc.) at the host will not destroy the backup. It is also a good idea to be able to take a backup with you in the event of a crisis, such as when I took my external hard drive with a current backup of all of my files, when I evacuated from Hurricane Rita. With this external drive, I could also access critical files from another computer if needed, prior to returning home.

Don't procrastinate – Do not put off until tomorrow what you must be doing today. The complete Murphy's First Law of Computing is, "A properly backed up hard drive will never fail, but the first time that you do not have a current backup, your hard drive will always fail at the most inopportune time." Sadly, all too many of us learn the importance of a backup immediately after our hard drive fails, as we come to the realization that all is lost.

June should not really be backup awareness month; every month should be backup awareness month!

STUDY GROUPS

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Do I Have to Overwrite My Hard Drive Multiple Times?

Hard drives

By Stephen Elderkin, President of WhiteCanyon, Inc. www.whitecanyon.com

There are multiple standards for wiping drives, and each one recommends a certain number of hard-drive overwrites. How many times do you really need to overwrite your drive in order to keep your personal information from falling into the wrong hands? Computer forensics expert Stephen Elderkin explains below how overwriting drives makes data unusable and how many times you need to overwrite your drive in order to prevent identity theft.

How Many Times Do You Need to Overwrite Your Data Before It Is Truly Erased?

Many people have asked questions such as "Why do programs like WipeDrive have so many options for overwriting the hard drive of a computer?" "Why is there not just one way of wiping the data?" and "Which option is right for my circumstances?"

Unfortunately, a quick search of the Internet on these topics will only make you more confused because very few people have written about them correctly. Many of the articles you would find say to destroy your hard drive with a hammer because there is no safe way to completely erase the information stored on it. This myth is absolutely false.

Why Are There Multiple Overwriting Standards?

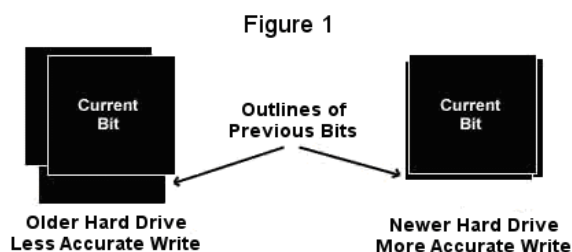
The main reason there are so many overwriting standards is because computers change at a rapid pace. Almost all of the standards were written by government agencies as a means of sanitizing unclassified drives. However, what most people forget to take into account is that old standards were written based on the specifications of old hardware. A 10 megabyte drive from the early 1980s has a very different architecture than a modern 120 gigabyte drive.

How Have Hard Drives Changed Over the Years?

One of the reasons hard drives had such small capacities several years ago is that the write and read heads of those drives were not very accurate. You could say they wobbled. The read and write heads are similar to the needle of a record player. A hard drive is composed of platters or disks, and each disk has a head that can read and write to the disk. As you can guess, the more the disk head wobbles, the less exact it will be. Modern drives have less wobble and can more accurately access the disk. This allows modern drives to have a much larger capacity than older drives by fitting more data into the same amount of space.

A Close-up View of a Hard Drive

Drives store data on disks using magnetic imprints that represent 1s and 0s. Figure 1 below shows what a bit would look like under an electron microscope. Notice that we can see three im-



prints of three different bits written to the disk in this example. Two bits were from a previous write while the large square represents the most recent bit written to this location. You can see that it is possible to read the data from a previous file stored on the drive by looking at the small amounts of magnetic charge left around the edges from previous writes.

How Would Someone Access Old Data from My Hard Drive?

Some people believe that with an electron microscope, advanced statistics, and special programming skills, you would be able to recover old data that have been overwritten. Even with these specialized and powerful tools, however, data recovery is so difficult that it can be called impossible; remember, we are looking at bits. There are millions and billions of them on a disk. It would take years to recover enough bits to begin looking for data, and even then you would not know which old bit imprints go with other old imprints. Looking at each of the possible combinations for billions of bits is a task so difficult that it can be called impossible.

The newer the drive, the less wobble there is in the disk heads and the less chance there is of having any residual bit data to look at. This means the chances of recovering previously overwritten data on a newer drive are even lower.

How Do I Prevent People from Looking at My Old Data?

To erase data on a drive, programs like WipeDrive overwrite each bit on the drive with junk data. The junk data bit replaces the magnetic imprint of the previous bit, thus erasing it. Because drive heads wobble, it makes sense to overwrite the data on the drive more than one time because the drive head is going to track differently for different writes. The older the drive, the more writes are needed to ensure that the old data has been replaced by junk data. The newer the drive, the fewer passes are needed.

How Many Overwrites Do I Need?

So how many overwrite passes do you need? One. Data is so incredibly difficult to recover after being overwritten that even people with electron microscopes, advanced statistical tools, and specialized programming skills are not going to be able to recover data from your drive. It just isn't going to happen. You can search the Internet for examples where overwritten data were recovered and you will not find even one event where a person recovered more than a couple of bits of a byte.

So the paranoid can rest easy. They can follow the Department of Defense standards to help them sleep better at night, but one overwrite is enough to protect your data from being recovered. Can you safely donate or sell an old computer without the risk of having your data stolen? The answer is yes if you use a program like WipeDrive to completely erase the computer before you let it leave your possession.

Hard Disk Disasters

Hard drives

By Dick Maybach, member Brookdale Computer User Group, New Jersey
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Hard disk failure is the most serious PC problem, because it jeopardizes all your data. Even if everything else in your PC dies, if your hard disk is good, you can just move it to a new machine and be back in business as though nothing had happened. The first problem is to recognize hard disk failure. Look for one or more of the following symptoms.

- A squealing or clicking noise – you will have to open your system case to find where the noise is coming from. Diskette and CD-ROM drives and fans can produce similar noises.
- A longer than usual time to boot up.
- A longer than usual time to open a folder or file.
- Spontaneous file or folder name changes.
- Frequent error messages.
- Missing or corrupted files or folders.
- Frequent “blue screens of death”.

If these begin to appear, immediately copy your data files (most likely your My Documents folder) to another device, preferably one with removable media, such as a CD-ROM or a DVD. Do not turn off your PC and do not spend time trying to diagnose the problem before saving your data. Every second you delay increases the likelihood that more data will be lost.

Clearly, the best defense is to back up your data before you have a problem. However, few people do this, and even if you do, it may have been some time since your last backup.

If your hard disk fails before you can save your data, all is not lost. If your data is very valuable, for example if it's customer data, you can send your disk to a commercial firm that specializes in data recovery. This service will cost from several hundred to several thousand dollars, but usually there is no fee unless they are at least partially successful. If you decide to do this, shut off your PC immediately and contact the firm for instructions. If your data is worth less than this amount, there are two things you can try that may work.

- Remove the hard drive from the system unit and give it a light tap by holding a screwdriver by its blade and tapping the unit with the handle. Reinstall the hard drive and reboot.
- Remove the drive and place it in a freezer for several minutes, until it is cold to the touch. Reinstall and reboot.

If either of these works, move your data to a safe place immediately.

If you have only a partial disk failure, save as much data as you can; then try the following.

- Restart your PC, but before Windows boots get into the BIOS setup utility. If you watch the screen carefully, you should see directions on how to do this. Often you will press F2 or F10. Look for an area called Utilities or something similar and run any drive diagnostics available.

- Run CHKDSK. (Click on Start, then on Run..., and at the prompt type

“chkdsk x: /r”, where x: is the drive in difficulty. If c: is problem drive, you will probably see a message that chkdsk can't check the drive now, but will offer to check it the next time you restart. Answer “y” and reboot.

- Run diagnostics supplied by your drive manufacturer, or if you don't have one, use Western Digital's Data Lifeguard Diagnostics, available free from <http://westerndigital.com>. Versions are available for both Windows and DOS.

You can take some simple steps to prolong the life of all your PC components.

- Keep the system unit clean, especially if it sits on the floor. Once every month or two open the system case and remove any dust and debris with a vacuum. I prefer this to compressed air, which just moves the dirt to a new resting place.
- Don't move your PC while it's operating; especially, don't jar it.
- Use a power surge protector or preferably an uninterruptible power supply (UPS). The latter are widely available for \$100 or so. Besides reducing stress on your components, one of these will save your data if the power fails. I always had a UPS at work, and every so often I would see the lights blink and hear streams of profanity from other offices whose occupants did not have one.

Modern PC components are quite reliable, and the chances are that you will replace your computer before anything fails. However, you should have a plan in case there is a problem. Similarly, the chances are that you will replace your car without ever having an accident yet you still wear a seatbelt, and carry insurance.



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How big is a 300 GB hard disk?

Hard drives

MONTHLY FEATURE

By Jim Sanders, Editor, Orange Bytes, North Orange County
Computer Club www.noccc.org / editor@noccc.org

I recently acquired a 300 GB hard disk for \$110 after rebates. When I look at that 3.5 inch hard drive that is one inch high and easily held in my hand, trying to put those 300 Giga bytes of storage in perspective is a little tough. I thought about the first Z80 CPM system I built in 1977 from a Cromemco kit that I had to solder together. It used 8 inch floppy disks that held 128,000 Bytes.

The diskettes were easy to damage and it was a good idea to keep them in storage boxes. I made some good money selling the SRW Computer Products plastic storage boxes at a great ACP Swap Meet discounted price of \$2.00 each. They were designed to hold 10, but you could get 2 or 3 more in if you were careful! I wondered how many floppies that would be, so I punched the numbers into the calculator. $300,000,000,000\text{B}/128,000\text{B} = 2,343,750$ diskettes. I don't know how to visualize that, but I did calculate that it would take \$468,750.00 worth of those boxes to store them all. I then remembered that the average price at that time was about \$3.50 a diskette. Again the calculator, $2,343,750$ diskettes \times \$3.50 = \$8,203,125.00. Wow! That is a number that I don't want to think about if I am talking about a hobby.

Another way to wrap your mind around huge numbers is to start small, with something that you can relate to, and work your way up. Now we know that one byte equals one character of the alphabet. The common 10 point type has 10 characters per inch. So, if we have 120 characters/bytes in a row, we have one foot. There are 5,280 feet in a mile. So $5,280 \times 120$ gives the number of character or bytes that would be on a mile long ticker tape that was being printed with 10 point type, an answer of 633,600 bytes. Compared to the 300 Giga bytes on the hard disk, 633,600 bytes is not much. To find out how much, we need to take the 300,000,000,000 byte capacity of the hard disk and divide it by 633,600 bytes in a mile. The answer to that math problem is the equivalent of 473,485 miles of ticker tape.

To put that into perspective, let's take the circumference of the earth (nominally 25,000 miles) and divide that into our answer. So, $473,485 / 25,000 = 18.93$. If we could find a big enough roll of ticker tape, printing all the information on that hard disk would wrap around the equator of the earth 18.93 times. That sounds impressive, but how many people can really visualize that. Besides, I don't know anyone who has a big enough ticker tape printer. Another thought, that ticker tape would be 3,000 miles short of stretching from the Earth to the Moon and back.

But let's try it with regular 8.5 inch \times 11 inch paper. Again, standard printing would be 10 point type, 10 bytes per inch, and 6 lines per inch. Most people leave at least a half inch margin all the way around the page. So that means each line will be 7.5 inches, or 75 bytes, and there will be 60 lines per page. So each page will use 75 bytes \times 60 lines, or 4,500 bytes. First, let's take 1 of the 300,000 megabytes on the disk and see how many pages that represents. $1,000,000 / 4,500 = 222.2$ pages. We still have 299,999 megabytes left and, using them, the total number of pages comes out to 66,660,000 pages.

That is also a little hard to imagine, so let's see how many reams of paper that is. Take 66,660,000 pages, divided by



500 sheets per ream = 133,320 reams of paper. Again, a little hard to visualize.

A lot of things have their volume given in cubic feet. That's 12 inches \times 12 inches \times 12 inches or 1,728 cubic inches, or 1 cubic foot. I measured one case of paper at 11.25 \times 9 \times 17.5 inches, or 1,771 cubic inches. Let's be generous and round that off to one cubic foot. So at 5,000 sheets, or ten reams per case, we divide the 133,320 reams that we came up with by 10 to get 13,332 cases, or that many cubic feet of space.

Stipulating that an average house is 1,400 square feet with eight foot high ceilings, then the average house has 11,200 cubic feet of space, ignoring the walls. If you filled up your house, wall-to-wall, floor-to-ceiling, with cases of printed paper, you would still have 2,132 cases left over. If you are in better shape than I am, there is still room to get one car in that two car garage. That's 10' \times 20' \times 9' = 1,800 cubic feet, so that still leaves us with 332 cases of paper. We could take all of the junk out of the other half of the garage, lay down a two foot thick layer of paper and put all the junk back in on top of it. That's how much the 300 Giga byte disk holds! So, unless you are planning on taking out a home improvement loan, don't buy that 400 Giga byte disk.

Keep your Hard Drive Driving

by Chris Doyle, Ontrack

Hard drives

Here's a quick quiz: What takes a licking yet keeps on ticking? Right—your hard drive. The truth is that hard disks manufactured in the last few years last longer than that old clunker you're using as a doorstop. Here's the surprise. You can squeeze a longer life—maybe even keep a faulty drive trucking—with a few easy tips.

* The silent killer of hard drives is heat—especially high-speed SCSI drives. My recommendation? Use a hard drive-cooling fan with all hard drives. You can buy them direct at <http://www.3dfxcool.com> or at FRY's. I have cooling fans for both my IDE and SCSI drives. In the lab, we have cooling fans on the drives at all times.

* Optimize your hard drive on a daily basis. As much as a pain this may be for some, optimizing your drive has several benefits. Besides optimizing the files, this process also catches many minor problems that may manifest themselves into a major problem later.

Examples? Cross linked or orphan files. Another good reason is that if you do have a problem accessing data on your drive, when a utility is run, such as Norton, nuts and bolts, tiramisu, the chances of recovery are much higher if the drive has been optimized recently. (By the way—Mijenix (<http://www.mijenix.com>) makes a great utility to perform this function <<Smile>>)

* Without questions, you must run SpinRite on all of your drives once a quarter—at number five, the highest. This is a personal recommendation. Steve Gibson's utility is excellent, and will find many if not all surface defects before they manifest themselves further. Trouble in Paradise, also known as TIP, is an excellent tool for Zip disks.

* Should I mention backing up your data on a regular basis? Do it often, early, and often and early.

* Examining your power supply is critical. It's not too difficult to tax a power supply in some systems if they are fully loaded. If possible, I recommend you make sure that the systems have a decent power supply—at least 250 watts or more. (PC Power and Cooling makes the best). Also make sure that your hard drives have their own independent power connection, not shared by other devices. An uninterruptible Power Supply (UPS) is another good idea (and don't sweat, these things are much more reasonably priced than in the past).

* Many people ask whether it's best to keep your computer running all the time—or better to turn it off and on. My recommendation is turn your computer on in the morning and off at night. I also think that disabling all power saving devices is best for hard drives. Forcing a hard drive on a desktop PC to spin down every 15 min of inactivity—and then waiting a minute or two to spin up—is worse than turning the computer * Never, ever move the computer while it is up and running. (Try telling that to laptop users!) Any blow to the computer—it tips over, is dropped an inch or more—and that bump gets transmitted directly to the hard drive. Most of the time it will cause a minor head crash. Worst case? It will cause

bad things to happen. No, don't ask. But you'll be calling Ontrack to get an estimate. <<smile>>

* Don't forget about static when handling drives. The newest and highest performing drives come with (hushed tones, please) Giant MR Heads. They're extremely sensitive to static. Ontrack has redone all of our static procedures to handle this technology, and I can tell you from first hand experience that static will kill drives dead.

* Drives that make clicking, thumping, or grinding noise are experiencing a mechanical problem of some sort. No surprise, huh? But each time the drive is powered up, the more that damage is occurring on the drive. If data recovery is needed in this case, please, please, please—the less you do to the drive, (powering up or using utilities) the more data we can recover. And the faster we can recover it.

* If you think you have a problem with a drive, try going to the manufacturers Web site. Download the specific utility they make to check the drive. Since the utility comes from the manufacturer, they know how to check specific issues with their drives.

Here are some examples:

* Quantum: QDPS

* IBM: DFT

* Western Digital: WD Diag

* Maxtor: MaxDiag (I think)

* Ontrack's Data Advisor: This tool will work with all drives. And it's probably the safest tool to use to check a drive.

* Here's a tip for tinkers, users that do a lot of testing of drives. In many cases, it's very difficult to get rid of a hard drive after installing a particular operating system or file system type. That's especially true when using programs such as System Commander.

Try booting up with Ontrack's Disk Manager. The utility has a feature that will write zeros to every sector of the drive. This puts the drive back into the shape it was when it came from the factory. After the process is done, it's easy to partition and format the drive. Don't forget, though, that this will destroy all information on the drive.

* Here's one for all of you SCSI users lurking out there (including me). Keep your drivers current. Driver and BIOS updates for your SCSI card can make a world of difference in how your drive performs. Don't forget to make sure you follow the specifications for cabling and termination.

To defrag, or not to defrag?

Hard drives

By **Carey Holzman**, freelance writer; co-host of the nationally syndicated talk show Computer America; instructor at Glendale Community College in Arizona; owner of a computer-repair business, and author of The Healthy PC. He enjoys sleeping in his free time. <www.careyholzman.com> <Carey@CareyHolzman.com>

Defragmenting, of course, is the process of reorganizing all data on a hard disk drive so that each file is arranged into a single uninterrupted, or contiguous, location on the disk. Many system builders and technicians have been taught, and still believe, that defragmenting hard disk drives on a regular basis keeps PCs operating at peak performance. But that idea is behind the times.

While it was true that defragmenting helped older PCs, it no longer applies. Today we have 7200-RPM (rotations per minute) hard disk drives with improved seek and latency times; many also contain an 8 or 16 MB cache buffer. Let's not forget Windows XP's ultra-efficient New Technology File System (NTFS). For PCs, servers, and workstations equipped with these innovations, defragmenting no longer makes much improvement, if any, to system performance.

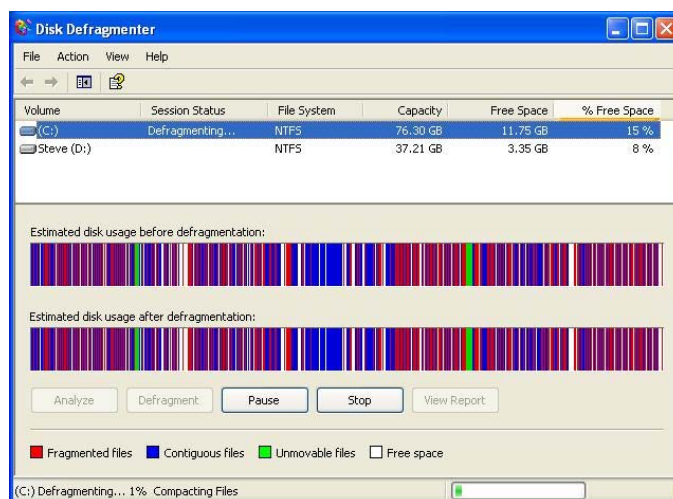
This is even more of an issue with the new Serial ATA hard disk drives, which are quickly becoming the new standard. Examples of SATA drives include the Seagate Barracuda line <<http://www.seagate.com/cda/newsinfo/newsroom/releases/article/0%2C%2C2733%2C00.html>> and new 10,000-RPM IDE (Integrated Drive Electronics) hard-disk drives, such as the Western Digital <<http://www.wdc.com/en/products/Products.asp?DriveID=40>> Raptor.

Still, defragmenting remains an important task. Why? For one, power consumption and heat can be directly related to an excessively fragmented hard drive. When the computer's operating system requests data, if a file is not contiguous, then extra seeking on the disk may be required. But a more important consideration is disk failure. Should a hard drive fail, the likelihood of successfully recovering data from the dead or damaged drive improves significantly if the data is contiguous rather than randomly scattered about the drive platters. The software companies that create defragmentation software would like you to believe that their software does improve system performance. But my own in-house testing refutes that, as do recent findings from Steve Gibson, PC World and other system testers.

So What Works?

Since defragging the disk won't do much to improve Windows XP performance, here are 23 suggestions that will. Each can enhance the computer's performance and reliability. Best of all, most of them will cost you nothing.

1.) To decrease a system's boot time and increase system performance, use the money you save by not buying defragmentation software -- the built-in Windows defragmenter works just fine -- and instead equip the computer with an Ultra-133 or Serial ATA hard drive with 8 or 16MB cache buffer.



2.) If a PC has less than 512 MB of RAM, add more memory. This is a relatively inexpensive and easy upgrade that can dramatically improve system performance.

3.) Ensure that Windows XP is utilizing the NTFS file system. If you're not sure, here's how to check: First, double-click the My Computer icon, right-click on the C: Drive, then select Properties. Next, examine the File System type; if it says FAT32, then back-up any important data. Next, click Start, click Run, type CMD, and then click OK. At the prompt, type CONVERT C: /FS:NTFS and press the Enter key. This process may take a while; it's important that the computer be uninterrupted and virus-free. The file system used by the bootable drive will be either FAT32 or NTFS. I highly recommend NTFS for its superior security, reliability, and efficiency with larger disk drives.

4.) Disable file indexing. The indexing service extracts information from documents and other files on the hard drive and creates a "searchable keyword index." As you can imagine, this process can be quite taxing on any system. The idea is that the user can search for a word, phrase, or property inside a document, should they have hundreds or thousands of documents and not know the file name of the document they want. Windows XP's built-in search functionality can still perform these kinds of searches without the Indexing service. It just takes longer.

The OS has to open each file at the time of the request to find what the user is looking for. Most people never need this feature of search. Those who do are typically in a large corporate environment where thousands of documents are located on at least one server. If you have no need for this search feature, I recommend disabling it. Here's how: First, double-click the My Computer icon. Next, right-click on the C: Drive, then select Properties. Uncheck "Allow Indexing Service to index this disk for fast file searching." Next, apply changes to "C: subfolders and files," and click OK. If a warning or error message appears (such as "Access is denied"), click the Ignore All button.

5.) Update the PC's video and motherboard chipset drivers. Also, update and configure the BIOS. For more information on how to configure your BIOS properly, see this article on my site. <www.careyholzman.com/bios/index.html>

6.) Empty the Windows Prefetch folder every three months or so. Windows XP can "prefetch" portions of data and applications that are used frequently. This makes processes appear to load faster when called upon by the user. That's fine. But over time, the prefetch folder may become overloaded with references to files and applications no longer in use. When that happens, Windows XP is wasting time, and slowing system performance, by pre-loading them. Nothing critical is in this folder, and the entire contents are safe to delete. It will automatically rebuild itself with current frequently used applications in no time.

7.) Once a month, run a disk cleanup. Here's how: Double-click the My Computer icon. Then right-click on the C: drive and select Properties. Click the Disk Cleanup button -- it's just to the right of the Capacity pie graph -- and delete all temporary files.

8.) In your Device Manager, double-click on the IDE ATA/ATAPI Controllers device, and ensure that DMA is enabled for each drive you have connected to the Primary and Secondary controller. Do this by double-clicking on Primary IDE Channel. Then click the Advanced Settings tab. Ensure the Transfer Mode is set to "DMA if available" for both Device 0 and Device 1. Then, repeat this process with the Secondary IDE Channel.

9.) Upgrade the cabling. As hard drive technology improves, the cabling requirements to achieve these performance boosts have become more stringent. Be sure to use 80-wire Ultra-133 cables on all of your IDE devices with the connectors properly assigned to the matching Master/Slave/Motherboard sockets. A single device must be at the end of the cable; connecting a single drive to the middle connector on this type of ribbon cable will cause signaling problems. With Ultra DMA hard drives, these signaling problems will prevent the drive from performing at its maximum potential. Also, because these cables inherently support "cable select," the location of each drive on the cable is VERY important. For these reasons, the cable is designed so drive positioning is explicitly clear.

10.) Remove all spyware from the computer. Use free programs such as AdAware by Lavasoft <www.lavasoft.com> or SpyBot Search & Destroy <www.safer-networking.org>. Once these programs are installed, be sure to check for and

download any updates before starting your search. Anything either program finds can be safely removed.

Any free software that requires spyware to run will no longer function once the spyware portion has been removed; if you really want the program even though it contains spyware, simply reinstall it. The applications mentioned above are great for removing Spyware once it's been installed. To prevent the installation of 80% or more of future Spyware, download and install Microsoft's FREE anti-spyware utility <www.microsoft.com> and installing JavaCoolSoftware's SpywareBlaster <www.javacoolsoftware.com/spywareblaster.html>

For more information about what Spyware is and how you unknowingly get infected with it, visit this Web <<http://www.tuglet.com/URLMRecordsTheURLThing.asp?nID=162957&f=www.webpronews.com/it/operatingsystems/wpn-22-20030610RemovingSpyware.html>> Pro News page.

11.) Remove any unnecessary programs and/or items from Windows Startup routine using the MSCONFIG utility. Here's how: First, click Start, click Run, type MSCONFIG, and click OK. Click the StartUp tab, then uncheck any items you don't want to start when Windows starts. Unsure what some items are? Visit the WinTasks Process Library at <www.liutilities.com/products/wintaskspro/processlibrary/>. It contains known system processes, applications, as well as spyware references and explanations. Or quickly identify them by searching for the filenames using Google or another Web search engine.

12.) Remove any unnecessary or unused programs from the Add/Remove Programs section of the Control Panel.

13.) Turn off any and all unnecessary animations, and disable active desktop. In fact, for optimal performance, turn off all animations. Windows XP offers many different settings in this area. Here's how to do it: First click on the System icon in the Control Panel. Next, click on the Advanced tab. Select the Settings button located under Performance. Feel free to play around with the options offered here, as nothing you can change will alter the reliability of the computer, only its responsiveness.

14.) If you are an advanced user who is comfortable editing their registry, try some of the performance registry tweaks offered at Tweak XP <www.tweakxp.com/performance_tweaks.aspx>

15.) Visit Microsoft's Windows update site regularly and download all updates labeled Critical. Download any optional updates at your discretion.

16.) Update your anti-virus software on a weekly, even daily, basis. Make sure you have only one anti-virus software package installed. Mixing anti-virus software is a sure way to spell disaster for performance and reliability.

17.) Make sure you have fewer than 500 fonts installed on their computer. The more fonts you have, the slower the system will become. While Windows XP handles fonts much more efficiently than did the previous versions of Windows, too many fonts -- that is, anything over 500 -- will noticeably tax the system.

Hard drives

18.) Do not partition the hard drive. Windows XP's NTFS file system runs more efficiently on one large partition. The data is no safer on a separate partition, and a reformat is never necessary to reinstall an operating system. The same excuses people offer for using partitions apply to using a folder instead. For example, instead of putting all your data on the D: drive, put it in a folder called "D drive." You'll achieve the same organizational benefits that a separate partition offers, but without the degradation in system performance. Also, your free space won't be limited by the size of the partition; instead, it will be limited by the size of the entire hard drive. This means you won't need to resize any partitions, ever. That task can be time-consuming and also can result in lost data.

19.) Check the system's RAM to ensure it is operating properly. I recommend using a free program called MemTest86 <www.memtest86.com/> The download will make a bootable CD or diskette (your choice), which will run 10 extensive tests on the PC's memory automatically after you boot to the disk you created. Allow all tests to run until at least three passes of the 10 tests are completed. If the program encounters any errors, turn off and unplug the computer, remove a stick of memory (assuming you have more than one), and run the test again. Remember, bad memory cannot be repaired, only replaced.

20.) If the PC has a CD or DVD recorder, check the drive manufacturer's Web site for updated firmware. In some cases you'll be able to upgrade the recorder to a faster speed. Best of all, it's free.

21.) Disable unnecessary services. Windows XP loads a lot of services that your customer most likely does not need. To determine which services you can disable, visit the Black Viper site <<http://majorgeeks.com/page.php?id=12>> for Windows XP configurations.

22.) If you're sick of a single Windows Explorer window crashing and then taking the rest of your OS down with it, then follow this tip: open My Computer, click on Tools, then Folder Options. Now click on the View tab. Scroll down to "Launch folder windows in a separate process," and enable this option. You'll have to reboot your machine for this option to take effect.

23.) At least once a year, open the computer's cases and blow out all the dust and debris. While you're in there, check that all the fans are turning properly. Also inspect the motherboard capacitors for bulging or leaks. For more information on this



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Improving PC Performance Without Upgrading Your Hardware

Boosting up the performance of your PC doesn't have to be difficult or expensive. Here's a step-by-step guide on how to do it.

By Kevin J. Vella, Public Relations Manager
Uniblue Systems Ltd <kevinjv@uniblue.net>
<http://www.uniblue.com/>

Nine things that Chip Manufacturers and PC retailers don't tell you!

The most common reasons for PC slowdowns are viruses, spyware, too many temporary files, software conflicts, residues from unwanted (and uninstalled) trial downloads and other applications, and, sometimes, just too many applications running at the same time hogging all or most of your computer resources.

The following are nine things that Chip Manufacturers and PC Retailers don't want you to know or how to perform. Following this advice will drastically increase your PC performance and help you regain your sanity while saving loads of money. And, if your PC is three years old and can't afford to upgrade yet, you will be able to squeeze out some more juice out of the old thing!

1. Know What You Are Running:

Sometimes slow downs occur because you have too many programs open at the same time. Shutting down those programs that you are not using will immediately boost performance.

2. Monitor Windows Processes:

If you press CTRL+ALT+DEL you will call up Tasks Manager which lists most of the processes that you are actually running.

Although limited, Task Manager will give you a reasonably good overview of what's running. But before ending processes to increase your performance please exercise extreme caution and learn what the processes do. Look at the article Maximizing PC Security to get a good overview of how you can do this.

You will find that either there is too much running or there is something hogging your CPU and memory. With certain Windows Utilities you can even set-up your computer to run certain system configurations depending upon the type of application/s you are running at the moment. These utilities also give you an insight on resource allocation and, with the help of graphs, can help you identify which application and/or process is most likely to slow or crash your computer.

3. Have a Clean System:

One of the most common reason (probably the most common) for slow downs is viruses and/or spyware. Sometimes even spyware residuals that have escaped your anti-spyware products can plague you for months. I had a problem with MSAA.EXE which was not caught by three spyware scanners - I eventually figured out what I had running because of point #2 above!

Virus and spyware authors just love creating menaces that hog your system resources and the only protection you have is to have everything up-to-date.

Make sure your antivirus software is up to date with current virus definitions. Then scan your computer for viruses. Make sure your Spyware software is up to date with current definitions - because of the way spyware works you should try and use at least two different programs to scan your system (scanners are usually free of charge and Microsoft have a free Anti-Spyware product which you should use). Firewalls are also an important security tool but beware as having an active firewall may slow performance.

What you may do once you are 100% sure that your system is clean is turn off your security only when not connected to the Internet. This should help you increase your performance too. But remember to switch everything on before going online. Otherwise, you will be immediately at risk.

4. Update Your Operating System

Having the latest updates of Windows may not generally increase system performance. However, Microsoft are continu-

ally patching up any security loop holes or performance related glitches. So in the long run, your system will be better off with the latest OS updates.

5. Disk Clean-ups

Defragging and disc repairs are also extremely important. Defragging is the process of locating and consolidating your files and folders sitting on your hard drives. This can be done automatically by Windows and as a result your system can access these files and folders (and new ones) more efficiently and quickly. Regular defrags and disk repairs will keep your computer running at optimum levels.

6. Temporary File Management:

Cleansing your temporary files including your Internet history including cookies gives you a larger amount of hard disk space to work with. This, in turn, gives more space for Windows virtual files (Page File memory). I go as far as limiting how much space Windows uses to create temporary files. For example, my setting is 1 Mb. In other words, at any point in time Windows is only allowed 1 Mb of space to store cookies, activeX controls etc.

7. Start-up Management

Next time you start up your PC just time how long it takes to boot and let you start using your applications. If you are lucky, start-up times should be no longer than seconds. In most cases, however, it takes minutes.

The Windows Startup Folder tells you most of the more visible processes that are running in your system. However this is not enough - many installed applications start up processes at boot up that you don't even know about. Not that these are harmful, they're probably useful and required. However, by monitoring what is starting up, you have a good chance of finding out what should and what should not be started. Such utilities as performance optimizers (see #9 below) will automatically identify your start-up files and allow you to disable some or all of them. Again, exercise caution here. Be sure to disable only those start-up processes that are superfluous.

My start-up times (and as a result my CPU and MEM Usage) were very short until I installed a particular program which I needed. However I made the mistake of setting up the server version when I don't really need it - I confess, it wasn't a mistake it was a program that impressed me so much that I decided to install the server version because I thought that I would have more visible functionality. However I was wrong. To cut a long story short, I had some system files installed on my system which were needed if my PC were actually a server (and not a client). One particular process hogged my system and used a constant 10,820 K of my memory when working in the background. Reinstalling the version I needed improved my performance without my having to spend as much as one penny.

8. Caution: Download in Progress

Be honest, whatever they tell you about security (although very true and serious), you just can't resist downloading and trying

out new products and utilities. It's fun! I just love scouring the Internet looking for some new utility to try out.

A few weeks back I needed software that lets me sort out the myriad of documents I have on my PC. Thing is I didn't want to spend too much money so I started looking at Open Source products that are free of charge. Well, I must have downloaded and installed at least 10 different programs. I liked none so in a second round I found the one I wanted. However, when uninstalling all the programs I tried, I had to be very careful. The uninstall operation of most applications or programs almost always leaves residual files or folders in your system. No uninstall operation will leave your system the way it was - dlls, processes such as schedulers that kick in at start-ups, and other legitimate processes that, with the main program being uninstalled have no specific function except to hog your system unnecessarily.

What I usually do after I uninstall and reboot my machine is use a Windows Utility (WinTasks) to help me identify the processes which are unnecessary and just block or delete them. Again exercise caution when doing this - make sure that you have all the program and its sub components uninstalled, then reboot, then try the manual clean up. If you are unsure, it is better to leave them in your system but making sure that they are blocked.

9. Use Performance Optimizers

Finally, if either you don't want to perform many of these things manually or you have exhausted all possible avenues, you may want to consider a Performance Optimizer.

Even the more experienced users cannot manage to fully control and monitor all that is happening within their system without a small toolkit of software utilities that generally includes a sturdy performance optimizer.

If anything these utilities do the work automatically. I use performance optimizers because they can do the job better and in as little time as possible. When I use a computer I am either working or playing some game - I just don't want to hassle myself tweaking and looking under the hood of my PC. Performance optimizers have been designed to inch their way into the system and help you boost your PC performance drastically. These utilities usually don't cost more than \$25 to \$30 and give you much more value than investing in RAM simply because they seek and solve slowdown problems rather than mask it.

Sometimes RAM is necessary. But, I believe that following these nine steps and principles you can get much more out of your PC. Plus, performance optimizers go the extra mile because they improve your system's overall operation beyond any level that you can manage on your own steam; simply because operating systems are getting more complex by the upgrade and it is almost humanly impossible to keep track of all that goes on in your computer.

Back to the Future with System Restore

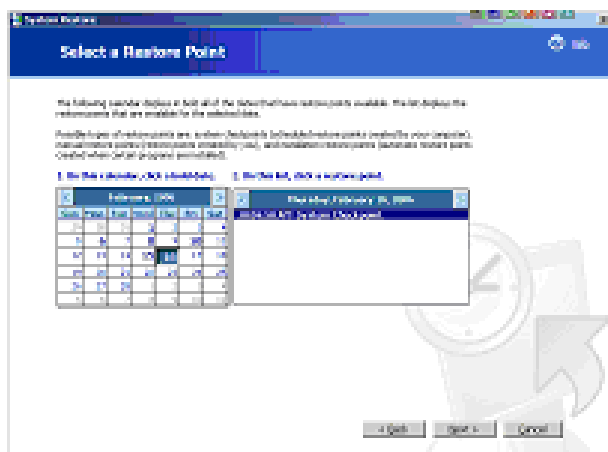
By Marjorie Tucker, Member of the Mountain Computer Users Group, Young Harris, GA
<tucker780@verizon.net> <<http://mcug.org/>>



Did you know that your computer has the ability to go back in time - just like the movie, Back to the Future? Well, it does, using a Windows XP program named System Restore. This built-in Windows program periodically makes an image of your hard drive, much like a backup copy. Then, when you have one of those annoying problems, like losing all of your desktop icons, you can restore that image to get your computer back in good working order.

You can find System Restore under Start - All Programs - Accessories - System Tools - System Restore. The screen that initially comes up gives you some basic information about this program. It will restore your settings to an earlier point in time, but leave your data completely intact. And, there is no fear of using it since the program is completely reversible.

Create Your Own Restore Point



To begin, you merely click the Next button on the right side of the screen. The next page shows a calendar, open to the current month, with bold numbers indicating the dates when an image was created on your computer. You can also use the arrows at the top of the calendar to go farther back in time, if necessary. You merely choose one of these dates and click again on Next.

The following screen reviews your choice and advises you to close all open programs since System Restore will be re-starting your computer. Verify that you want to take this step and then click on the Next button again to start the process.

Be patient because it will take several minutes to perform this action; but eventually your computer will restart itself and it will be back to the restoration time point. If this didn't solve your problem you can run the program again and go even further back in time.

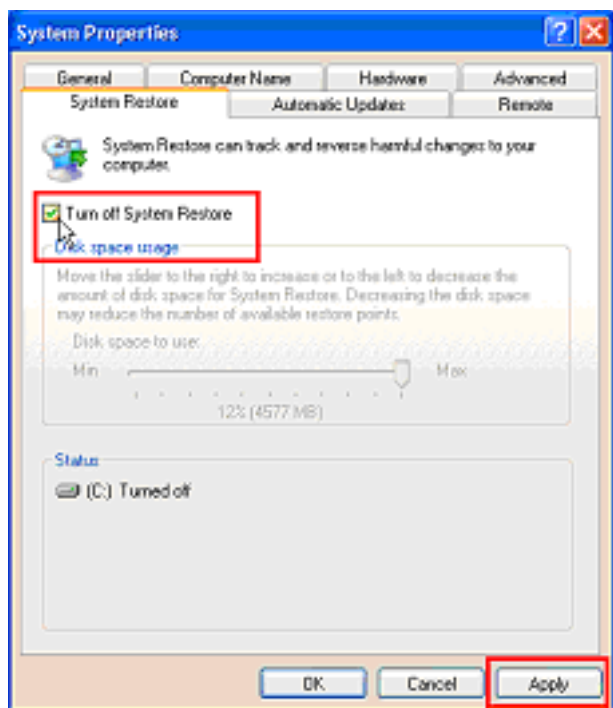


There are times when it would be very nice to know that you have a backup all ready to use - such as just before you start to install that monstrous new program that may destroy your entire computer setup. Well, System Restore will let you create an additional restore point anytime it would be convenient. To do this, merely click on the second choice of the initial System Restore screen, Create a Restore Point. The program will make an instant backup that you can use when that new program fails.

There are Some Cautions

System Restore is very useful tool and you will probably need to use it before long. However, this handy feature can cause problems when your computer catches a virus or gains an unwanted trojan. Every time your computer creates a new restore backup point, it is also backing up that virus or trojan. That means that although you get rid of the problem, it has the ability to sneak back into your computer from that backup. For this reason Symantec and other antivirus software companies suggest that you turn off the System Restore feature before you de-virus your computer.

Operating Systems



To turn off System Restore click the Start button, right-click My Computer and left-click Properties. Click the System Restore tab and then check the box labelled "Turn off system restore." You will be asked if you are certain you want to turn it off; click on OK. System Restore is now turned off. You are now free to get rid of any viruses or trojans without fear that they will immediately return. Just remember to turn System Restore on when you have finished.



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News Brief

Lego launches new Mind Storm line

Lego has picked 100 lucky fans who will be the first members of the public to get their hands on Mindstorms NXT, the latest generation of the company's programmable robot toys. Last year some Lego fans figured out a way to hack the development tools on a company Web site. Instead of going after them with lawyers, Lego responded by saying, "That's terrific." The 100 Lego fans named last week have a chance to help develop the product by road-testing it and then share their impressions with Mindstorm executives. The 2006 version--which is expected to be publicly available in August 2006--gives users the ability to build and program robots that incorporate visual, sound and touch-sensitive sensors that can be controlled wirelessly using Bluetooth devices. Mindstorms director Soren Lund hopes many of the developer-program members will create attractive and impressive robots that Lego will be able to showcase on the Mindstorms NXT Web site when the product officially launches this summer..

Windows XP Housecleaning

Operating
Systems

By Dick Maybach, Member of the Brookdale Computer User Group, New Jersey

<<http://www.bcug.com/>> <N2nd@att.net>

Unless you are careful, after a period of use Windows will begin to slow down. This occurs because many programs are always active, even though you aren't using them and because the number of files increases, which means that searches take longer. Fortunately, Windows XP contains several tools to help you ease these conditions. Using these tools periodically (every month or two is reasonable) will help you keep your PC lean and mean.

Use Disk Cleanup to delete useless files. Right-click on a disk icon in Windows Explorer (C: will be the most rewarding); then click Properties, click the Disk Cleanup button, and select the actions. (I prefer not to compress old files as I've had bad experiences with compression.) Also be sure to check the actions available under the More Options tab, in particular deleting all but the last restore image. Finally search all your hard drives for the strings "*.tmp" and "*.dmp" in filenames. Delete anything more than a week or so old; however, Windows will refuse to delete any files it considers important.

Go through your saved e-mail and delete old messages. This will reduce the size of the mail database file and help you to find important e-mail more quickly.

Look at the list of installed programs (Start ? Control Panel ? Add or Remove Programs) and remove any you don't use. Most of find that new software often is less useful than we expected. Also, many PC manufacturers ship machines with software that we neither ask for nor need. While you're checking, be sure to click on the Add/Remove Windows Components icon in the left margin of the window. You find MS tools that you don't need.

Windows allocates a large portion of your disk space for use by System Restore (Start ? All Programs ? Accessories ? System Tools ? System Restore ? System Restore Settings). Select each drive and click on the Settings button. Reduce the Disk Space Usage by moving the slider to no greater than 1 GByte on each of your drives. Use less on small drives, especially if they contain nothing but data.

Check the startup folder for programs that automatically start; you will probably find that you don't want many of these running. Start ? All Programs ? Startup to view the contents of the startup folder. To stop a program from starting automatically right click on its icon then click delete. This does not delete the program; it only stops it from being started at boot-up.

Unfortunately, most programs that start automatically don't appear in the startup folder. To disable these, click Start ? Run and type "msconfig". Click the startup tab and uncheck any programs you don't want to run at startup. When you finish, Windows will ask you to restart. After boot-up you will see a diagnostic screen. On it uncheck the box that displays the diagnostic screen each time you boot.

You can also turn off Windows services that you don't need, but you shouldn't do this unless you are very knowledgeable. However, it doesn't hurt to look at what's running, and you may learn something. Open the Services window by clicking Start ? Control Panel ? Administrative Tools ? Services and the System Configuration window by clicking Start, then Run,

typing "msconfig" and selecting the services tab. Move the windows so you can see both. Clicking on a name in the services window will display a short description. Removing a check mark in the System Configuration window will disable that service, but no matter how confident you are, don't disable any service marked "essential".

Check for unsigned files and drivers; these can be corrupted files or programs not approved by Microsoft. Click Start ? All Programs ? Accessories ? System Tools ? System Information ? Tools ? File Signature Verification Utility ? Start. The search will take several minutes; then a list will appear showing all the program files without valid signatures. Consider deleting (by using the Add/Remove Programs tool) these.

Another utility you should know about is System Information (Start ? All Programs ? Accessories ? System Tools ? System Information). This doesn't allow you to change anything, but you can learn a lot about Windows by exploring it. For instance, if you click on the plus box by Software Environment then on Startup Programs, it will show you a list (after a pause) of all the modules that start at boot-up. It shows information in each entry that may enable you to track down a troublesome program. As is common with Windows utilities, you can sort any column by clicking on its header.

If you have problems with a program that ran with an earlier version of Windows, try running them in program compatibility mode. Click Start ? All Programs ? Accessories ? Program Compatibility Wizard ? Next ? Next. You will see a list of all the installed programs. Select the troublesome program and a compatibility mode (Win 95, Win NT, Win 98/Me, or Win 2000). Clicking Next brings up a screen allowing you to set a lower resolution on the screen, which may be needed for very old Windows programs.

You can tune your PC performance with very little risk, even if you are a novice. Right click on My Computer in Windows Explorer; then, click Properties ? Advanced ? Performance Settings. Usually, checking "Let Windows choose what's best for my computer" is satisfactory, but you might to try "Adjust for best performance" if you machine is slow. If you are more adventuresome, you can select Custom and disable individual features by unchecking items in the list. If you don't like the result, you can just go back to "Let Windows choose what's best for my computer."

After completing the cleanup check to see if you should defragment your disks. Right click on a disk icon in Windows Explorer; then click Properties ? Tools tab ? Defragment now ? Analyze button. If Windows says the disk does not need defragmenting, don't do it. Defragging the C: disk takes a long time, and seldom results in any noticeable performance improvement.

Do a clean sweep of your computer

Operating
Systems

MONTHLY FEATURE

By Marc Saltzman

<<http://www.microsoft.com/athome/moredone/cleansweep.aspx>>,
<mindshar@microsoft.com>

How to safely remove software and files from your PC

Like many mothers, Andrea Grace will sit down at her PC to check e-mail, only to find that her kids, Jason, 8, and Rachel, 10, have installed some new programs. "Between those CD-ROM games found in cereal boxes and downloaded Neopets, there are now icons all over the place," says Grace. "And of

course they don't play half the games. If I ran out of space I wouldn't know how to delete them," she admits.

Grace isn't alone—it's not uncommon to fill space on a hard drive with games, productivity programs, or files, such as music, digital photos, and video clips. Some technology analysts believe that we use less than 10 percent of the programs installed on our computer.

So, considering you're likely to do some spring cleaning in the coming months by removing old and unwanted clutter from your closets and garage, why not tidy up your computer as well?

While deleting programs is relatively easy, many novice computer users believe they can be removed by simply deleting their icon on the desktop. This does not work as it's only a shortcut to the real program, which consists of many files. And keep in mind that you can do damage to your PC's performance by deleting an entire program folder that you don't think you need from your hard drive.

The following is a look at how to safely—and easily—remove old or unused programs from your Microsoft Windows XP-based computer. Much of the advice is also applicable to older versions of Windows.

Decide which programs to purge

The first step is to decide which programs you no longer need. Try to keep only the programs you use regularly as it's easy to become a digital packrat. If it helps, make a list of programs you want to keep and others you can do away with.

Has it been a year since your child touched that action game? Chances are you still have the original CDs anyway (should you want to reinstall it in the future), so perhaps it's time to wipe it off the hard drive.

Have your music tastes changed since you went through that Country & Western "stage" in 2002? You can easily delete downloaded MP3 files—or at least burn them to a CD to free up space on your PC.



If you're unsure about a program that's on your hard drive, you can always do a search at your favorite search engine (e.g., MSN Search) to see what it is. For example, if you don't plan on buying a camcorder, remove any preinstalled video-editing software that may have come bundled on your PC.

Ready, set, "Start"

The easiest way to remove a program from your hard drive is to look for an uninstall or remove option from within its program group. You will find this by clicking the Start menu, then All Programs (or Program Files), and then choosing the program you want to uninstall.

Once inside this program group, you will usually see an icon to launch the program, a ReadMe file (documentation that tells you how to use the program), and, for our purposes, an option that enables you to remove or uninstall the program. Click this and follow the onscreen wizard to safely remove the program from your PC. You may be asked to reboot your computer. Only click to do so once you've saved everything that's open at that time.

Quick tip:

If you want to free up even more room on your hard drive, go to My Computer or Windows Explorer and right-click on the letter associated with your hard drive (usually C:). Click Properties, then click Disk Cleanup. Check off the desired boxes and it will tell you how much space it can free up.

When uninstalling a program, you may also get a message that says the program can remove a file that may be shared by another program. To be safe, keep these suggested files on your PC (they shouldn't take up much room on your hard drive, anyway). Similarly, when you uninstall a game, the program may ask if you want to keep saved game files (i.e. a bookmark of your progress). If you think that you will reinstall and play this game again, you can choose to keep these files.

Sometimes the program group may be the company's name. Move your mouse over the name and it will reveal which program(s) are inside.

Quick tip:

If you download a .zip or .exe file from the Web and then install the program to the hard drive, you can delete the original file once it's successfully installed.

Keep in mind that your PC automatically creates restore points while you're using your computer. That way, if you accidentally delete a program that you want to keep, you can revert your PC back to an earlier time. To do so, click the Start menu, then All Programs (or Program Files), then Accessories, and then System Tools. Click System Restore and the program will guide you through the steps.

Take "Control"

Some programs do not give you the option to uninstall them from a program group. No problem. You'll need to go to the Start menu, select Control Panel, and then Add or Remove Programs.

It may take a few seconds for this page to load but once it is finished, it will display a long alphabetical list of installed programs. Once you see the name of a program you no longer want on your hard drive, click it, then click the tab to the right of it, which will say Remove or Change/Remove, and follow the prompts. A progress bar will show you how long it will take to safely remove the program. When it's finished, you will see the list once again.

Go through the list, but leave those programs that you are unsure of. Remember—you may use Microsoft Word all the time so do not uninstall Microsoft Office as Word is part of it. Some programs may not be familiar to you, but are required for another to run—a rule of thumb is to ignore it, especially if it doesn't take up too much space on your hard drive (you will see how many megabytes on the right-hand side of the program name). If the program is spyware or adware (such as SuperShopper Toolbar), then you may want to leave this for your spyware/adware program to sniff out and safely remove. Two good free programs are Ad-Aware and SpyBot, both of which are available at Download.com. You can also download the free new Microsoft Windows AntiSpyware (Beta).

Quick tip:

This article focuses on uninstalling entire programs, but it's even easier to delete individual files. Once you're inside My Computer or Windows Explorer, simply highlight the files you no longer want on your hard drive and tap the delete button or right-click and select Delete. This will send all unwanted files

News Brief

Digital Photo Contest

All of you digital photo enthusiasts have until September 30 to enter your photos in this contest. The kick-off event for the 2007 Annual Conference will showcase the talents of our member group photographers! Somewhere inside of all of us is a creative genius just waiting for the chance to grab the spotlight and we want to give you that chance. There will be multiple chances to win, professional judging and our own "Photo Idol" chosen from our Conference attendees! So, grab those cameras and start shooting!

<<http://www.apcug.net/events/photocontest/index.htm>>

Essential Processes, How You Can Tell

By **Vinny La Bash**, Member of the Sarasota PCUG, Florida
<www.spcug.org> <labash@spcug.org>

Every other computer article these days seems to be about Windows Vista, a long promised operating system that won't make its appearance for almost another year. Why all the fuss about something that doesn't even exist yet? It's as far advanced over Windows XP as Windows 95 was over 3.1, that's why. That's nice, but we don't have Vista to take us to Nirvana today. We common folk have XP. That's not bad, but we don't have Vista as promised. Maybe this time next year I'll be writing about a Vista tip to make life easier while we're all anticipating the release of Vienna, the follow on to Vista. While we're waiting, here's something to make the wait easier.

If you press Ctrl+Alt+Delete to bring up the Windows Task Manager and then activate the Processes tab, you see a long list of computer services that run in the background while you're working with your system. You've undoubtedly received recommendations that you should shut down or disable the unessential processes to improve system performance. This is sound advice, but how can you tell what's essential from what could be shut down without clobbering your operation? Try the following to get a fighting start in that direction.

Restart your system and when it begins to reboot press F8 repeatedly until the Start Up menu appears. Select the Safe Mode option from the menu. If you get another screen asking you to select the operating system, choose the one which applies to you. In most cases, you will see one choice and it will be Windows XP Home Edition, Windows XP Professional Edition or Windows XP Media Center Edition. A bunch of programming gibberish may fill up your screen next and your system may appear to be 'frozen' for a minute or two. Relax, but don't touch anything, especially the keyboard or the mouse.

Eventually something like the normal Windows Welcome Screen will appear and you will be asked to sign in. If you are the only one using your system and your user profile has full Administrator privileges, you can safely log on to Windows Safe Mode. If you're not certain, use the Administrator Profile.

You will now be confronted with a formidable looking dialog box containing an ambiguous explanation of Safe Mode. Click the Yes button. When the desktop appears, don't panic. The icons may look very different, but nothing is wrong. One of the characteristics of Safe Mode is to load only the minimum number of video drivers that will support the lowest resolution your monitor can handle. This guarantees you will have a visible screen in Safe Mode. Everything will be back to normal when you restart, but you will probably have to rearrange your icons.

Press Ctrl+Alt+Delete. This time the Windows Task Manager displays a considerably shorter list in the Processes section. This list represents what's really essential to keep Windows running. Don't shut down or disable anything in this short list when you are running in Windows normal mode. You run the risk of not only crashing your system, but you may not be able to boot up again without doing a repair reinstall of your operating system. The idea here is to improve the performance of your system, not put yourself out of business.

You can make a handwritten list of the processes that are running in Safe Mode and use that as a reference, but here is another method.

1. Click on a blank area of the Windows Task Manager to make sure it is active. Click the Processes tab.
2. Press Alt+PrtScrn to capture the image of the dialog box and store it in the clipboard area.
3. Close the Windows Task Manager Dialog box.
4. Click on the Start button.
5. From the Start Menu, open the All Programs section.
6. Open the Accessories Menu.
7. Start the Paint program.
8. From the Edit menu select Paste to put the stored image in the canvas area.
9. Save the image on the Desktop, the My Documents folder or in any folder where you can retrieve it easily.
10. Close Paint.
11. Restart Windows.
12. Rearrange your icons if necessary when the desktop appears in normal mode.
13. Open Paint as you did in Safe Mode.
14. Retrieve and print the Task Manager Dialog box image.

You can copy and paste the image in your word processor or another application if you prefer. When you shut down or disable any process not on your short list, you can be confident that you won't inadvertently clobber your system while trying to improve its performance. What about all those other programs running in the background? That's a subject for another article.

Computer Crimes

Susan Ives, Alamo PC

Foolproof

By: Dianne Pugh,
Paperback, Pocket
Star Books, 1998,
514 pages, \$6.99



Bridget and Kip Cross disagree about the future of Pandora Software, their cutting-edge game company. Bridget wants to take it public; Kip just wants to program the latest Slade Slayer scenario and sleep with 5-year-old Brianna's nanny. However you slice it, Bridget will win - she's the majority stockholder. But not for long. She's brutally murdered, Kip is pegged by the cops as the chief suspect and their traumatized daughter is the only witness. Broker Iris Thorne is appointed trustee of little Brianna's shares. Is the murderer the cutthroat venture capitalist, a sinister media

watchdog group, one of Kip's bimbos or Kip himself?

Although the technical details are skimpy, video game shoot-em-up culture is a running theme throughout the book. You'll get some amusing insights into how a computer game is developed and how the companies producing them are financed. The characters are amusing, the plot twisty and the writing competent. A good book to read on the beach.

Oxford Exit

By: Veronica Stallwood,
Hardback Scribner,
1994, 184 pages,
\$20.00



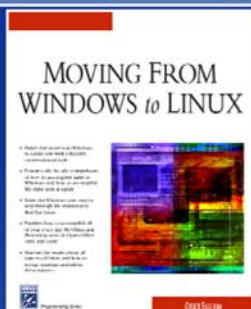
Kate Ivory is roped into a part time undercover job in the cataloging department of Oxford's Bodleian Library. The library has recently automated its card catalog and someone is using a loophole in the programming

to steal rare books and sell them in the black market. Kate has a nagging suspicion that the thefts are somehow linked to the death of an intern, and puts her life in danger to solve the crime.

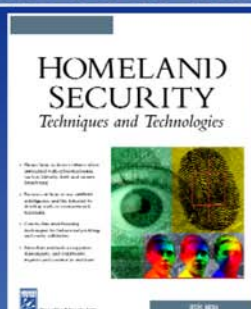
Once you get over the unlikelihood that one of the world's preeminent libraries would hire a romance writer with a knack for word processing to catch a sophisticated computer hacker, the book is great. Lots of computer details, engaging characters, a wonderful Oxford setting and a hilarious look at the dark side of librarians. The computer database glitch is described in believable detail. The scene of the annual Dewey Decimal System contest was a hoot. Out of print; I got my copy at the Cody branch library, and the audio cassette is still on the market. Recommended.

Susan Ives, past president of Alamo PC, claims that computers are a mystery to her. Remember the Alibi Bookstore at 8055 West Ave. #101, San Antonio, TX (at the corner of West Ave. and Lockhill-Selma), (210) 344-7776, tries its darndest to keep the recommended books in stock.

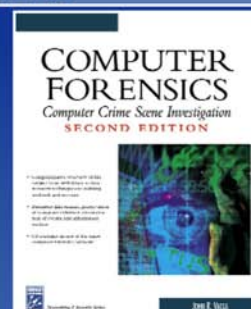
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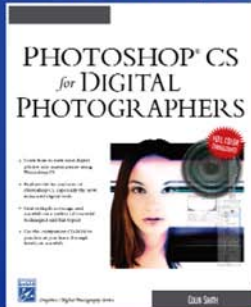
1-58450-280-0 \$44.95



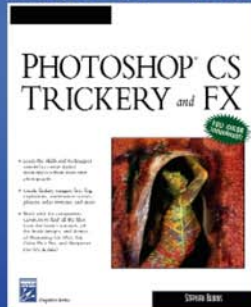
1-58450-328-9 \$49.95



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Book Review

PC Annoyances (\$19.95)

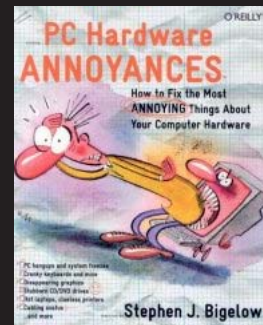
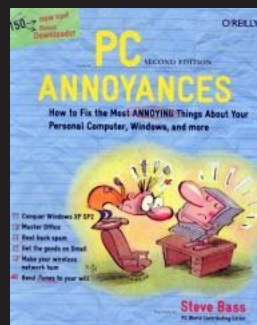
by Steve Bass

PC Hardware Annoyances (\$24.95)

by Stephen J. Bigelow

Published by O'Reilly

Reviewed by Gabriel Goldberg



Many of us have mixed relationships with computers and technology. They enrich our lives but can be maddening at times. Books and magazines often tell us how great they are, but an O'Reilly book series addresses the dark side of the story by describing their annoyances and offers "help for newbies and powerusers alike."

The format of the books is similar to Q&A dialogues or lists of FAQs (frequently asked questions). They're not meant to be read from cover to cover but explored based on a particular need or curiosity. This search is assisted by good tables of contents and full indexes. The books are written in conversational English, pairing annoyances with their fixes, and include an abundant amount of clear and helpful screen shots.

While flipping through these books, the handy tips boxes lead to many "aha" moments and I was able to identify many solutions to current and future problems. Some of the content overlaps between books, such as Internet topics being addressed in its own book, Internet Annoyances, also being mentioned in both PC Annoyances and Home Networking Annoyances. You may want to read a general book along with those specific titles that address your main interests. Some books are in their second edition, making it worthwhile to check print dates and edition numbers before purchasing them.

Steve Bass, author of PC Annoyances, provides a good introduction, stating that "Many people are now realizing that they've been putting up with programs that have downright annoying features and yes, bugs. It's high time they learned they aren't alone, it's not their fault, and, most important, there are solutions and workarounds."

Bass' book isn't overly technical. It addresses topics such as e-mail, Windows, the Internet, Microsoft Office, Windows Explorer, music, video, CDs, and hardware. Many all-too-common problems are identified and solved, but it's not all-inclusive. For example, it doesn't mention Thunderbird e-mail or Firefox browser, both of which I like a lot, but they can be annoying too! Coverage of Windows XP SP2 is localized and not mentioned places where it would be appropriate. Varied software is recommended, free and purchased, downloaded and store-bought, and advice is provided on configuring Windows and applications. And non-annoyance bonus material, such as "IM Netiquette rules," which was both entertaining and valuable. I was happy to learn how adding a work menu to MS Word gives instant access to frequently-used documents.

Another book in this series, PC Hardware Annoyances, covers diverse topics including computer setup, keyboard, mouse, startup, BIOS/CMOS, memory, processor, maintenance, and battery. Some annoyances are offered up as questions, such as "Do I need specialized PC cleaning supplies?" The helpful and short answer is "no", since common materials, used appropriately, work just fine. Because everyone has unique interests and

concerns, even the book's specialized items are useful and thought provoking.

Other Annoyances titles address computer privacy, home networking, the Internet, the Mac, Windows XP for geeks, and some Microsoft applications (Access, Excel, and Word), all of which are listed on the O'Reilly Annoyances Central Web site. This site also offers additional resources to combat computer-related annoyances with it's Experts' Blogs (a good way to get your unique questions answered before they appear in a book), the Daily Fix (a stream of individual items from the books), and Robert's Rant (the slow-paced blog of Robert Luhn, the Annoyances series Executive Editor, who addresses topics such as whether Wikis can be trusted and the origin of his book series).

Volunteers Wanted

Call the Learning Center to volunteer to assist ongoing classes. For more info, call 736-0700.



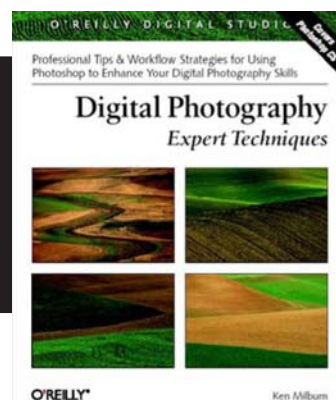
Book Review

Digital Photography Expert Techniques

By Deke McClelland

Published by O'Reilly

Review by John Donan, NOCCC



This book is a companion to Deke McClelland's Adobe Photoshop One-on-One, a second of the high-end digital photography books published by O'Reilly. As with the other it is well illustrated with 653 glossy, full-color photographs illustrating the various steps. This is helpful for someone like me who likes to scan through a book and pick up where it interests me. For example in the chapter "Converting Photos to Paintings," I quickly spotted a technique (Tip 6) that I have wanted to emulate for some time, creating realistic watercolors. Here, as he does throughout the book, he complements Photoshop's capability with a plug-in, stating, "Most computer programs have trouble imitating watercolor realistically." The author's workflow organization allows one to read and understand without having to sit at the computer. It also has a chapter called "Creating Fictitious Photos" which is a different avenue to making art from photos or improving to excellence photos otherwise wallowing in the realm of mediocrity. The last tip in this chapter is "Use the Art of Collage."

The book is directed toward the serious photographer. The first four chapters depict this with such things as a 44 item check list (containing a cable release, something almost forgotten in this era of the advancing digital camera,) gray card adjustments, bracketing exposures and telling which 50 cameras (eleven manufacturers) are recognized by the Adobe Photoshop CS RAW plug-in. He claims that the RAW format is the only way to go, giving step-by-step instruction on its use. This Photoshop plug-in is the most widely used application to interpret RAW images. Compared to JPEG, the format saved by most cameras, RAW files capture a far greater range of colors.

Milburn thoroughly covers image management (Tip 1 in chapter 3 is "get to know your Photoshop File Browser") He then covers three image management programs: iPhoto, Adobe Photoshop Album, and Canto Cumulus. The thirty pages of chapter 4 are all about panoramas, how to shoot, starting with rotating around the camera's focal nodal point at precise intervals. Here, third party programs are the best alternative. They are more accurate and make the stitching process much easier. You will not find a better description of how take and process panoramas anywhere.

The book is 360 pages 13 chapters. Most chapters have a Getting Started section at the beginning covering the basics needed. There are 77 Tips covering common issues that might be encountered as one progresses into the various subjects. The material is pretty much equally divided between photography, general image editing, special techniques and the handling of the end product. It is written around Photoshop CS. Milburn says he assumes the reader has a prior familiarity with Photoshop but most of his tasks can be accomplished with Photoshop Elements 2.0 or any other image editor that supports layers and Photoshop-compatible plug-ins. I found at least 45 instances where the author was applying third party software such as Corel KnockOut, nik Color Efex, KPT Collection, plus many more which create some of the same

effects found in Photoshop but without the steep learning curve

His camera of choice, for someone purchasing a new one today, is an SLR with interchangeable lenses (possibly your old 35mm film lenses.) These are now dropping below the \$1,000 threshold. For a new computer system he recommends, as a minimum, 2.4GHz processor, 1GB RAM, 17-in monitor, CD-ROM or DVD-ROM burner, two USB 2.0 connections and two FireWire (IEEE 1394) ports. For storage he notes that, if you are serious about quality you will want to keep images at the highest resolution possible. He considers that a single picture could easily consume 500MB of disk space (so buy a ton of hard drive)

The author, Ken Milburn, has been a photographer, both full- and part-time, for nearly five decades. Ken has written over 300 articles and columns for computer magazines as well as 17 books on web design, Flash, and (mostly) Adobe Photoshop and digital photography. Books currently in print include Digital Photography: 99 Tips to Make You Look Like a Pro, The Photoshop 7 Virtual Classroom, and Photoshop Elements 2.0—The Complete Reference.

This book targets the professional, or serious, digital photographer who is using an SLR digital camera with at least six megapixels and plenty of memory, but I recommend it for any digital photographer desiring to gain high quality results. Although it uses Photoshop for manipulating the images other tools can be used to give spectacular results. Another target for this book is the film photographer who wants to move to the digital realm, but doesn't quite know how best to set up the workflow of processing images. Because a digital photograph can take many forms after image enhancement, there are a number of good ideas here to help you know what material to save and what to delete. It has already become one of my most used references and I highly recommend it for others.

Visit the Alamo PC Learning Center

Media Center

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Hardware Review

The Mouse from Hell

Hardware Review...or Sort of

By Ann Moore, Topeka PC Users Club

Several months ago, I sent the following e-mail to "Answerperson" concerning a tragedy in my life:

"Dear Answerperson,

When I started my computer this morning, my mouse showed no sign of life. Its heart (red light) did not flicker nor did it feel warm to my touch. It was stone cold dead. I tried to revive it by performing an uninstall-reinstall, to no avail. A check of outlets and wiring found them intact. How do I determine the cause of death? There were no early signs of malfunction. If it were an animal, I could have a necropsy performed. Must I disassemble it to determine the cause of death? I cringe at the thought of disemboweling my friend. My mouse was not extraordinary in any way – it was not wireless nor was it ergonomic, just a simple mouse that I loved and cherished. Every day for four year, I held this inanimate object in my hand, caressed it, and knew every curve and indentation intimately. We were as one.

I have accepted the fact that I must now lay it to rest, but where? Is there a cemetery for computer mice? Should I have it cremated or do I put it in a box and bury it in my backyard under the lilac bush? What will become of my dear friend? Is there a computer mouse heaven? This has never happened to me before and I am devastated. Please no cards or flowers. There will be a memorial fund set up in the name of "Ann's Mouse" and donations may be sent to [commuter\(at\)cox.net](mailto:commuter(at)cox.net)"

Answerperson offered his deepest sympathy and suggested that I put my sorrow behind me, go on with my computing and find a new mouse. I visited Best buy in search of a replacement and found no sympathy there. Their only concern was to sell me a very expensive replacement. In my vulnerable state, if the clerk had shown a little compassion, I might have purchased a more expensive model but because his attitude was cold and unfeeling, I left the store with one of their cheapest models. There is an old adage: "You get what you pay for," and that is exactly what I got – in spades.

I doted on my new mouse, showering it with an abundance of TLC. I never mistreated it by applying any unnecessary pressure, jerking or pulling. In spite of all my efforts to maintain a close personal relationship, it soon became apparent that we were not compatible. The erratic behavior of the mouse became noticeable following surgery on my right shoulder. I was forced to change the mouse settings to accommodate my left hand and the mouse began to balk at every command. Although I moved it around very slowly, it would take off and race around the screen leaving me breathless in my attempt to keep up with it.

In October, I purchased a new LDS 19-inch monitor and the mouse went ballistic. It refused to leave the confines of its colorful, soft pad. Trying to reach the far corners of my monitor with my cursor became almost impossible. The mouse resisted my every effort to control its actions. Every day was a tug-of-war and I was losing my patience. I had serious work to do and no time to play games. I needed a good reli-

able mouse. I decided that this obnoxious, malevolent, detestable little rodent had to be eradicated. It was time to go cordless.

Completing a jubilant trip to Best Buy, I came home with a Logitech cordless mouse. I could hardly wait to start using it. What a different a cord makes! This Logitech moves like a dream and is a pleasure to work with. It takes me everywhere I went to go. Truly, a match made in heaven. I am certain that I have found a new reliable friend.

What do I do with this evil, malicious, wicked little devil that made my life a living hell? No sad songs or mourning for this monster. I had visions of snipping off its tail to make it impotent, then dropping it on the floor and stomping it to death. I even considered calling "The Terminator." What I will do is wrap it up in colorful paper and donate it to the club for a prize at the next Christmas party. I am hoping it will fall into a strong masculine hand that will teach this contemptible, spiteful, despicable creature how to behave in the presence of a lady.

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TOSHIBA



DELL



SONY



COMPAQ

July 2006

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 *PRR* MCSE (Adv) 8:30 A.M. - Noon Class 6 of 6 *PRR* Windows XP 1 - 3 P.M. C++ 2:30 - 4:30 P.M.
2	3 Genealogy 7 - 9 P.M.	4 Independence Day Learning Center Closed BOD 6:30 P.M. Canceled Rescheduled to July 6. Excel Basics (Canceled) 7 - 9 P.M.	5	6 Student's Practice Lab 9:00 A.M. - Noon Class 5 of 6 *PRR* Digital Camera & Photography 9 - 11 A.M. Class 6 of 9 *PRR* Photoshop CS & CS2 1 - 5 P.M. (a/r) HGSI 6:30 - 8:30 P.M. BOD 6:30 P.M. - Net Web Development 7 - 9 P.M.	7 Dr. is In 9:00 A.M. - Noon Class 6 of 9 *PRR* Photoshop CS2 1 - 5 P.M. PC Alameda Magazine & PDF 7 - 9 P.M.	8 *PRR* MCSE (Adv) 8:30 A.M. - Noon Commodore 1 - 4 P.M.
9	10 General Meeting @ Crossroads 7 - 9 P.M. Presenter:	11 Class 10 of 12 **PRR** Digital Photo Editing 9 - 11 A.M. Excel Basics (Canceled) 7 - 9 P.M.	12 Power Internet 10 A.M. - Noon Home Page Jumpstart 5:30 - 7 P.M. Canceled class will start again in the fall	13 Student Practice Lab 9:00 A.M. - Noon Class 6 of 6 *PRR* Digital Camera & Photography 9 - 11 A.M. Class 7 of 9 *PRR* Photoshop CS & CS2 1 - 5 P.M.	14 *PRR* Small Business Server 2003 8 - 10 A.M. (Rescheduled from July 7) Dr. is In 9:00 A.M. - Noon Class 7 of 9 *PRR* Photoshop CS2 1 - 5 P.M.	15 *PRR* MCSE (Adv) 8:30 A.M. - Noon C++ 2:30 - 4:30 P.M.
16	17	18 Class 11 of 12 **PRR** Digital Photo Editing 9 - 11 A.M. Excel Basics (Canceled) 7 - 9 P.M.	19	20 Student Practice Lab 9:00 A.M. - Noon Class 8 of 9 *PRR* Photoshop CS & CS2 1 - 5 P.M.	21 Dr. is In 9:00 A.M. - Noon Class 8 of 9 *PRR* Photoshop CS2 1 - 5 P.M.	22 *PRR* MCSE (Adv) 8:30 A.M. - Noon Learning Center Desk Staff Meeting 1 - 3 P.M.
23	24 CoreiDRA ^W X3 6 - 8 P.M.	25 Class 12 of 12 **PRR** Digital Photo Editing 9 - 11 A.M. Excel Basics (Canceled) 7 - 9 P.M.	26 (a/r) WordPerfect 7 - 9 P.M.	27 Student Practice Lab 9:00 A.M. - Noon Class 9 of 9 *PRR* Photoshop CS & CS2 1 - 5 P.M. (Dot) NetNuke Portal 7 - 9 P.M.	28 Dr. is In 9:00 A.M. - Noon Class 9 of 9 *PRR* Photoshop CS & CS2 1 - 5 P.M.	29
30	31	AlamoPC Organization				



The Learning Center

Alamo PC Organization classes and study groups

COMPUTER CLINIC

The Doctor Is In

Each Friday morning, volunteer "Computer Doctors" share their time at the Computer Learning Center to handle technical hardware and software questions and solve problems. They attempt to troubleshoot hardware and sort out software problems on site. If the problem is beyond their means, the member is referred to one of the repair shops that advertise with Alamo PC. The repair shop does charge for the problem. We do the work at the Computer Learning Center as a member-to-member benefit, with donations requested.

What to bring with you:

- Your Alamo PC membership card
- Your computer and all connecting cables, cords, software drivers or programs related to the problem area
- You do not need to bring your monitor, mouse, or keyboard unless you are having a specific problem with those items. Make sure you have the keycode for all of your software.
- If you are having problems with your scanner, printer, or something that hooks up to your computer; bring that item in addition to your computer etc. plus all connecting cables and software (don't forget the keycode for your software)

When: Every Friday 9 am to noon

Where: Alamo PC Organization
Computer Learning Center

Prerequisites: Bring your hardware and all connecting cables, cords, software drivers or programs related to the problem area

Tuition fee: Donations for this service are requested, the funds are used to purchase testing and other equipment to use at the Dr Is In sessions.

Technical Rating: ★

STUDY GROUPS

Student Practice Lab

A specific time period for students taking Alamo PC Courses to use Computer Lab One (Classroom One) to practice their class assignments. Students may also make up missed class days, if the instructor has provided the course material to the individual. The Practice Lab is monitored and the instructors will help when possible. The Practice Lab is for Class Work Only. Those abusing the system will be asked to leave. Seating is limited and on a first come, first serve basis. If necessary a time limit will be imposed.

Lab Instructors: Joe Gentry, Sarah Thomas
When: Thursday mornings, except Holidays, 9 am to Noon.

Where: Computer Learning Center

Pre-registration: No

Technical Rating: ★

C/C ++ Study Group

Please note we are currently a study group and no longer a Class. C/C++ Study Group Our group consists of 3 to 6 regular members who meet twice a month to discuss their plans and progress on development of software for experimental use. We do not plan to offer C or C++ courses in this study group. To join the study group, get acquainted with some of its members and consider preparing a brief presentation of your planned or current efforts.

Contact:
Bruce McAlexander
<mcalexb@satx.rr.com> 210-680-0231
Murry Adams
<mnadams@texas.net> 210-696-0047
Carl Deneke
<cdeneke@Texas.net> 210-496-6397

When: First and Third Saturday, 2:30 pm

Where: Learning Center.

Pre-registration: No

Technical Rating: ★★ - ★★★

Commodore Users of SA

Contact: Diana Jones
830-303-1220

When: Second Saturday, 1-4 pm

Where: Learning Center.

Pre-registration: No

Technical Rating: ★ - ★★★★★

Genealogy Study Group

For everyone interested in using their computer for genealogy. We will discuss currently available genealogy software, their pros and cons and meeting participants views as to best software to use for both beginners and advanced genealogists.

Contact: Jim Collier
<jcinquiry@earthlink.net>
210-710-5660

When: First Monday, 7-9 pm

Where: Learning Center.

Pre-registration: No

Technical Rating: ★ - ★★

HGSI Study Group

The premise of the HGS Investor SIG is, "Knowledge becomes stronger when passed on to others." We have created an environment for continuing education and open discussion between well informed members and guest speakers in matters of using Fundamental and Technical Analysis for the buying and selling of equities. Meetings are held on the First Thursday of each month in the UBS Conference Room, in Suite 300 at 200 Concord Plaza Drive, at 6:30PM to 8:30PM. If you wish to be added to our mailing list or for more information, contact below.

Contact: Maynard Burstein
<maynardb@juno.com> 735-3288

When: 1st Thursday, 6:30-8:30pm

Where: UBS/Paine Webber, 200 Concord Plaza Dr. Suite 300

Pre-registration: Call Maynard

Technical Rating: ★ - ★★

Technical Content Ratings

- ★ For the beginner, no experience necessary and no prerequisite.
- ★★ Assumes some basic familiarity with the subject but is not a technical course.
- ★★★ Assumes that the student is somewhat familiar with the subject and will discuss.
- ★★★★ Assumes that the student is competent in the material and will be technical.

STUDY GROUPS (cont.)

DotNET Study Group

This is a study group for those interested in developing Windows and Web applications using Microsoft's .NET technology. We will use development modules and applications for the DNN Portal using VB.NET and C# as a basis for demonstrating .Net development. Guest speakers occasionally present new technology and development tools available for .Net Developers. Door prizes (books, software, shirts, etc.) are distributed at most meetings.

Contact: Joe Brazell 345-2207

When: 1st Thursday, 7-9pm

Where: Learning Center

Pre-registration: No

Technical Rating ★★★

DotNetNuke Portal Study Group

Learn DotNetNuke portal software for hosting your website. Focus on hands-on configuration and use of the DNN 3.x portal. The class will discuss the portal framework and configuration of a DNN site. Setup web pages, insert modules on the pages, modify and edit the look of the pages and data in the pages. Modules include Calendar, Announcements, Forums, Blogs, Contacts, Links, Surveys and HTML.

Contact: Joe Brazell 345-2207

When: 7PM – 9PM Sept. 29, Oct. 27 (no November or December meeting)

Where: Learning Center

Pre-registration: No

Technical Rating: ★

MCSE Advanced Study Group

The MCSE Advanced SIG, affectionately known as 'The Geeks', is currently studying Microsoft's new ISA Server 2004 in anticipation of it's being included in the soon to be released Service Pack 1 for Small Business Server 2003. The SIG meets every Saturday morning from 8:30 until noon. Space is limited and the subject matter is very advanced. Therefore membership is restricted. Please contact Larry Lentz before attempting to attend.

Contact: Larry Lentz, MCSE on NT & W2K, MCDDBA, MCSA:Messaging <Larry@LentzComputer.Net>

When: Every Saturday, 8:30-noon

Where: Contact Larry

Pre-registration: Yes - contact Larry

Technical Rating ★★★★★

Small Business Server Study Group

The Alamo PC Organization Small Business Server Special Interest Group (APCO SBS SIG) celebrated its first birthday on Friday, July 8th. We had a record turnout of 24 despite several 'regulars' having to be out of town or taking care of clients. The technical portion was a brief discussion of how to configure Internet Over the Internet (RPC over HTTP).

Our next meeting will be on Friday, August 5th. After the Taco Social we will have a discussion of WSUS, Windows Software Update Services.

For more information, please contact group chair, Larry Lentz at Larry@LentzComputer.net, or visit the group web site at <http://www.LentzComputer.net/SBS.>

Power Internet Study Group

Current Internet users can learn more. Each month a different Internet application will be discussed, such as 64 bit computers, SATA HDD technology, e-mail, browser use, MS Outlook, and virus protection in communications. This is a good place to share interests and insights about your experiences on the World Wide Web.

Contact: John Woody <jwoody@texas.net> 210-494-5684

When: 2nd Wednesday, 10am-noon

Where: Learning Center

Preregistration: No

Technical Rating ★★

WordPerfect Evening Study Group

We demonstrate projects and features of the latest version of WordPerfect. We also like to work on real life situations with our members who have questions.

Contact: Cynthia Thompson 210-655-1058

When: 4th Wednesday, 7-9pm

Where: Call Cynthia for directions

Pre-registration: Yes - Call Cynthia

Technical Rating ★ - ★★★★★

Technical Content Ratings

- ★ For the beginner, no experience necessary and no prerequisite.
- ★★ Assumes some basic familiarity with the subject but is not a technical course.
- ★★★ Assumes that the student is somewhat familiar with the subject and will discuss.
- ★★★★ Assumes that the student is competent in the material and will be technical.

CLASSES

Alamo PC offers Free and Fee-Based classes. Classes showing a \$ next to the title indicate that either a Registration Fee or a Tuition Fee will be required.

Student Practice Lab

A specific time period for students taking Alamo PC Courses to use Computer Lab One (Classroom One) to practice their class assignments. Students may also make up missed class days, if the instructor has provided the course material to the individual. The Practice Lab is monitored and the instructors will help when possible. The Practice Lab is for Class Work Only. Those abusing the system will be asked to leave. Seating is limited and on a first come, first serve basis. If necessary a time limit will be imposed.

Lab Instructors: Joe Gentry, Sarah Thomas

When: Thursday mornings, except Holidays, 9 am to Noon.

Where: Computer Learning Center

Pre-registration: No

Technical Rating: ★

The next three free or low-cost classes provide instruction on the basics of using a computer, the Windows Operating System, and how to use Adobe Acrobat to obtain your PC Alamode online magazine. The successful completion of the Windows XP class (or classes) would then enable those students to take the other classes offered by Alamo PC.

Introduction To Windows - \$

The Introduction To Windows class is designed for people who do not have a computer yet or have just obtained one and don't know how to "turn it on". Students will learn about the parts of the computer, acquire keyboard and mouse skills used in many software programs, and some word processing. Instruction proceeds at a slower pace than most computer courses and time is allotted for "hands on" practice. Taking the next course, Windows XP, will still be necessary for students who want to be productive with their computers, but the students will be better able to understand what the Windows XP Instructor is teaching. Internet and e-mail will NOT be covered in this course.

Instructors: Andy Roca, Donna Dudley

When: Six sessions, Wednesdays; 10 am to noon, choose one set:

Set 1) May 24, 31, June 7, 14, 21, 28

Set 2) August 2, 9, 16, 23, 30 Sep 6

Set 3) Oct 4, 11, 18, 25, Nov 1, 8

Fees: Registration fee is \$10.00

This class will use the Easy Windows XP book, purchase of the book will be helpful and is strongly recommended but is not required. The book may be purchased from Alamo PC for \$20

Pre-registration: YES Call Learning Center at 210-736-0080

Where: Learning Center

Technical Rating: ★

Windows XP - \$

Our Windows XP course reviews the fundamentals of using a computer, and provides instruction on using the Microsoft Windows XP operating system. In this class you will learn how to: Open, Close, Save, Delete, Copy, and Move files; work with Files and Folders; customize your Desktop Layout; and to Resize and Move program windows. You will also be introduced to several "free" programs already on your computer, including: Wordpad - for basic word processing; Paint - for basic graphics work; Computer Solitaire and other games; and a Calculator.

Prerequisites: Students should have completed the Introduction To Windows course or have the equivalent knowledge. Choice of two class sessions:

Instructor: Audrey Henkin

When: 6 sessions, Tuesdays 1:30-3:30 pm; Choose one set:

Set 1) May 9, 16, 23, 30, June 6, 13

Set 2) August 15, 22, 29, Sep 5, 12, 19

Set 3) October 3, 10, 17, 24, 31, Nov 7 OR

Instructor: Don Robinson

When: 6 sessions, Saturdays 1-3 pm; Choose one set:

Set 1) May 27, June 3, 10, 17, 24, July 1

Set 2) August 5, 12, 19, 26, Sep 2, 9

Set 3) Oct 7, 14, 21, 28, Nov 4, 11

Fees: Registration fee is \$10.00

This class will use the Easy Windows XP book, purchase of the book will be helpful and is strongly recommended but is not required. The book may be purchased from Alamo PC for \$20

Pre-registration: YES Call Learning Center at 210-736-0080

Where: Computer Learning Center

Technical Rating: ★

Adobe Acrobat - PDF Class

How to download, install, and use Adobe Acrobat Reader. How to view the PC Alamode magazine online or download it to your computer or a CD. Students who want to download the magazine to a CD in class should bring a blank CD-RW (a read / writeable or recordable CD)

Instructor: Steve Tech
stephentechnr@yahoo.com

When: first Fri. of the month, 7 pm to 9 pm

Pre-registration: YES Call Learning Center at 210-736-0080

Where: Computer Learning Center

Technical Rating: ★

APCO Retro (Antique Computer Users Group)

We're initially only going to meet on-line, through the mailing list I've established using Yahoo! Groups. Membership is limited to Alamo PC members, but anyone can join the list by sending a message to <apcoretro-subscribe@yahooogroups.com>." Or, if you're reading the electronic version of the PC Alamode where this text appears, you can join APCO Retro simply by going to

<<http://groups.yahoo.com/group/apcoretro/join>>

Contact: Shane Hicks

<shane@absolute-powercomputing.com>

When: Anytime

Where: Cyberspace

Pre-registration: Must sign-up on <APCORETRO@yahooogroups.com>

Technical Rating: ★ - ★★★★★

CorelDRAW I Class

This basic class discusses basic tools and effects, concentrating on fills, blends, envelopes and other special effects for the next few months.

Contact: Steve Tech

<stephentechnr@yahoo.com>
210-675-2880

When: 4th Monday, 6-8pm

Where: Learning Center

Pre-registration: No

Technical Rating: ★★

Digital Camera & Photography Class

Digital Cameras have become an integral part of our computerized lifestyle. They come in all shapes and sizes; some are simple, some not. Yet many of us look at this wonderful tool and think, "Now what is that doohicky for?" Sometimes learning to use our digital cameras can be a confusing and frustrating experience and the manual may even make it worse. Then when you do figure out how to use the camera, the photo never seems to come out quite right. Learn how to use your digital camera, plus all the tips and tricks to get better pictures when you take them. Topics of discussion may include camera optics, composition, tips, choosing the right camera, lighting, how to take night shots, silhouettes, portraits, action shots, and close ups. This class will include field trips to interesting local spots to learn photography techniques.

Instructor: Joe M. Davis

When: Class meets once a week for 8 weeks on Thursdays 9 -11 am (some sessions may be longer)

Choice of two class sessions:

Thurs., Aug 3, 10, 17, 24, 31, Sep 7, 14, 21 OR

Thurs., Sep 28, Oct 5, 12, 19, 26, Nov 2, 9, 16

Pre-registration: YES Call Learning Center at 210-736-0080

Where: Computer Learning Center Plus Field Trips

Technical Rating: ★ - ★★

Intro. To Digital Photo Editing Class Advanced Digital Photo Editing

Students will learn the basics of digital photo editing using Microsoft Digital Imaging 2006 and if time permits, extra tips and tricks about matting and framing plus interesting uses for your photos. The photo editing basics used in this class can be applied to almost any photo editing program. The Microsoft Digital Imaging 2006 software is not required for the class but it would be helpful to have on your home computer.

The Introduction Class may include:

Remedial computer work as it relates to the use of Image 2006. Any computer skills that will be essential for success in Image 2006. We will learn how to place files into the work area. How to control the work area. We will learn the use of the essential photo editing tools such as; color balance, sharpening focus, removing red eye, crop, straighten photo, etc. We will advance as far as the students prior experience allows.

The Advanced Class may include:

Learning the work area of our program. We learn the use of the tools that are available with Image 2006. We learn to use the tools to do everything from making greeting cards to photo refinishing.

Prerequisites: Students should have completed the Windows XP course or have the equivalent knowledge.

Instructor: Joe M. Davis

When: Class meets once a week for 8 weeks on Tuesdays 9 -11 am

Introduction: Tuesdays, Aug 1, 8, 15, 22, 29, Sep 5, 12, 19

Advanced: Tuesdays, Sep 26, Oct 3, 10, 17, 24, 31, Nov 7, 14

Pre-registration - YES Call Learning Center at 210-736-0080

Where: Computer Learning Center

Technical Rating ★ - ★★

Photoshop Classes for use with Photoshop 7, CS, CS2 - \$

These courses will teach you how to modify and combine images to create realistic composite images. You will learn to use several tools for selecting parts of images, and will move, duplicate, and resize images. You will also learn to use layers, and to apply layer effects and filters to create special effects. Additionally, you will use painting tools and blending modes to create blending effects, and will perform adjustments to enhance images. A CD with the images for the entire class is provided. Photoshop Classes are offered as

Technical Content Ratings

- ★ For the beginner, no experience necessary and no prerequisite.
- ★★ Assumes some basic familiarity with the subject but is not a technical course.
- ★★★ Assumes that the student is somewhat familiar with the subject and will discuss.
- ★★★★ Assumes that the student is competent in the material and will be technical.

three separate classes, teaching the basic tools, palettes and procedures Instruction class "A" using Photoshop 7. includes adaption for Photoshop CS and CS2 Instruction class "B" with different lessons and text, using Photoshop 7 includes adaption for Photoshop CS and CS2 Photoshop Basic Instruction for Photoshop CS and CS2 (focuses on CS and CS2 but those using Photoshop 7 can take this class)

Prerequisites: 1) Students need to have completed the Windows XP course or have the equivalent knowledge to be able to function properly and progress in these graphics programs This is Not a course for beginning students. 2) Students need the Software for Photoshop 7 or Photoshop CS or Photoshop CS2 on their home computers to join these graphics instruction classes.

Instructor: Beverly Bihn assisted by Jane Montgomery

When: Photoshop Basic Instruction for Photoshop 7, CS, and CS2 will meet on Fridays, 1 to 5 pm, January and February 2007

Fees: \$90 for New Students, \$50 for Previous Students who have attended a Photoshop 7, Instruction Class A or B class, or CS2 class

Pre-registration: YES Call Learning Center at 210-736-0080

Where: Learning Center

Technical Rating: ★★-★★★

Photoshop Workshop for use with Photoshop 7, CS, CS2 - \$

Written creative lessons are given to participants and demonstrations of the lessons are given during class for students to follow. Extra exercises at the end of the lessons encourage students to do similar tasks on their own without demonstrations. They can bring a blank recordable CD or a jump drive, to copy the images for the lessons to take home for more practice. Workshops are open to all Photoshop 7 and CS2 users who have taken previous classes from Beverly Bihn or with the permission of the instructor.

Prerequisites: 1) Students need to have completed the Photoshop Instruction Class A or Photoshop Instruction Class B, or have the equivalent knowledge with the permission of the Instructor. 2) Students need the Software for Photoshop 7 or Photoshop CS or Photoshop CS2 on their home computers to join these graphics instruction classes.

Instructor: Beverly Bihn assisted by Jane Montgomery

When: August on Fridays (Aug. 4, 11, 18, 25) from 1 to 5 pm; Lessons that will be a continuation of the June- July basic instruction classes September on Fridays (Sept. 1, 8, 15, 22, 29) from 1 to 5 pm Working on "fancy" procedures beyond the basics October on Fridays (Oct. 6, 13, 20, 27) from 1 to 5 pm Working on more "fancy" procedures beyond the basics November on Fridays (Nov. 3, 10, 17, 24) from 1 to 5 pm Calendar classes for various 2007 calendars, using personal photos

Fees: Tuition fee: \$25 per month

Pre-registration: YES Call Learning Center at 210-736-0080

Where: Learning Center

Technical Rating: ★★-★★★

eBay - Bid with Confidence: An Introduction to Internet Auctions

This 4-session class shows you how to buy and sell at Internet auctions using the eBay system (excludes real estate and automobiles).

Contact: Learning Center 736-0080 <learncenter@alamopc.org>

When: Date and time. To be announced. Call the Alamo PC Computer Learning Center at (210) 736-0080, or (210) 736-0700 to place your name on a Waiting List for the class. You will be notified when the next class is available.

Where: Learning Center, Room 1

Pre-registration: Yes

Technical Rating: ★

Excel Class - Basic

This class is intended for people who want to do significant projects or develop skills for the workplace. As such it moves at fairly brisk pace and includes homework assignments. Students will become familiar with Excel 2000's basic functionality, menus, toolbars, icons and shortcut keys. Learn how to create, format, save and print an Excel spreadsheet. Also, understand and use formulas, work with worksheets and workbooks, and learn the basic productivity elements of Excel. The Excel 2000 Class will use the Excel 2000 Step By Step book. This book will be helpful but is not required.

Contact: Bill Eastridge <weastridge@satx.rr.com>

When: First four Tuesdays of odd numbered months (Jan, Mar, May, etc.) 7-9pm **no class July, Aug.**

Class will resume Sept.

Where: Learning Center

Pre-registration: Yes

Technical Rating: ★ - ★★★

Excel 2000 Class - Intermediate

This class is follow-on to the Excel Basics Class and is intended people who want to do significant projects or develop skills for the workplace. It covers conditional formatting, absolute addressing, sorting, subtotaling, filtering, charting, functions and other subjects as time permits. The Excel 2000 Class will use the Excel 2000 Step By Step book. This book will be helpful but is not required.

Contact: Bill Eastridge <weastridge@satx.rr.com>

When: First four Tuesdays of Feb., June and Oct. 7-9pm

Where: Learning Center

Pre-registration: Yes

Technical Rating: ★★★

Student Practice Lab

A specific time period for students taking Alamo PC Courses to use Computer Lab One (Classroom One) to practice their class assignments. Students may also make up missed class days, if the instructor has provided the course material to the individual. The Practice Lab is monitored and the instructors will help when possible. The Practice Lab is for Class Work Only. Those abusing the system will be asked to leave. Seating is limited and on a first come, first serve basis. If necessary a time limit will be imposed.

Lab Instructors: Joe Gentry, Sarah Thomas

When: Thursday mornings, except Holidays, 9 am to Noon.

Where: Computer Learning Center

Pre-registration: No

Home Page Jumpstart

A general introduction to developing your own Internet web page. It is *not* a course on HTML. Includes a 20+ page manual and a training disk. Not hands-on.

Contact: Susan Ives

<suives@texas.net> 210-694-4582

When: 2nd Wednesday, 5:30-7pm

Where: Learning Center

Pre-registration: No

Technical Rating: ★ - ★★

HTML and Beyond Class

Learn how to design, build and manage your own web site using HTML.

Students should attend the Home Page Jumpstart Class and have familiarity with the Windows Operating System. The Six (to Eight if needed) Session class will begin a new cycle each March and September.

Contact: Mike Bianchi

<webmaster@alamopc.org>

When: Saturdays, 4-8 pm

Where: Learning Center

Technical Content Ratings

- ★ For the beginner, no experience necessary and no prerequisite.
- ★★ Assumes some basic familiarity with the subject but is not a technical course.
- ★★★ Assumes that the student is somewhat familiar with the subject and will discuss.
- ★★★★ Assumes that the student is competent in the material and will be technical.

Prerequisite: Home Page Jumpstart Class, familiarity with Windows
Pre-registration: yes
 To register e-mail Mike at
 <webmaster@alamopc.org>
Technical Rating: ★★

Internet And E-Mail - \$

The Internet and E-mail course will cover basic techniques needed to effectively and enjoyably "surf the net." Students will learn how to find information on the net, download files, applications and graphics, and how to purchase items from "e-commerce" sites. Depending on student interest, the class will learn about important Internet issues like privacy, credit card security, and information reliability. Depending on time constraints, students may also cover more advanced topics like using the Internet for long distance communication, "Web Cams," and enjoying "streaming" audio and video.

Prerequisites: Students must have completed the Windows XP course or have the equivalent knowledge.

When: 6 weeks, Wednesdays, 1 to 3 pm

Choose one set:

Set 1) May 24, 31, June 7, 14, 21, 28

Set 2) August 2, 9, 16, 23, (skip Aug 30) Sep 6, 13

Set 3) Oct 4, 11, 18, 25, Nov 1, 8

Instructor: Don Robinson

Fees: Registration fee is \$10.00

Where: Learning Center

Pre-registration: YES Call Learning Center at 210-736-0080

Technical Rating: ★

Power Point class

This course features a structured curriculum for Microsoft PowerPoint. Students will be introduced to PowerPoint and will experience hands on development of an entertaining PowerPoint presentation. Emphasis will be placed on Inserting Graphics, Text, Layout, Titles and Slide Transitions.

Contact: Learning Center 736-0700

When: Dates and time to be announced

Where: Learning Center

Pre-registration: Yes

Technical Rating: ★

Word 2000 Class

Become familiar with Word 2000's basic functionality, menus, toolbars and shortcut keys. Students will learn how to create, view, format, save and print a Word document. Optional textbook: Word 2000 Step by Step book (this will be helpful but is not required). Student should have basic knowledge of Windows and be familiar with operating the mouse and keyboard.

Contact: Linda Bianchi at

education@alamopc.org

When: To be announced

Where: Learning Center

Pre-registration: Yes, call Learning Center at 736-0080

Technical Rating ★ - ★★★

Private or Semi-Private Tutorials - \$

Develop your skills at your own pace and at a time that fits your schedule. Introductory private tutorials for one, two, or three students. Choose from:

- Microsoft Word
- Microsoft Excel
- Basic Computer Skills, or
- Keyboarding/Typing

Contact: Learning Center (210) 736-0080 or 736-0700

When: Days and hours are arranged between the student(s) and teacher.

Where: Learning Center

Fees: 1 student: \$35 per hour, 10 hours for \$300. 2 or 3 students: per student—\$20 per hour, 10 hours for \$150

Pre-registration: Yes—call or visit the Learning Center

Technical Rating: ★

Student Practice Lab

A specific time period for students taking Alamo PC Courses to use Computer Lab One (Classroom One) to practice their class assignments. Students may also make up missed class days, if the instructor has provided the course material to the individual. The Practice Lab is monitored and the instructors will help when possible. The Practice Lab is for Class Work Only. Those abusing the system will be asked to leave. Seating is limited and on a first come, first serve basis. If necessary a time limit will be imposed.

Lab Instructors: Joe Gentry, Sarah Thomas

When: Thursday mornings, except Holidays, 9 am to Noon.

Where: Computer Learning Center

Pre-registration: No

Technical Content Ratings

★ For the beginner, no experience necessary and no prerequisite.

★★ Assumes some basic familiarity with the subject but is not a technical course.

★★★ Assumes that the student is somewhat familiar with the subject and will discuss.

★★★★ Assumes that the student is competent in the material and will be technical.



100% gray cotton golf shirts with pocket and embroidered full-color

Alamo PC logo

Available at the Learning Center in a wide variety of sizes.

\$20.00

Call the Learning Center at 736-0700

Visit the Alamo PC Learning Center

Media Center

Learn all about computers with hundreds of books and dozens of video tapes. Enjoy our large selection of techno-fiction.

A comfortable seating area is available.

Call (210) 736-0700

Help Numbers

Can you help a new member with a new computer? Are you proficient in software not listed? Can you help with a title currently showing only one volunteer? Call Linda Bianchi at 226-2460 or email her at <education@alamopc.org>.

1 Look down the list for the software program you need help with; note the number in front of the title.

2 Then look down the list to the right for the corresponding number for the person who may be able to help you.

Please observe the times given by the volunteers name to call for phone help.

Step One

1 Computers for Beginners

2 Windows 98

3 Windows XP

Microsoft Office

4 Word

5 Excel

6 PowerPoint

7 Publisher

8 WinFax Pro

Corel Office

9 WordPerfect

10 CorelDraw

11 Quattro Pro

12 Paint Shop Pro

Photoshop

13 Adobe Photoshop

Internet and E-mail

14 Internet Basics / ISP Connection

15 Web Page Development

16 Internet Explorer

17 MS Outlook Express

18 Opera

19 Mozilla

20 Dreamweaver

21 .Net

22 Flash

23 RoadRunner

Open Office

24 OpenOffice

Financial

25 Quick Books

26 Quicken

Auction Online

27 eBay

Genealogy

28 Family Origins for Windows

29 Genealogy

Communications / Management

30 Time&Chaos

31 Act

32 Goldmine

Data Base

33 Access

34 AlphaFour

35 dBase

36 Paradox

37 MySQL

Networking

38 Networking

Other

39 Hardware / Setting Up A New PC

40 Maintenance and Security

41 Home Help

Step Two

Expertise	Name	Phone	Availability	E-mail
(1, 5, 6, 3, 12, 23, 26, 38, 41)	John Bolton	658-3060	6pm-9pm M-F	
(1, 3, 14)	Joe Barth	696-5783	7pm-9pm Tu, Th, Sat	jbarth@swbell.net
(2, 3, 4, 16, 17, 23, 29, 38, 39, 40, 41)	Bruce Cramer	865-2933	9am-3pm M-F, Sat	service@pcpro4u.com
(3, 5)	Bill Eastridge	223-8743	10am-6pm M-F, Sat, Sun	
(4, 15, 17, 33)	Bill Hudson	490-6513	7pm-10 pm M-F, Sat, Sun	bhudson3@satx.rr.com
(4, 9, 14, 27)	William Hudson	824-6910	3pm-8pm M-F, Sat	rwsh@earthlink.net
(19, 24, 30, 37)	Chris Montgomery	490-2415	7pm-9pm M-F / noon-6pm Sat, Sun	
(3, 16, 17)	Ted Ressler			catechist@gmail.com
(1, 3, 14, 16, 17, 40)	Don Robinson	497-3737	9am-5pm M-F, Sat, Sun	dl7266@swbell.net
(10)	Stephen Tech, Jr	675-2880	5:30pm-9pm M - F	stephentechjr@yahoo.com
(9)	Cynthia Thompson	655-1058	7pm-9pm M-F / 10am-4pm Sat, Sun	cynthom@satx.rr.com
(4)	Christel Villarreal			christel.villarreal@gmail.com

If you are unable to find help in the list above, consider contacting the desk staff volunteers at the Alamo PC Computer Learning Center. 736-0700 or 736-0080. 10am - 4pm M-F, Sat Remember these volunteers are all levels of expertise and some may not be able to answer your questions, but may be able to find someone who can.


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Classified Ads

E-mail or snail mail (address on page 3) your ad to the Editor, PC Alamode at: editor@alamopc.org. Copy deadline is 10th of month preceeding publication. Classified ads are free to members of Alamo PC.

- For Sale** Old dusty computer found in my garage. No power source, no mother board, no RAM. It's basically a plastic box full of dust. \$2,000 or best offer. Call 555-5555
- For Sale** Invest in antique computer junk. Box of old 5.25" disks. Paid \$45, will take \$600, plus delilvery fee. Call 555-5555
- Wanted** Classified ads from members of Alamo PC. It costs nothing and it's a good way to sell or buy any computer-related thing.
- Missing** Alamo PC members from the classifieds section. Answers to the name of 'Apconian.' Last seen about 5 issues ago. Reward of free classified ad offered.



100% gray cotton golf shirts with pocket and embroidered full-color **Alamo PC logo**
Available at the Learning Center in a wide variety of sizes.

\$20.00

Call the Learning Center at **736-0700**

Alamo PC Organization has your Number!

Your membership number entitles you to a full year of membership privileges. Established in 1983, this non-profit, all-volunteer organization is dedicated to helping members keep up with trends and technologies.

Monthly Meetings

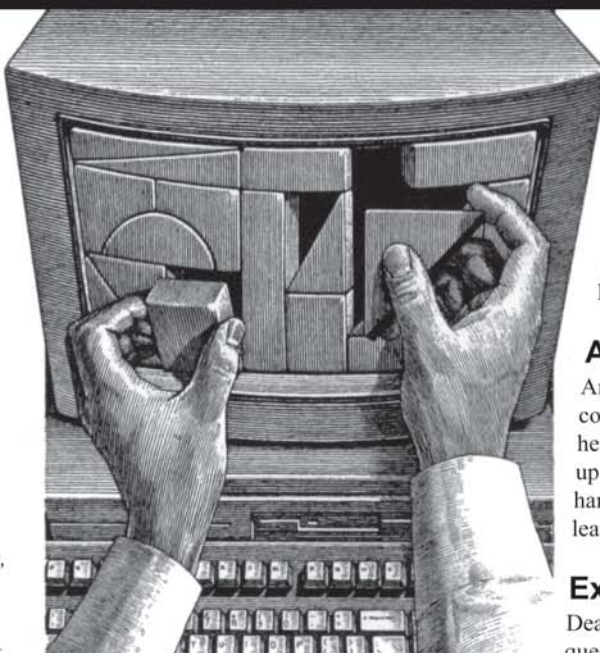
Every month you can attend a presentation meeting, which is open to our 2,500 members. Local and national companies provide the first glimpses of new products and discounts on existing products. There are also drawings for FREE hardware and software.

Award-Winning Magazine

When you join Alamo PC, you'll receive its award-winning magazine, *PC Alamode*, each month. You'll learn of group activities and you'll enjoy the reviews of new products from your fellow members. Regular columnists will give you insight to this fast-paced, dynamic industry. As a member, you can sell your outgrown stuff in our FREE Classified ads section.

Special Interest Groups and Classes

Alamo PC offers more than 30 Study Groups and classes on specific software programs for beginners to expert. These small groups typically meet once a month in one of our two hands-on computer labs or classrooms and provide an opportunity to get answers in an informal setting. There are groups for word processing, Web design, graphics and programming and even study groups to help you get Microsoft Certified. You can attend as many SIGs as you'd like and, as you become experienced, even lead one!



Internet (www.alamopc.org)

Alamo PC is on the Internet, and more importantly, Alamo PC can help you get on the Internet too. If you're already on the Internet, attending one of Alamo PC's Internet SIGs will help you to become a savvy Internet surfer.

Alamo PC SeniorComp

Are you age 45 or older and not into computers or the Internet yet? Let us help. Contact Alamo PC today and sign up for the very next class. Classes are hands-on at a pace to match your learning style.

Expert Help

Deadlocked with a computer problem or question? Get access to personal help from expert Alamo PC members. Just call! If you need someone to diagnose hardware and software problems, try "THE DOCTOR IS IN," a free clinic where members bring in their computers and allow our experts to help diagnose and often fix many PC ailments.

APPLY FOR YOUR NUMBER -- JOIN NOW!

To join, return the application below or sign up online at www.alamopc.org. Your \$45 dues covers your entire family!e. You may use your credit card or send your personal check. If you need more information, call (210) 736-0700. Shortly after joining, you'll receive a membership card entitling you to all rights and privileges and discounts. **JOIN TODAY!**

GIFT MEMBERSHIPS NOW AVAILABLE: Call 210-736-0700 for details.



Membership Application -- Apply for your number today!

PLEASE ANSWER ALL QUESTIONS. This information will be kept in confidence - it will be used for planning purposes only

FIRST: _____ MI _____ LAST: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

PHONE H: _____ W: _____ FAX: _____

DATE OF BIRTH: ____/____/____ OCCUPATION: _____

EMPLOYER: _____ TITLE: _____

E-MAIL: _____

Please accept my membership for: ☐ 1 year - \$45 ☐ 2 Years - \$85 ☐ 3 Years - \$125 ☐ New Member ☐ Renewal

Method of payment: ☐ Check ☐ VISA ☐ MasterCard ☐ American Express

Credit Card # _____ EXP DATE: ____/____/____ SIGNATURE: _____

Make checks payable to Alamo PC Organization and mail to: **Alamo PC, PO Box 65180, San Antonio, TX 78265-5180**

IMPORTANT ☐ I do not authorize Alamo PC Organization to release my name address and phone to selected vendors

PCA JAN05

Alamo PC Organization, Inc.

Renew Now!

Isn't it about time for you to consider all the benefits of membership with Alamo PC? Renew your membership before the year is over!

For more information call the Learning Center at
210.736.0700



Consider A Matching Donation, or a Donation To Alamo PC Organization

Increasing members knowledge and effective use of personal computers, and providing other membership services and access to the expertise of other members, does not happen without an associated monthly expense. In recent months, although member dues and ads have offset the majority of the required monthly expense, and cost-saving measures are constantly being reviewed, the total amount of monthly funds generated has been less than the monthly expense. The shortfall has had to come from reserve funds, which have been severely depleted. We would like to offer everyone the opportunity to help rebuild the reserve fund.

If you employer has a "Matching Donation" program, please consider that you can double a donation amount by participating. All donations are tax deductible and can be dropped off at the Alamo PC Learning Center in Crossroads Mall (near the underground parking entrance, accessed from Fredericksburg Road) or mailed to **Alamo PC Organization, PO Box 65180, San Antonio, TX, 78265-5180**. Checks, Money Orders, etc., should be made payable to **Alamo PC Organization** and identified as "Donation."

On-line donations can be made at <<https://training.alamopc.org/donations>>. If you do not have on-line access, credit card donations can be made by mail if you legibly provide the following information on a piece of paper: Full Name, Address, City, State, Zip, Phone Number (to verify you want your card charged), Name of Card, Card Number, Card Expiration Date, Donation Amount, and your usual Signature. Please help us keep our membership dues low, meet our monthly expenses and rebuild the reserve fund.

