

Amateur Computer Group of New Jersey NEWS

Volume 32, Number 5

May 2007

Let's Lie to the World

Robert D Hawes, ACGNJ

It seems as if there is no standard of truth anymore. Anyone can say anything they want, no matter how false, with no fear of censure. As long as they're a big business, that is. Recently, a Florida State Representative named Ed Homan tried to insert the following text into a bill; "By July 1, 2009, the Agency for Enterprise Information Technology shall develop a plan and a business case analysis for the creation, exchange, and maintenance of documents by state agencies in an open format that is capable of being: (a) Published without restrictions or royalties; (b) Fully and independently implemented by multiple software providers on multiple platforms without any intellectual property reservations for necessary technology; and (c) Controlled by an open industry organization having a well-defined inclusive process for evolution of the standard. Each state agency must be able to receive electronic documents in an open, extensible markup language-based file format for office applications and may not change documents to a file format used by only one vendor. The Agency for Enterprise Information Technology shall develop rules for state agencies to follow in determining whether existing electronic documents must be converted to an open, extensible markup language-based file format. In developing guidelines under this subsection, the agency shall consider: (a) The cost of converting electronic documents; (b) The need for public access to the documents; and (c) The expected storage life of the documents."

Sounds fair, doesn't it? It just specifies "openness", without mentioning ODF (Open Document Format), OpenOffice.org, or Microsoft's "Open" XML format by name. But we all know what would qualify under those conditions, and what wouldn't. So a team of Microsoft lobbyists descended upon Florida, and managed to convince the legislators that including this language would somehow lock the state into a closed file system; while eliminating it (and thus continuing to pay big bucks to use Microsoft's proprietary file formats) was the "open and free" choice. Talk about spin control. Well, if others don't have to be honest, why should I? I've decided to spread my own fair share of good old dishonest misinformation to the general public, and I'm asking *you* to help. Let's create our own Urban Legend.

When I decided to re-examine some of my Linux tests from 2005, I needed a hard disk to work on. Only two spare drives were available, an 80 GB and a 20 GB, and **both** had files on them. There was a bit over 25 GB total, so I couldn't just copy all files from the 80 to the 20. Besides, I might need a second drive for the experiments. So I burned the files from both drives to DVD. It took six disks. I gave them straight ISO9660 style volume labels: JICBU82_1F6 to JICBU82_6F6, for "Just-In-Case Back-Up of 80 & 20 GB drives — 1 of 6" to "6 of 6". (While the Joliet CD/DVD file system allows you to make longer labels, *no* program, not

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<http://www.acgnj.org>

Founded 1975

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Tips for reviewers: Why does anyone need it? Why did you like it or hate it? Ease (or difficulty) of installation, learning and use. Would you pay for it?

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Publication Exchange: Other computer user groups are invited to send a subscription to ACGNJ at the address below. We will respond in kind.

Address Changes should be directed to Martin Rosenblum (m.rosenblum@ieee.org) and/or to his attention at ACGNJ at the address below.

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Typographic Note: The ACGNJ News is produced using Corel Ventura 5. Font families used are Times New Roman (TT) for body text, Arial (TT) for headlines.

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From The DealsGuy

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

*A Great Trade Show

We recently worked the National Association of Builders show and it was very large with over four million pounds of freight just to build the booths, and 105,000 attendees. Six large two-story modular homes were assembled in the parking lot for display, one worth over a million dollars, and many booths in the exhibit hall had a second floor. However, something very impressive to me was the Kohler booth. There was a stage for their selling activities and the background for it was a waterfall about 20 feet high and the same wide, but like no other waterfall you have ever seen. Yes, the water was tumbling down in variations, but it did other things. All of a sudden the water would stop its normal waterfall display, and the individual letters for KOHLER would drop formed with water, one at a time, then the entire name would fall, followed by other messages, all spelled out with well formed letters made with falling water. Many other patterns were also formed by the falling water. I watched it for about ten minutes and it never repeated the entire same pattern of messages during that time. It was a highlight of the show and I'm sure that display cost Kohler many bucks. I wish I had asked to see the control room.

*Feedback!

Thanks for the comments that I received on the side effects of medication. Not many responded, but the comments were interesting and so far, the respondents agreed with me, but I would also be interested in other opinions. Perhaps I should start a blog about all this.

Let's Lie, *continued from page 1*

even XP SP2, displays more than the first eleven characters. So why bother?) Burning DVDs is boring. Even with today's fast drives, it still takes significant time. Having nothing better to do while the DVD writer chugged along, I found myself becoming intrigued with the sound of JICBU82. JICBU '82? Could it have been a festival of some kind? What foul deeds and/or dastardly goings-on might have happened there? Eventually, I came up with the following imaginary quote:

"If all of the people who say that they were at JICBU '82 had actually been there, there wouldn't have been any room for the performers. Before the unfortunate "incident", participants who had also attended Woodstock said that it put Woodstock to shame. Afterwards, it was universally agreed that it made Altamont look like a picnic. The "I survived JICBU 82" tee-shirts that were hurriedly produced for sale as it ended became instant collectors' items. (The missing apostrophe was somehow overlooked in the rush). They rarely come up for auction, but when they do, they go for fantastic prices. That usually only happens when somebody dies. As long as they're still breathing, none of the lucky few owners will ever part with them willingly".

Having written that paragraph (even if only as a silly way to pass some otherwise wasted time), I naturally wanted to show it off. Since ACGNJ NEWS is the only publication I currently contribute to, I had to find some way to make it fit here. I

*A Little Fun In The Sun

My wife and I decided to introduce our son and his wife to cruising during their stay at our beach condo, and while we did not want to take another Carnival cruise after our last experience, the spring break season gave no opportunity for deals. We finally settled on a Carnival 4 night cruise to Cozumel only because Carnival offered us the best price. We felt that since our son and his wife have never cruised they wouldn't know a good one from a bad one, but we ended up being pleasantly surprised at how good the Inspiration (Carnival's ship) turned out to be. The food was excellent, the shows were fantastic, and all in all, it was a great trip. As expected, it was a much younger crowd, including a lot of spring breakers, but we tried to stay clear of them the best we could, and had a good time. Shopping was fun in Cozumel. That ship did things much better than the Carnival Miracle we previously cruised on. Since the Inspiration was an older ship, there were a few things that needed improvement, but it will be going into dry-dock in September for some refurbishing and hopefully they will improve some of them. However, the shortcomings were nothing serious.

*Here is an announcement, but remember I have not tried this or any of the others, and since I have edited to shorten them, be sure to check it out thoroughly on their Web site.

*Remote Desktop Monitoring is Here

But Think of it as a Spy!

thought about the recent antics of Microsoft, and other historic "big lies", and came up with this idea. I can get in a few digs at Bill, maybe give somebody a few laughs, and maybe, just maybe, make phony history.

So that's my contribution to the story. Now all of you make up something absurd to add to it, then pass it on. You want a computer connection? Perhaps Gates was there. Could the "incident" have been all *his* fault? Maybe our combined tall tale will take on a life of its own and become a bona fide Urban Legend.

I can hear some skeptic saying; "You've clearly stated, right here in print, that you just now made this whole thing up. Doesn't that fact somewhat destroy your notion of creating a legend"? Well, no, actually. Remember, JICBU '82 "happened" a quarter century ago. If the story takes hold, this article, published at this late date, will **not** be seen by true believers as the origin. Instead, it will be seen as just another in the long series of attempts by "the authorities" to debunk the facts and cover up the truth. That's the beauty of conspiracy theory.

Bye for now. I've got to run right out and make myself a tee-shirt. Maybe it'll be worth a fortune someday.

There is no restriction against any non-profit group using this article as long as it is kept in context with proper credit given the author. ☺

You can monitor the activity of all the PCs in your classroom remotely. Plus, you can share your screen with your students' PCs, making demos and presentations much easier. Classroom Spy Professional from EduIQ.com <http://www.EduIQ.com> enables remote interaction between the user on the administrator's computer and users of individual computers, even over LAN, WLAN, VPN and the Internet. Once installed and configured, the program lets you see what's taking place on the screens of remote machines and, if needed, take full control over the mouse and keyboard of any machine. There is also an ability to show your own screen to remote users and execute some administrative operations. The program encrypts screen data as well as mouse and keyboard input.

Because the program can run as a service on Vista, the login page and User Account Control (UAC) prompt are accessible. There is a live picture of the remote computer screens. Due to some optimization, the live screen doesn't use a high bandwidth, but even when the lower network bandwidth is required, the refresh interval can be extended using one mouse click. The activities of any student can be recorded for further analysis and assessment. The teacher can use the existing computer infrastructure to deliver a presentation directly to the screens of remote users.

It's also possible to execute various administrative commands, for example, log off users, turn off, restart, hibernate, or suspend one or all remote computers at once with a single mouse click. There is also an ability to schedule recording of remote computers desktops, and record remote activities, even when there is nobody monitoring the administrator's computer. The capabilities of Classroom Spy Professional can effectively be used not only in a classroom but also in offices.

Classroom Spy Professional 2.4.2 runs under Windows 98, Me, NT4, 2000, XP, 2003 and Vista, and costs \$49.95 (US) for a three-computer license. User Group members are offered a 15% discount at <http://www.ClassroomSpy.com> using the coupon code PRUG788243. For other types of licenses, please refer to http://www.ClassroomSpy.com/classroomspy_pro.htm. Licensed customers are entitled to free technical support by e-mail. Additional information on the product, as well as a free 30-day evaluation copy is available from the Web site.

Direct download link: ClassroomSpy.com/dwn/classroomspypro.exe (3.6 Mb)

*A Bonanza of Goodies

Paul Witheridge from the Sarnia Computer Users Group in Sarnia, Ontario, sent me some items that my readers might be interested in. I'll list them, but be aware that some may already be expired by the looks of the coupon codes. I'm sorry that I didn't have room last month. I'm making them short so I can fit them all in. It's always good to have a friend with a sharp eye.

Acrobat is an expensive product and now they have their product activation which many resent. Here is a deal on another PDF product. How about a \$20 discount on Nuance PDF Converter Professional 4! Coupon code PDF\$20OFF; http://www.digitalriver.com/dr/v2/ec_MAIN.Entry17c?CID=0&PN=5&

[SP=10007&SID=19198&PID=855990&ClickID=dwkrzowcsmxhoybz;kkkt2wmmk0mksc2txw&CUR=840&DSP=&PGRP=0&ABCODE=&CACHE_ID=0](http://www.digitalriver.com/dr/v2/ec_MAIN.Entry17c?CID=0&PN=5&SP=10007&SID=19198&PID=855990&ClickID=dwkrzowcsmxhoybz;kkkt2wmmk0mksc2txw&CUR=840&DSP=&PGRP=0&ABCODE=&CACHE_ID=0)

DealsGuy note: I read a negative review of PDF Converter in the December issue of SouthEastern Michigan Computer Organization's DATA BUS. <http://www.semco.org>

10% off any purchase at the CA store. Coupon code DecAFFOFF10;

http://store.digitalriver.com/servlet/ControllerServlet?Action=DisplayHomePage&SiteID=cacnsum&Locale=en_US&Env=BASE&ClickID=bdesuukdflyvqkgnueezmdyye1yelfmzne

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\$20 discount on CA PC MacLAN. Coupon code AFFML07; <http://go.lockergnome.com/649>.

http://shop.ca.com/file_sharing/pc_mac_network.aspx

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http://www.digitalriver.com/dr/v2/ec_MAIN.Entry17c?CID=280604&PN=5&SP=10007&SID=1839&PID=873873&ClickID=cqai77lqpxskzln e7aaa4vqssawsaxpv4ei&CUR=840&DSP=&PGRP=0&ABCODE=&CACHE_ID=280604

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10% off Roxio Easy Media Creator 9 Suite. Coupon code SAVE10C9; roxio.com/enu/products/creator/suite/overview.html

\$10 discount Roxio Popcorn 2 (DVD copier). Coupon code P2SAVE10; <http://go.lockergnome.com/657>.

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\$400 discount TurboCAD Deluxe v12.2 Upgrade; <http://www.turbocad.com/prodinfo.asp?t=1&mcid=382> (DealsGuy)

Get Organized Now!!

Sandy Berger (sandy@compukiss.com), CompuKISS (www.compukiss.com)

With today's complex world and multi-tasking, it is not surprising that we all seem to have too much to remember. The time-honored "to-do list" is still a suitable way to keep all of your tasks remembered and organized. Now the to-do list has gone high tech with Gubb an online list-maker.

Gubb is simple, effective, and free. Just surf over to www.gubb.net and click on the large Start Here button. Enter your email address and the username and password that you want to use. Gubb will present you with preformatted lists or you can create your own from scratch. Each list can have a different background color or you can make them all the same.

Gubb made PC Magazine's list of the 10 worst application names, but don't let the name throw you. Gubb is a winner despite its name. Gubb's clean and simple interface makes it easy to create lists and to add, edit, or delete items. Important items can have one, two, or three stars. You can sort items by priority, date due, completed items, or alphabetically. Especially useful is the ability to rearrange items in a list by dragging and dropping them. You can also drag and drop the lists themselves to position them on your screen. If your lists get too long, you can collapse them so you see only the title, opening them to full length as you need them.

If crossing items off your list as you complete them gives you a sense of satisfaction, Gubb will let you perform that task quite easily. Just click in the check box next to each item and Gubb puts a line through the item and marks it as completed. Gubb can also move the item to a completed list automatically or you can set it up so that you can archive your completed items at the end of the day, or any time of your choosing. If at anytime you need to see if, or when, you completed a task, you simply click on the name of the list to look at all the completed items and the time and date that you marked them complete.

These features alone make this Web service worthwhile, but there is more. You can share your lists with others. You can email or text message items right into your lists. You can have

any of your lists emailed to yourself or to others. If you have an Internet-connected cell phone, lists can also be sent to your phone. So if you were in a grocery store and needed your shopping list, with the right equipment, you could access it from Gubb on your cell phone. All this may sound a bit complicated, but Gubb has done an exemplary job of keeping all these tasks easy to do.

My husband and I have each created multiple lists. We also have several lists that we share. Since we work together, this has really helped keep us organized both at home and at work. He can add items to my office or home lists and I can add anything I like to his office or home "honey-do" list. Gubb is helping us keep synchronized as well as organized.

Gubb is not perfect, but it is close. My complaints are pretty minor. I would love the ability to create several categories within each list. I would also like to be able to easily see if my husband added something to my list or vice versa. The program offers 3 shades of each of the following colors: blue, red, yellow, green, orange, pink, and gray. That's 21 colors to choose from so I am really being picky when I say I would like to be able to use purple, turquoise blue, and lime green for my lists. Okay, I know I am being hard to please, but maybe the Gubb creators will accommodate my wishes.

A recent survey showed that 25% of New Year resolutions are completely forgotten, but now you can use Gubb to resurrect your "I am going to be more organized." resolution. Sometimes getting organized means buying shelves, bins, baskets, and folders, but if you have an Internet-connected computer, Gubb will help you get organized without expense. Go ahead. Do it. It will feel great to get all those scraps of paper and to-do notes off your desk and to get all those to do items off your mind. I know, because Gubb has helped me do just that!

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DealsGuy, *continued*

note: There is a problem with the stated discount, which doesn't make sense, so you should check on where the mistake is.)

20% off Net Nanny products. Coupon code 270355; <http://www.netnanny.com/>

\$5 savings on Big Hammer Patio Designer; <http://www.bighammersoftware.com/affiliates/patio.aspx>

\$5 savings on Big Hammer Deck Designer; <http://www.bighammersoftware.com/affiliates/deck.aspx>

\$10 savings on Big Hammer Garage and Shed Designer bundle; [bighammersoftware.com/affiliates/garage_shed_bundle.aspx](http://www.bighammersoftware.com/affiliates/garage_shed_bundle.aspx)

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rising-global.com/CategoryDetail.aspx?MenuId=1&CategoryId=3

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20% off RadarSync System Checkup. Coupon code RadarSync2in1-11; <http://go.lockernome.com/668>.

<http://www.radarsync.com/>

That's it for this month. I'll soon have some new product announcements on my Web site. Meet me here again next month if your editor permits. 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. Visit my Web site at <http://www.dealsguy.com>. ☐

Countdown to the Digital Deadline

Jim Sanders (editor@noccc.org), North Orange County Computer Club CA (www.noccc.org)

Television, as most of us know it, has barely two years of life left in it. Congress has set a deadline of February 17, 2009 for analog broadcasts to end. That means that the faithful television that you have had, for I don't know how many years, will cease functioning on that date. Well, cease functioning may be too strong of a description, but there will no longer be an over the air broadcast of the analog type of signal that it knows how to interpret.

Starting on that date, all of the over the air television broadcasting stations have been mandated to transmit the digital television format signal only. Old faithful, or maybe not so old, can still be used as long as there is some device that can feed it the analog signal that it knows how to deal with. This could be your VCR or DVD player for instance. Or, it could be one of the set top boxes that millions of people are going to have to purchase if they wish to continue using their analog television to receive over the air television broadcasts. The purpose of the set top box is to tune in the digital television frequency and convert it to the NTSB analog signal that your television knows how to deal with.

The set top boxes contain an ATSC tuner. This stands for Advanced Television Systems Committee. They are an international organization setting the standards for digital television. In time, they will replace the NTSC, which is an American organization overseeing analog TV transmissions. There is considerable talk about Congress passing legislation to subsidize, or provide free of charge, set top boxes to low income families. At this time there is no requirement that the recipients be United States citizens.

When you purchase a digital television, ATSC is a term that will be listed on the specifications showing that the television has a built-in digital tuner. There are eighteen formats in the DTV spectrum, 12 SDTV formats and 6 HDTV formats.

The Federal Communications Commission (FCC) is the regulating organization in the United States that controls conversion from analog to digital. The Federal Communications Commission has set deadlines that mandate all manufacturers include digital tuners in their televisions. These are the dates that have been mandated:

- July 1, 2005: all TVs with screen sizes over 36 in. must include built-in ATSC tuner.
- July 1, 2006: 100% of 25 to 35in. TVs must include ATSC DTV tuner.
- July 1, 2007: 100% of 13 to 24in. TVs must include ATSC DTV tuner.
- July 1, 2007 100% of all interface device's must have ATSC DTV tuner. That includes equipment such as VHS VCRs, DVD player/recorders, and DVRs.

These deadlines only apply to new televisions and do not include the huge inventory of existing units. That is why you may see a number of television's larger than 36in. still being sold without built-in digital tuners.

Definition of television; a television is a viewing device that includes a tuner. A device without a tuner is called a monitor.

There is a loophole in the FCC regulations that allows manufacturers to build TVs without any tuner which would technically make it a monitor.

Most cable subscribers and all satellite subscribers use their service provider's set top box to receive and decode the digital signals instead of using the television's built-in ATSC tuner. One exception to that rule is a small credit card type of chip that takes the place of the set top box and is called a CableCARD.

Most cable and satellite providers charge in the neighborhood of \$9.95 a month to receive HD channels. Over the air High Definition channels are "free" in the same sense that current analog channels are free, that is you pay the price of watching the commercials but don't actually have to shell out money. So if you spend the extra bucks up front to buy an HD television that includes the ATSC tuner, you are not forced to pay that additional monthly charge. By purchasing an antenna from an electronics store for in the neighborhood of \$25 to \$100, a person that owns a set with a built-in ATSC tuner can enjoy the over the air broadcasts for free.

When analog signals are turned off and digital becomes the standard, cable and satellite providers will probably provide the local networks for free if they don't do so already. But you will still have to buy or lease the cable box which right now costs in the neighborhood of \$199. In addition to that, you'll still have to purchase the programming from the provider.

So if you are a person that currently relies on getting all of your television through a rooftop antenna, in less than two years you will be faced with the choice of spending money for some new equipment or no longer being able to watch television.

One method of dealing with the problem would be to purchase one of the new DVD VCR combos that include the ATSC tuner. A number of VCR manufacturers, including Panasonic, have announced that when the new regulations go into effect, they will simply stop manufacturing that class of equipment. JVC has announced a new DVD/VCR/ATSC tuner model that will be available in May, the DRMV99 at \$329.95. If you already own a good VCR and a good DVD player, it might make more sense to go ahead and purchase just the ATSC set top tuner.

In addition to dealing with all of the high definition signal acquisition problems, a whole lot of people are already trying to deal with the somewhat confusing array of HDTV offerings. The terminology which is frequently observed in the papers can be very confusing. The phrase "HD ready" is usually an indicator that the unit is a monitor that does not include a tuner. A lot of advertisements conveniently do not include what version of high definition a particular offering is. It is simply referred to as HD without saying whether it is 720i, 720p, 1080i or 1080p. The actual pixel resolution is often omitted as well. The 720i or p sets need to have a resolution of 1280 pixels by 720 pixels. The real 1080i or p sets need to have a resolution of 1920 pixels by 1080 pixels. Just like the older VGA computer monitors the 720i refers to an interlaced

Continued

display and the 720p refers to a progressive scan display. The progressive display is the better quality.

Then you have to decide which display technology you are going to pick. The Plasma flat panel, the LCD flat panel, the rear projection DLP television, the rear projection LCD television, the wall projection unit in either DLP or LCD. What is the brightness level? What is the viewing angle? What is the life expectancy of the projector bulb? What is the cost of the projector bulb? Does the unit have a VGA, a DVI and an HDMI video connector?

At the moment, I think the best bang for the buck is to purchase a projector that will do 720p, and if you can afford the extra cost, one that will do 1080p. If you have never seen even an older 800x600 projector displaying a movie from a standard DVD on an eight foot diagonal screen, I think you will find it impressive and I think you should do that before you spend money on anything.

Some selected FAQs from <http://www.dtv.gov/>

What is the digital TV transition?

The switch from analog TV (the traditional TV system using magnetic waves to transmit and display TV pictures and sound) to digital television (the new TV system using information transmitted as “data bits” — like a computer — to display movie-quality pictures and sound), is referred to as the digital TV (DTV) transition. In 1996, the U.S. Congress authorized the distribution of an additional broadcast channel to each TV broadcaster so that they could introduce DTV service while simultaneously continuing their analog TV broadcasts. In addition to improved picture and sound quality, an important benefit of DTV is that it will free up parts of the broadcast spectrum for public safety as well as other valuable uses. This is possible because the modern technology of DTV is more efficient than analog TV technology. DTV allows the same number of stations to broadcast using fewer total channels (less of the broadcast spectrum) which will free up scarce and valuable spectrum for public safety and new wireless services.

What is the February 17th, 2009 DTV deadline date?

Congress passed a law on February 1, 2006, setting a final deadline for the DTV transition of February 17, 2009. Most television stations will continue broadcasting both analog and digital programming until February 17, 2009, when all analog broadcasting will stop. Analog TVs receiving over-the-air programming will still work after that date, but owners of these TVs will need to buy converter boxes to change digital broadcasts into analog format. Converter boxes will be available from consumer electronic products retailers at that time. Cable and satellite subscribers with analog TVs should contact their service providers about obtaining converter boxes for the DTV transition.

What is digital television (DTV)?

Digital television (DTV) is a new type of broadcasting technology that will transform television as we now know it. By transmitting the information used to make a TV picture and sound as “data bits” (like a computer), a digital broadcaster can carry more information than is currently possible with analog broadcast technology. For example, the technology

allows the transmission of pictures with higher resolution for dramatically better picture and sound quality than currently available — called High Definition Television (HDTV) - or the transmission of several “standard definition” TV programs at once — called “multicasting.” “Standard definition” digital TV pictures would be similar in clarity and detail to the best TV pictures being received and displayed today using the current analog broadcast system and TV receivers. DTV technology can also be used to provide interactive video and data services that are not possible with “analog” technology.

Is HDTV the same thing as DTV?

HDTV is the highest quality of DTV, but it is only one of many formats. In addition to HDTV, the most common formats are Standard Definition Television (SDTV) and Enhanced Definition Television (EDTV).

SDTV is the baseline display and resolution for both analog and digital. Transmission of SDTV may be in either the traditional (4:3) or wide-screen (16:9) format. EDTV is a step up from Analog Television. EDTV comes in widescreen (16:9) or traditional (4:3) format and provides better picture quality than SDTV, but not as high as HDTV.

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Diskeeper 2007 Pro Premier

Enhancing File System Performance — Automatically

Verne Perry (VerneP@aol.com), PCC Member, Hayward, CA (<http://www.pcc.org>)

First off, I'm not very impressed by Windows Vista, primarily because I vainly hoped that with this version, Microsoft would finally solve its file system problems. It didn't. So on my Windows machines I'll continue to have to worry about the sluggishness that results from file fragmentation that occurs just with use of the machine. Between home and office I maintain 8 XP machines, and one Windows 98 machine, that acts as a server, and to keep all of these running smoothly I spend a lot of time defragging them. I found long ago that using Windows Defrager was an extremely slow process, and over the years developed a maintenance routine which involved windows checkdisk to check the disks on boot-up and a freeware program called SpeedDefrag 4.1 to defrag the disks prior to any drivers or startup programs being loaded. The process is not automatic, and often procrastination in starting the process resulted in the machine getting so fragged that there was a noticeable performance drag. So I was happy to receive a copy of Diskeeper 2007 Pro Premiere to evaluate.

Diskeeper promotional materials said this version introduced a major new feature called "InvisiTasking", a proprietary feature that runs in the background and this "on the fly" defragmentation used "very close to zero" resources and was invisible. InvisiTasking was described as being the "essence" of the product. Moreover, Diskeeper's older "I-FAAST" (Intelligent File Access Acceleration Sequencing Technology) file system performance technology which is designed to benchmark hard disk volumes for performance characteristics and continually monitor them to determine which files are requested most often, was integrated with the "InvisiTasking" product. For safety, Diskeeper 2007 moves a file only when it is absolutely certain that no data will be lost using a "Movefile" application programming interface (API) jointly developed with Microsoft. Although manual defragmentation with Diskeeper is still possible, it is not the way the product is now intended to be used.

I decided to test Diskeeper on my home XP machine, because it has the highest rate of defragmentation, due to my frequent installation and uninstallation of various test programs. That machine also has a Linux partition which I wanted to use as a "curve ball" thrown into my testing. Other than the Linux partition, the machine's other hard disk partitions were formatted in NTFS, for which "InvisiTasking" and "I-FAAST" technologies were optimally designed.

The first thing Diskeeper did was to analyze all Windows hard disk volumes. I was pleased it skipped the Linux volume, since I wouldn't want Diskeeper dealing with that anyway. It reported that my C:\ drive was heavily fragmented, which I expected. However, I was surprised that the analysis included a report generated by FRAGSHIELD, advising that the drive's Master File Table (MFT) was using 86% of the total MFT size and was likely to become fragmented. Despite having previously tested a fair number of defragmentation programs (commercial and freeware) I had never before seen such a test or option to optimize the MFT. Windows XP initially establishes the size of the MFT, but as more files are

placed on the disk the MFT may fill up, and when XP increases the size of the MFT to accommodate needed additional indexing, the increase usually results in a fragmented MFT. Because the MFT is an index of all the files on the disks (working the same way that phone book stores phone numbers), a fragmented MFT will cause a disproportionate amount of file performance degradation. So I decided to follow Diskeeper's recommendation to increase size of the MFT to correct this problem, as well as to do a boot-time defrag of the increased MFT and the windows pagefile. I also decided to thoroughly test the "on the fly" "essence" of the new version by setting all drive volumes for automatic defragmentation.

Despite my initial skepticism about an "on the fly" defrager, my experience with Diskeeper was very positive. After completing the initial set up I decided to put the "on the fly" features to an immediate test. In my experience, playing a fast paced first person shooter game is an excellent way to test drag imposed by a program running in the background, so after the initial setup I fired up Unreal Tournament 2004 for a two hour test session. I noticed a drag for nearly the whole session, but in the three weeks since that initial test, I have played the same game and also done other things, trying to detect a drag from Diskeeper's "on the fly" defragmentation. Since that initial session, I have detected no drag whatsoever. On the other hand, I have noticed that my machine is running much smoother, faster, and otherwise free from any symptoms of fragmentation. Finally, I ran the Analyze feature on all my hard disk partitions, and found that in the three week period there was essentially no new fragmentation.

I also tested Diskeeper on an external USB drive formatted with NTFS. Diskeeper was able to analyze and defrag the drive. Although the analysis indicated that the external drive's MFT needed to be increased, I knew that would be impossible because there is no practical way to perform a boot time defrag on such an external drive.

As long as Windows continues to use the NTFS file system, which requires periodic defragmentation, I would highly recommend Diskeeper 2007 Pro Premiere, which is priced at \$99.99. You can do your own test by downloading a free 30-day full trial version from Diskeeper.com. Installation requires an XP or 2000 operating system and at least 11 MB of disk space. There is a Pro version for \$49.99 (which does not have the integrated I-FAAST feature, but does have the FRAGSHIELD) and a Home version which does not have either the I-FAAST or the FRAGSHIELD feature). As for Vista, existing Diskeeper 2007 customers can go to the web site to receive a free link to download a Vista-only version, and new customers can purchase the Vista-only version.

Of course another solution is for the business world to go to an Operating System that doesn't have these archaic file system problems. How about something called Linux?

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Experimenting with Live CD-ROMs

Dick Maybach (n2nd@att.net), Brookdale Computer Users Group (www.bcuq.com)

In the early days of PCs, we did much more experimenting than we do now. The only long-term storage was on diskettes, and when we removed the diskette olding the operating system, we also removed any problems that resulted from our experiments. Now, our hard disks hard large, complex operating systems, and if they are damaged by our errors or by malware such as viruses, the recovery process can be long and painful. Those who still like to experiment should consider live CD-ROMs.

A live CD-Rom contains an operating system and applications and can be run without using the hard disk at all. When you remove the CD-ROM, your old operating system (probably Windows) takes over. In fact, since the hard disk was not accessed while the live CD-ROM was running, Windows is no more aware that the PC has been used than if you had never switched on the power.

To use a live CD-ROM, you must set up your PC so that if a CD-ROM is present, it will try to boot from it, rather than the hard disk. Watch carefully as your PC boots, and you should see a message telling you how to start the BIOS set-up program. Often, the procedure is to press the F2 key repeatedly during booting. Don't just hold it down, as the PC will think your keyboard has a stuck key and will refuse to start. Once the set-up program has started, read each screen carefully before changing anything.

Changing boot order

If you think you've made a mistake, exit without changing anything (often done by pressing the escape key) and start again. You are looking for the screen that lets you change the boot order, which is the order in which the PC checks deviced for an operating system. It always includes the hard disk, diskette and CD-ROM, and (on newer machines) USB devices. In our case we want the CD-ROM checked before the hard disk. Once you are satisfied that everything is okay, save your changes and exit the program (often done by pressing F10).

You can download live CD-ROM programs free from the Internet. However, you will now have what is called an ISO image. This is not a file, and if you write it to a CD-ROM as a file, it won't be bootable. Unfortunately, the free versions of CD-ROM burner programs included with many PCs won't burn ISO images. But a suitable program, ISO Recorder, is available free at isorecorder.alexfeinman.com/isorecorder.htm. Many live CD-ROMs are available as pre-recorded CD-ROMs. See the referenced Web sites for information.

A good place to start is with the Ultimate Boot CD, available at <http://www.ultimatebootcd.com/>. This provides four versions of DOS and five of Linux, plus tools for motherboard, hard disk, and file system maintenance, in addition to four virus scanners.

DOS Lives at freedos.org

If you long for the simpler days of DOS, see <http://www.freedos.org/> to obtain an open-source clone of DOS. This will allow you to get reacquainted with the command line, BAT files, BASIC programming, and run those old programs that no longer work under Windows. The full version

contains some extras, FreeGEM (a clone of the old Digital Research graphical user interface), BWBasic (Bywater Basic), and several games.

If you would like to experiment with Linux, but aren't ready yet to install it on your hard disk, look at Ubuntu (<http://www.ubuntu.com/>), which provides a Windows-like interface, or Knoppix (<http://www.knoppix.org>), which is known for being very adaptable to different PC hardware. Several tutorial books are available for each — check your local Barnes & Noble or Borders.

For Linux, Windows, and, to a limited extent, Macintosh maintenance and recovery, my favorite is INSERT, available at http://www.inside-security.de/insert_en.html. This is worth a complete article, and I'll discuss it in next month's column.

Your Knoppix secret decoder CD

Security Tools Distribution (STD) (<http://s-t-d.org/>), is a variant of Knoppix, customized for those in computer security. It includes tools for encryption and code-breaking, for finding evidence of computer break-ins, for working with firewalls, for building honey pots (traps for ensnaring hackers), for analyzing and breaking passwords, for analyzing network traffic, and for assessing computer vulnerability.

You can see a long list of available live CD-ROMs at <http://www.frozentech.com/content/livecd.php>. Most of these are versions of Linux, because its source code is available and free, and because it's modular. Windows, by comparison, is proprietary and monolithic. At one point, Microsoft claimed that you couldn't remove even its Internet browser without disabling the operating system.

Happy exploring! ☺



Why You Need A Firewall

Brian K. Lewis, Ph.D. (bwsail@yahoo.com), Sarasota PCUG (www.spcug.org)

When you connect your computer to the Internet, you open a door which invites any other computer in the world to come in. Actually, you have more than 65,000 doors into your computer, any one of which may be open, unless you have taken steps to keep these doors closed. That is the purpose of a firewall. The firewall filters information packets that show up at your “door” or computer port as we usually refer to it, and can either prevent them from entering or pass them through.

When your computer connects to the Internet, it is assigned a numeric address or IP (internet protocol) address. These addresses are a 32 bit number. They usually written out in four groups with periods between each group as follows: 111.11.11.111. Traveling over the Internet are many programs that simply look for unprotected IP addresses. The IP address of any unprotected computer is sent back to the originator who can then upload a trojan or spyware package to that address. The originator can then take control of the computer or the application will record keystrokes and send all recorded information back to the program originator.

Although your computer has one IP address there are many different ports on your address. There are different ports for different purposes on your computer. Your connection to the Internet is usually through port 80. This is referred to as the HTTP (hypertext transfer protocol) port. It is used when you connect to a web page. The web page data is downloaded to your computer through this port. Another commonly used port is 25. This is used for the SMTP (standard mail transfer protocol) or e-mail transfer. Another port is used for incoming mail or POP3 transfer is port 110. These are all part of the port series from 0 to 1024 that are the most common ports. Many applications use ports in this region including PC Anywhere, Internet telephones, MSN messenger, Net Meeting, and all AOL operations. Ports 1024 to 49451 are referred to as registered ports. There are many Internet games that use ports in this region. There are also other specific functions assigned to these ports and some may duplicate functions in the common port region. The final group of ports are dynamic and have no specific functions registered. However, the point is that all of these ports can be accessed by remote computers somewhere out on the Internet and use them to connect to your computer if you have not protected them.

Automated port scanning software is available free from many “hacker sites”. Its use is very common on the Internet. There are various types of scans. Some will look for any of the 65,535 possible ports. Another type looks for open UDP (user data protocol) ports or may use an FTP (file transfer protocol) bounce to hide the origin of the scan. If an open port is located, software can be downloaded that will open a “backdoor” on your computer. This allows remote input and output. It can also be used to attack other computers to produce a “zombie” network. Such networks have been used to attack large computer servers in attempts to bring them down or to produce a “denial of service” attack.

Many users believe that a router with a firewall is adequate protection. Most routers use either network address transla-

tion (NAT) or a packet filter. Information on the Internet is transmitted in packets which contain the IP address of the sender and the address of the receiver in addition to the data. The routers firewall uses filters that look at the sending and receiving addresses of incoming packets on port 80 (HTTP). Only those packets that are a response to an outgoing request are allowed through. If your router uses a packet filter it can be penetrated by a fragmented scan. This type of scan breaks up packets into fragments which can easily get through the simple packet filter found in most router firewalls. Routers using NAT either alone or in combination with a packet filter can also be easily thwarted. NAT is not successful when the packet is an FTP packet or is sent by Microsoft’s Netmeeting or similar audio/video applications that bury the address in the body of the packet. Only when the address is in the header of the packet can the router use address substitution. So packet filtering and NAT, although useful, do not provide complete firewall protection for all Internet connections.

Another method for preventing intrusions is “stateful” packet inspection. This is the method used by most software firewalls and some of the newer routers. When your web browser opens a connection to the Internet, the firewall software records that connection and keeps a record of its status. Whenever a packet arrives at your computer, the data in the packet can be compared to the information in the firewall state table. The firewall software can also make decisions based on the data content of the packet, not just the sender’s address. Because this examination does require some time there may be a slight slowdown of your system, but in most cases, there will not be enough delay for most users to notice.

So inbound packets can be filtered and examined for dangerous content. However, when the user connects to a web server, the page requested is downloaded to the users computer. It is possible for that web page to contain a small program or a link to a dangerous site in a one pixel unit on the page. When this is downloaded the program is run or the link activated. This results in an outgoing packet to some Internet address through a non-standard port so the user is not aware of the activity. This type of activity would not be stopped by a hardware firewall in a router. It can only be blocked by a software firewall which recognizes that this activity is coming from a new application that has not previously made an Internet connection. In this case the software will query the computer user to determine if this new application should be allowed to connect. Hopefully, the user would recognize that this was not an application that the user was running and the outbound packet would then be blocked. It is absolutely necessary for the firewall to process both incoming and outgoing packets. Only a software firewall can establish the necessary tables for comparing the incoming/outgoing packets to allowed activity and request user interaction when necessary.

This leads us to the Windows firewall. This firewall, as used with Windows XP, does not have any control of outbound packets. Any application is allowed to connect to the Internet without any filtering or other checking of source or content.

Continued

Recovering Files from a Hard Drive

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Have you deleted a file that you need and you don't know how to get it back? The first step is to make absolutely sure that it has been deleted. Open your Windows Recycle Bin and double-check. Is it in there? If so, simply right-click on the file and choose Restore.

If you have emptied the Recycle Bin the next step is to restore the file from your latest backup. You do back up your data regularly, don't you?

Unfortunately, there is no native "Undelete" command in Windows XP. This is a mystery because Microsoft had a nifty undelete feature in Windows 3.1 which somehow disappeared in Windows 95 and subsequent versions of the operating system. This is abysmal for Windows users, but profitable for third party software developers.

It's important to understand that when a file is deleted it is not actually removed from your system. Windows deletes only the first letter of the file's name and replaces it with a marked for deletion character. This makes the file "invisible" to windows, and if Windows needs the space for something else, it has no qualms about overwriting your valuable data.

What this means is that if you accidentally delete a file, you have a limited amount of time to recover it before windows stores something else over the same space. It may not happen right away, but it will happen eventually.

Since there is no way within XP to recover a lost file, you have to turn to a third party solution. The good news is that there are several excellent programs that will do the job easily. The even better news is that these programs are free. Isn't that nice? Use Google or your favorite search engine to find FreeUndelet, PC Inspector File Recovery, or Undelete Plus.

All of them work well though you may find one easier to use than another. That's a matter of personal preference.

You need to be cautious about this. If you download the utility directly to your hard drive, you run the risk of storing the undelete program over the very data you are trying to recover. If you have a second hard drive, you can download to that or better yet, download directly to a thumb drive. That avoids all danger of losing important data, and it has the additional advantage of immediate portability.

The programs all work similarly. Direct any of the programs to a specific disk and you will get a list of all deleted recoverable files on the drive. You may also get a description alerting you that the file(s) may be wholly or partially recoverable. That's good to know.

Direct any recovered files to an external hard drive if you have one. Don't save anything to your hard drive until you have recovered everything you need. Use Windows Explorer to manage the recovered files. Group them into categories to sort or group the files so you can easily determine if they are program files, data files or something else. Some files may have data missing if Windows overwrote some of the sectors where it was stored.

If after all this you haven't been successful, your best alternative is to consider a data recovery service. These can be a devastating drain on your wallet, so don't use these services to recover saved game files. Do some comparison shopping as rates can vary considerably. Good luck and watch those sticky fingers when they hover near the delete key.

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Why You Need a Firewall, *continued*

Windows Vista was supposed to come with both inbound and outbound filtering. However, as it is delivered it provides only inbound protection just as did XP. The outbound protection is turned off by default. So, if it is there, how do you turn on the outbound protection? To change this you have to use the Microsoft Management Console. Then you have to write a rule to block each "malware" application you anticipate might get on your computer. You can not create a general rule for all malware. Creating rules that would cover all possible malware applications is an impossible task. Microsoft has been quoted as saying "outbound filtering isn't really needed, and the key is making sure that malware doesn't infect the PC in the first place." Also they have stated that large enterprises had requested that it be turned off by default. Microsoft does say that "core Windows Services have specific behaviors which are monitored by the firewall". Instead of using outbound filtering Microsoft recommends that you buy

"Windows Live OneCare", a product and subscription service. My recommendation is that you obtain a free two-way firewall like ZoneAlarm and ignore the Windows firewall completely.

Whatever you do, don't connect your computer to the Internet without using a firewall and an antivirus application. I have come across too many computers recently that are attached to constant on Internet connections and had no protection. The cost of removing the malware from these systems was more than the cost of premium protection. So don't get caught short!

Dr. Lewis is a former university & medical school professor. He has been working with personal computers for more than thirty years. This article has been provided to APCUG by the author solely for publication by APCUG member groups. All other uses require the permission of the author (see e-mail address above). ☐

Guilty!

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Guilty, the strange judge shouted as he banged the gavel. The defendant will rise and receive his sentence. You have been found guilty of dirty deeds done to your computer and are sentenced to electrocution!" I thought to myself, with my knees shaking, there must be some kind of an appeal process since the judge and jury all had heads that looked like monitors and bodies like upright computers and could easily be biased and not in my human favor!

I did find the testimony at my trial to be informative. A clean environment does not require computer cleaning usually more than once a year. Many computer users like to do the cleaning when they are doing their annual spring house cleaning. The dirtier the environment the greater frequency of cleaning needed. A clean computer cuts down on downtime, repair bills, and minimizes health risks. **Do not eat, drink, smoke or use magnets near your computer — it is not a fast food joint!**

Here are some tips: (1) shut your computer down properly, (2) run scan disk and defragmenter at least monthly, (3) Delete files and programs you no longer need, (4) use antivirus, anti spyware programs and a good hard drive cleaner like the freeware CCleaner and a registry cleaner like the freeware RegClean to keep your hard drive healthy, (5) Back up your data in case of an emergency!

To clean your computer case, use a damp lint free cloth. **Never spray water on a computer or other electrical devices.** Place liquid on the cloth, not directly on the system and use 100% alcohol which has no water content. Use a pencil eraser on hard-to-remove marks.

The monitor can be cleaned with a commercial glass cleaner and a damp clean lint free cloth. Using an anti static wipe or a

dry cloth with anti-static fabric softener will reduce the dust attracted by static discharge.

Clean the keyboard by turning the keyboard upside down and shaking the gunk out of it while singing, "There is a whole lot of shaking going on." Clean the keyboard surface with a damp lint free cloth with 100% alcohol. **Do not take the keyboard apart — you might not get it back together again!**

Clean the mouse by taking it apart using a damp lint free cloth and clean the rollers inside of the mouse (be sure to rotate them) with a clean cotton swab with 100% alcohol solution. After the mouse has dried put it back together reversing the steps you did when taking it apart.

The inside of your computer is a dust magnet. An annual cleaning in a normal computer environment is a good idea. **You must be very careful if you decide to clean the inside of your computer or you could do damage to your system!** Whenever, you go into the case of your computer it is a good idea to wear a grounding strap to reduce the risk of a static discharge. Blow out dust with compressed air or a vacuum cleaner. Avoid touching chips or electronic components on your system. Electronic components run hotter when covered with dust blankets, and it shortens their normal life span, which is why your computer needs to be cleaned internally periodically.

I have to go now to get a human attorney to appeal my case so I can avoid electrical execution so there will be another article in the Computer Hysteria Column for next month. However, I do have one final question for you, "Are you guilty?"

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Back Issues Needed

The editor is attempting to build a CD containing all issues of ACGNJ News in pdf format, but our collection is incomplete. We're hoping some faithful reader has been hoarding them and will be willing to lend them to us just long enough to scan them. We promise to return them quickly. Thanks Joseph Gaffney, who loaned his collection for scanning. Below is a list of what we still need.

1985: June, July, August, September

1984: August

1976: January, February, March, April (pamphlet-size booklets)

1975: All issues (pamphlet-size booklets)

If you can supply any of these missing issues (or scanned images or good copies), please contact the Editor by email (bdegroot@ptd.net). Those who supply missing issues will receive a free copy of the resulting CD as our thanks for your help. ☐

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2/3 page	4½ x 10	115	Closing date: 1st of preceding month. Ex: Apr 1 for May
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1/3 page	2¼ x 10 4½ x 7 ¼	57	Printed by sheet fed offset Halftone screen: 120
1/4 page	3¼ x 5 2¼ x 7	50	Negatives rightreading, emulsion side down. Halftones/photos \$10 extra
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Dual-Boot Revisted, Part 3

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This is my third (and maybe last) article referring back to my original set of dual-boot tests (May and June, 2005, ACGNJ News), but it's actually my fourth article featuring GParted (Gnome Partition Editor). The first (January 2007) tested GParted LiveCD version 0.3.1-1 (hereafter referred to as GP31) against my long-time "right hand" partition utility, the floppy-booted DOS version of Partition Magic 8.0 (hereafter referred to as PM8). The second (February 2007) re-did my 2005 dual-boot installations for the seven distributions (six Linux, one BSD) that produced "bad" partitions two years ago; using the **same** (now obsolete) versions that I worked with back then. I tested those partitions with GP31 as well as PM8 this time, and found that some (**only** some) of them were, in fact, good after all. The third article (March 2007) tested the latest (as of January, 2007) releases of those seven distributions with PM8 and GP31, to see if any had gotten better in the last few years. (Two of them didn't). Although I actually performed **all** of the tests before the end of February, I only got about a third of the way through writing them up before I had to stop, due to time and space pressures. This article (which I'm writing in March, but you won't see until May) should finally wrap everything up. Please note that GParted released several newer versions after I began this series, but I started out using GP31, so that's what I finished with. Also note that while I expected to be able to select and successfully boot XP as well as each Linux/BSD distribution being tested (and, as you'll see below, I failed the one that couldn't), dual-booting was merely a means to an end this time. My primary interest was in examining the condition of the new partitions created by the various install routines. (I hate wordy recaps. Don't you?)

Just a few (yeah, right) more opening notes, then we'll get down to business. First, the two partition layouts used here are **not** my own designs, and don't represent my own ideas about how dual-booting should work. They were set up to mirror various aspects of the ACGNJ computer's hard disk layout, as it existed in 2005. They are being used again now **only** for consistency. They're definitely not intended to represent a recommended layout for a dual-boot system today. In fact, my personal booting preferences have changed over the years. I set up my first multi-OS PC over ten years ago. It hasn't been my main workstation for a **loooooong** time, but I still use it for special projects. That computer ran (and still runs) the commercial program System Commander, which replaced the hard disk's Master Boot Record with its own proprietary version (featuring an OS selection list). My setup could (and still does) choose between **four** operating systems (one for each of the primary master's four allowable primary partitions). A second (slave) hard disk on that computer provided common data storage. I was (and still am) quite proud of that setup. However, even as I was experimenting with System Commander, I was also experimenting on other computers with exchangeable IDE hard disk drawers. Some (when inserted as the primary master) booted various operating systems. Others (when inserted as the secondary master) just held data. Two

CD (later DVD) drives (one reader, one writer) were the primary and secondary slaves. (Sure, a writer can also read, but a dedicated reader is much faster. Plus, most times when you boot from a CD or DVD, you **can't** then pull out the boot disk and insert a data disk, like you could with floppies. Such situations are rare, but they happen. Then, a second reader can be a life-saver). While it could be a pain shuffling through a pile of seemingly identical disk drawers in search of the right one, this became my preferred way of swapping multiple operating systems, and it's how my current main computer is set up today. Lately, though, I've been hearing a lot of good things about virtual operating systems. When I finally get around to building my next PC (which will definitely **not** be running Vista **or** XP), I'll include enough memory so I can experiment with them, too. Right now, if somebody asked me to recommend a dual-booting method, I'm not sure how I'd reply.

Second, a note about the r-word: As I was writing the previous installment, I got **really** sick of typing "re-boot" over and over again. Maybe you got just as sick of reading it. As you've undoubtedly noticed by now, the utilities I'm using here come on different operating systems. Any time I want to use PM8, I have to re-boot from its DOS floppy disk first. Any time I want to use GP31, I have to re-boot from its Linux live CD first. If I need to use cfdisk 2.12 (my third opinion and go-to tie-breaker), I have to re-boot from the Minislack 1.0.1 install CD first. The only possible exception is the DOS command FDISK /MBR. Because FDISK is on the same boot floppy as PM8, I can use it right after PM8 if I need to. If I want to use it after GP31 or cfdisk, I have to reboot from the floppy first. I'm not going to say it each time, but from now on, when I refer to a utility, assume that I had to reboot the computer first.

Third, a highly condensed version of my rather histrionic rant from last time: Even though both PM8 and GP31 claim to be able to identify and manipulate them, **there are no such things as logical partitions**. What there are, are one or more formatted logical **drives** contained inside a single extended partition. Whenever, further below, I use the term "logical partition", I will actually be telling you a **lie**, at the behest of PM8 or GP31. I apologize in advance.

Fourth, the test computer: The same one I used for the three previous articles; containing a SOYO SY-K7VTA Pro motherboard with an AMD Athlon 1.7 GHz. processor, 768 MB memory, an NVIDIA TNT2 AGP video card, a built-in VIA AC97 sound card, a Western Digital 80 GB IDE hard disk as the primary master and a Sony CD/DVD reader as the primary slave. A Linksys LNE100TX Ethernet card and a Netgear DSL router provided the internet connection. This same computer was also used for the 2005 experiments, except it had a Maxtor 80 GB hard disk and only 512 MB of memory back then.

Fifth, the test criteria: In 2005, each distribution had to pass only two tests. It had to access the internet "out-of-the-box", and it had to play something through the built-in AC97 sound

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card. (Remarkably, those seemingly simple requirements yielded a 42% failure rate). Partition condition was a side issue back then, not directly affecting the pass/fail outcome. This time, making “good” partitions is the primary test. Sound, internet, and even dual-booting itself are still significant, but secondary.

Sixth, the test subjects: Here’s a list of the seven distributions under review, in the order in which they were processed in Round One, followed by their test results. (Ubuntu and Fedora Core were put at the end of the test sequence because they were the **only** dual-boot failures in 2005). The numbers are their Distrowatch Top 100 rankings as of February, 2007. These figures are just a popularity contest based on hits per day (and, in fact, they actually go up to over 350). However, Distrowatch has put a lot of work into insuring that these counts **can’t** be skewed, either by over-enthusiastic fans or by sneaky manufacturers. It measures relative interest rather than actual use, but it’s as fair and even-handed as it’s possible to be. **Nobody** has any better Linux/BSD statistics, so the Distrowatch Top 100 gets quoted **a lot**. Overall, my original picks have done pretty well in the last two years. They all held steady or advanced (including the unlisted ones that I didn’t re-test now because they made good partitions the first time). The single exception is Yoper, which was number 17 in 2005, but has plummeted like a stone since.

2. openSUSE 10.2 (Passed)
5. PCLinuxOS 0.93a (Passed)
13. Zenwalk 4.2 (Failed)
28. PC-BSD 1.3.01 (Passed)
102. Yoper 3.0 Beta (Failed)
1. Ubuntu 6.10 (Passed)
3. Fedora Core 6 (Passed)

Zenwalk and Yoper failed in Round One, for identical reasons. Each still relied on the exact same manual partitioning utility that they used in 2005. It created sub-standard partitions then, and it kept on creating them now. Since partition creation examination is the whole point of these new tests, **neither** will be appearing again below.

Seventh and final digression: A quick review of Linux partition names. The first hard disk is “hda”. Thus, hda1 through hda4 are the four allowable partitions (four primary, or three primary and one extended) on that hard disk. Logical numbers (which **always** start with hda5, even if all the lower numbers haven’t been used) can only exist inside that single extended partition, which (when it exists) does **not** have to be hda4.

Round Two: XP-in-front

In the hard disk layout for this test, a 40 GB Windows XP bootable NTFS primary partition came first, then a 17 GB extended partition containing a 17 GB FAT32 logical partition (for common data storage), and finally 20 GB of unallocated free space. I made a “whole disk” Ghost image of these partitions in 2005, so in theory, we could get the **exact** same layout now. Unfortunately, since the “80 GB” hard disk we’re using this time is almost 2 GB **smaller** than the “80 GB” disk from 2005, I had to reduce the restoration size of the middle

extended / logical partition combination so that the more important partitions at either end would come out correctly.

Round Two, Test One: openSUSE 10.2

This new version of openSUSE fixed all its previous problems, and performed well in the standalone test; so I wasn’t expecting any trouble here. I should have known better.

In 2005, SUSE 9.2 just added a small primary swap partition and a large primary reiserfs partition to the free space at the end of the hard disk. This time, openSUSE 10.2 was much more ambitious. It wanted to shrink hda1 (the NTFS primary partition) to 14.6 GB, shrink hda5 (the FAT32 logical partition) to 5.3 GB, and create three new partitions: a 24.3 GB Ext3 for hda2 (home), a 19.5 GB Ext3 for hda4 (root), and a 2.0 GB Swap for hda6. It didn’t specify, but from the names, hda2 and hda4 would be primary partitions, while hda6 would be a logical partition located inside the extended partition. (That’s got to be hda3, the only name that openSUSE **didn’t** mention). I had a bad feeling about this, but checking the quality of automatically created partitions is the major focus this time, so I let it go ahead.

The installation went without incident. The openSUSE dual-boot screen has two small animated penguins walking back and forth across a landscape featuring snow, icicles and an igloo. Despite the over-cute imagery, openSUSE and XP both booted and operated correctly.

Unfortunately, PM8 got a partition table error and couldn’t view the hard disk. GP31 saw a 14.35 GB NTFS primary partition for hda1, followed by 345.18 MB of unallocated space. Then, a 24.38 GB Ext3 primary partition for hda2, a 15.93 GB extended partition for hda3 and a 19.53 GB Ext3 primary partition for hda4. Inside hda3 were a 5.31 GB logical FAT32 partition for hda5, a 2.01 GB logical Swap partition for hda6, and 8.61 GB of unallocated logical space.

PM8’s error and GP31’s patchwork of unallocated spaces indicate that, for re-sizing at the **very** least, openSUSE’s automatic partition creation utility is still “not ready for prime time”. From ample recent experience, I was sure that GP31 could have fixed everything. But why bother? Good partition condition **as created** was the goal this time, and it hadn’t been met by a long shot. Instead of un-resizing those partitions and using FDISK /MBR to get ready for the next test, I just overwrote the entire hard disk with the “XP-in-front” Ghost image.

So openSUSE 10.2 failed in Round Two (but will get another chance in Round Three).

Round Two, Test Two: PCLinuxOS 0.93a

PCLinuxOS did well in Round One. None of the problems I had with its previous version showed up again. Once more, I wasn’t expecting any trouble. This time, except for a few moments of anxiety, I got my wish.

As in Round One, I booted PCLinuxOS 0.93a first as a live CD, then used the desktop icon provided to launch the hard disk install routine. There was a “Use free space” option, so I took it. The only other choice I was given was for boot loader: either LILO (the default) or GRUB. I went with LILO. The

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“Wizard” did **not** display a partition creation list before it started. Given my recent experience with openSUSE above, I got a bit concerned when I saw “hda8” flash on the screen for a second. Just how complicated a system was being created? Otherwise, the installation proceeded automatically, without incident.

When it came up, the dual-boot screen was quite visually appealing. It had only a small logo, a clear OS choice section in pleasant colors, and **no** clutter. Both XP and PCLinuxOS worked just fine.

PM8 saw that the extended partition had been expanded all the way to the rear of the hard disk. In addition to the original (and unchanged) FAT32 logical hda5, it now contained a deep purple 5,993.0 MB Ext3 hda6, a brown 1,098.2 MB Swap hda7, and a deep purple 12,991.6 MB Ext3 hda8, all with correct colors. (Just three new partitions; I needn’t have worried). A lot of operating systems **can’t** boot from inside an extended partition. Obviously, PCLinuxOS isn’t one of them. Since PM8 saw everything correctly, I didn’t really need to double-check with GP31, but I did anyway. It agreed completely. After I deleted hda6, hda7 and hda8, shrank the extend partition back to its original size, and wiped out LILO by running FDISK /MBR, XP booted correctly on its own. (Confirming that the “Wizard” hadn’t left any “muddy footprints” on the hard disk).

So PCLinuxOS 0.93a passed Round Two with flying (and pleasant looking) colors.

Round Two, Test Three: PC-BSD 1.3.01

PC-BSD is a version of BSD, a tight little family of Unix-like operating systems. Even when you count Mac OS X (which runs on top of a BSD variant named Darwin), they number barely half a dozen members. (Compare that to the more than half a **thousand** Linux variations). All have a long standing record of excellence. PC-BSD 0.6 performed perfectly in my 2005 tests. My only quarrel with it was that PM8 couldn’t read its partitions. Even then, I thought this was probably PM8’s fault. Quoting my then-self, I said; “This time I think the partitions were right and PM8 was wrong.” My new friend GP31 hasn’t been any help in this area. It can’t read PC-BSD’s partitions either. The ancient (by Linux measurement) command line utility cfdisk 2.12 can identify them, but it can’t guarantee their quality. (Even if it could, I wouldn’t necessarily believe it. The partitions that cfdisk itself creates are definitely **not** up to the Partition Magic standard of perfection). In Round One, PM8 managed to pull back some information from the partition table, which matched cfdisk’s identification. That’s the best (and only) indication I have that the partition was good. Talk about wishy-washy. It’s really not fair to test PC-BSD when I don’t have a partition utility that I can implicitly trust to evaluate its partitions; but my only other alternative would be to leave it out (and it’s just **too good** to be left out).

The PC-BSD install routing presented an opening menu containing seven options and a timer. Most users would want the default, which is good because they’re only given three seconds to choose otherwise. The screen does include an instruction to stop the timer by pressing the spacebar, but it’s

displayed below the seven choices. **Nobody**, reading that screen for the first time, will get that far down before the default selection is launched. (Maybe some developer set the timer short to make de-bugging easier, then forgot to re-set it to a more reasonable interval afterwards). For dual-boot installations, PC-BSD 1.3.01 doesn’t provide a “use free space” option. If it can’t have the whole hard disk, it requires an already existing **primary** partition to overwrite. I gave it a 20 GB FAT32 (using up all the unallocated space). I wanted to disable the firewall for this disposable installation. So, under Configuration, I had to check the Advanced Setup box. Because of that, in addition to the Firewall screen, I also got a follow-up Disk screen. There, in grayed out but still clearly visible text, it listed a 19 GB UFS partition and a 1 GB Swap partition. However, once the install routine started, one of the messages that quickly flashed across the screen said “formatting newfs”. (That’s what version 0.6 said in 2005). Otherwise, the installation proceeded uneventfully.

PC-BSD didn’t have a separate dual-boot screen. At the absolutely non-graphical command line, two options were presented: “F1 DOS” and “F2 FreeBSD”. They didn’t even bother to clear the screen of the many previous boot-up messages. Pressing F1 launched XP, pressing F2 launched PC-BSD. Both ran OK.

PM8 got a partition table error, so it couldn’t view the hard disk contents. GP31 saw (in addition to the pre-existing partitions) a 19.53 GB primary partition of type “unknown”; which cfdisk 2.12, in turn, identified as a FreeBSD partition. There was **no** new Swap partition. After the new partition was deleted and FDISK /MBR was run, PM8 could view the disk again and XP could boot as a single system again, so PC-BSD didn’t leave any “muddy footprints” either.

Thus, PC-BSD 1.3.01 passed Round Two with faint praise. Once installed, it ran beautifully; but somebody needs to do a bit of timer and message clean-up in the install routine.

Round Two, Test Four: Ubuntu 6.10

Ubuntu 6.10 did well in Round One. That was the first time it **didn’t** give PM8 partition table errors. This new edition of Ubuntu finally seemed to have solved all its problems.

I clicked the Install icon on the live CD desktop to start the hard disk installation. There was a “Use the largest continuous free space” option, so I took it. When the “Ready to install” screen came up, it listed “partition #6 swap” and “partition #2 ext3”, in that order. No “hda” prefixes, no sizes, and no primary/logical information (though that could be inferred from the numbers). After that, the install routine proceeded without incident.

Ubuntu’s dual-boot screen, like PC-BSD’s, was completely non-graphical. However, Ubuntu at least cleared the screen first and put some work into it. Just white on black, it was text mode in all its monochromatic glory. (It reminded me of what ambitious batch programmers used to be able to do in the good old DOS days). The selections were clear and nicely laid out, and the timer was set to a reasonable interval. The screen was functional, clean, uncluttered, and even elegant in

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its own bare-bones way. Plus, being in text mode, there was *no logo*. Both XP and Ubuntu booted just fine.

PM8 saw that the extended partition had been expanded slightly to fit a brown 847.1 MB logical Swap partition after the pre-existing logical FAT32 partition. Then, a new deep purple 19,155.6 MB primary Ext3 partition filled out the rest of hard disk (both colors correct). GP31 confirmed that they were hda6 and hda2. After the new partitions were deleted and FDISK /MBR was run, PM8 could view the disk again, and XP could boot as a single system again. In 2005, Ubuntu left a total mess behind. This time, it didn't leave any "muddy footprints" at all.

So Ubuntu 6.10 passed Round Two, with "honorable mention" for its dual-boot screen design.

Round Two, Test Five: Fedora Core 6

Fedora Core 3 crashed with various degrees of spectacularity (is there such a word?) in all its previous dual-boot attempts. Fedora Core 6 did well in Round One. However, Fedora Core 3 always passed the standalone tests, so Fedora Core 6's previous good performance guaranteed nothing here.

As usual, I disabled the firewall (which, of course, I wouldn't do if I intended this installation to be permanent). Since there was a "Use free space" option, I took it. After that, the install routine proceeded automatically. It didn't give me any partition information, but it didn't crash either.

The Fedora Core 6 dual-boot screen was composed of pleasant colors, but the background was a bit cluttered due to the presence of their DNA-like illustration. The screen informed me that Fedora Core 6 would boot in three seconds unless I pressed any key to enter the menu. I managed to hit a key in time, and a box popped up, offering the choice of Fedora Core or Other. (They didn't even **try** to identify the second OS). However, both XP and Fedora Core 6 booted just fine.

Following the (unchanged) pre-existing partitions, PM8 reported a deep purple 102.0 MB Ext3 primary partition and a **yellow** 19,900.8 MB "Type 8E (Hex)" primary partition. (Adjusting sizes to match the available hard disk space, the same results as in Round One). GP31 saw an Ext3 primary partition with a "boot" flag and an unknown primary partition with an "lvm" flag. Like before, only cfdisk 2.12 could completely identify the second partition as a Linux LVM partition (type code 8E). As I said in Round One, I've recently re-interpreted the way I read PM8's second message. It's yellow, which means that PM8 can't quite figure out what's going on. However, since PM8 was able to extract some valid information from the partition table, that's pretty good empirical proof that the table didn't have any errors, and that the partition was therefore **good**. In previous articles, I found that LVM means **Logical Volume Management**; which is a method of allocating space on mass storage devices that's supposed to be more flexible than conventional partitioning schemes. LVM has been implemented in the Linux kernel since 1998, but hardly anybody uses it.

So Fedora Core **finally** passed in Round Two.

Round Three: XP-at-end

This arrangement flips the partitions from Round Two, putting the 20 GB of unallocated space first, with the 17 GB extended partition containing the 17 GB FAT32 logical partition next, and the 40 GB Windows XP NTFS primary partition last. As in Round Two, I restored these test partitions from another "whole disk" Ghost image that I made for the original tests two years ago. As in Round Two, I had to reduce the size in the middle, to make the partitions at each end come out correctly. Note that this is a much less stable setup for XP, but it more closely matches the ACGNJ computer's hard disk layout as it existed back in 2005.

Speaking of 2005, do you remember the incident that inspired this whole thing? I was watching as John Raff added a Fedora Core 3 dual-boot system to the club computer. John wouldn't jeopardize the existing Windows XP installation by modifying the hard disk's Master Boot Record. Instead, he made a floppy boot disk that first launched the GRUB boot loader, then redirected it to his new Fedora Core setup. At the time, I thought this was an unnecessary complication, so I let all my experiments use the MBR if they wanted (and they all did). However, *not a single one* of my XP-at-end experiments, now or at any previous time, could be repaired by running FDISK /MBR after the Linux/BSD partitions had been removed. The XP partition always became completely unbootable (although it could still have been copied for data retrieval, using Ghost or PM8), and the hard disk had to be entirely re-Ghosted for each subsequent test. John knows what he's doing.

Round Three, Test One: openSUSE 10.2

Again, openSUSE 10.2 wanted to shrink the existing partitions and create three new ones. Again, I had a bad feeling (and this time, who could blame me?), but I let it go ahead.

The installation went without incident, and openSUSE and XP both booted OK.

Again, PM8 got a partition table error and couldn't view the hard disk. GP31 saw (from front to back) a 19.54 GB Ext3 primary partition for hda4 (filling all the previously unallocated disk space), then 15.92 GB extended partition hda2 (its own size unchanged). Inside hda2 were the pre-existing FAT32 hda5 (shrunk to 5.30 GB), a 2.01 GB logical Swap partition for hda6, and 8.61 GB of unallocated logical space. After hda2 came pre-existing NTFS primary partition hda1 (shrunk to 14.35 GB), followed by 345.15 MB of unallocated space. Finally, new 24.38 GB Ext3 primary partition hda3 filled out the rest of the drive.

With both partition **and** gap sizes very similar to the hatchet job from Round Two, this patchwork installation further confirms that openSUSE's automatic partitioning utility is just **not** up to snuff. Even if you ignore the gaps, PM8's error indicates that the partitions themselves were faulty. This time, I used GP31 to delete the new partitions and resize the old ones. Then, PM8 could view the disk OK. But as I expected, FDISK /MBR couldn't return XP to bootability. For the next test, I had to overwrite the hard disk again with the "XP-at-end" Ghost image.

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So openSUSE 10.2 failed for partitions again in Round Three.

Round Three, Test Two: PCLinuxOS 0.93a

Launching the hard disk install routine once again from the live CD, I chose the same options as before. The installation proceeded automatically, without incident. Then, both XP and PCLinuxOS booted just fine.

PM8 saw that the extended partition had been expanded all the way to the front of the hard disk. Before the original (and unchanged) logical FAT32 partition, there now were a deep purple 5,992.9 MB logical Ext3 partition, a brown 1,098.2 MB logical Swap partition, and a deep purple 12,919.4 MB logical Ext3 partition, all with correct colors. Since PM8 saw everything correctly, I didn't bother with GP31. FDISK /MBR **didn't** work.

So PCLinuxOS 0.93a passed Round Three, too.

Round Three, Test Three: PC-BSD 1.3.01

This time, I fed PC-BSD a 19 GB FAT32 primary partition (leaving 1 GB of free space after it). Under Advanced Setup, the Disk screen once more displayed grayed out text listing a 19 GB UFS partition and a 1 GB Swap partition. Again, the "formatting newfs" message quickly flashed by. Again, the installation proceeded uneventfully. Afterwards, PC-BSD and XP both booted OK.

As if you couldn't guess, PM8 got a partition table error, so it couldn't view the disk. GP31 saw (before the pre-existing partitions) a new 18.54 GB primary partition of type "unknown"; then 1 GB of unallocated space. So much for that Swap partition. Again, cfdisk 2.12 identified the new partition as a FreeBSD partition. After the new partition was deleted, PM8 could view the hard disk. Once again, FDISK /MBR didn't work.

So PC-BSD 1.3.01 passed Round Three, but the automatic partitioning tool definitely displayed the **wrong** data. It still needs a bit of work.

Round Three, Test Four: Ubuntu 6.10

Launching a hard disk installation once again from the Ubuntu live CD, I chose the same options as in Round Two, and the install routine proceeded without incident. Ubuntu and XP both booted correctly.

Unfortunately, PM8 got a partition table error, so it couldn't see anything. GP31 saw a new 18.71 GB primary Ext3 partition (filling most of the previously unallocated space). After that, it saw that the extended partition had been expanded slightly forward, to fit a new 847.12 MB logical Swap partition in front of the pre-existing (and unchanged) logical FAT32 partition. Finally, it saw the pre-existing (and also unchanged) primary NTFS partition. After I used GP31 to delete the logical Swap partition and shrink the extended partition back to its original size, PM8 saw a deep purple 19,163.4 MB primary Ext3 partition and 847.2 MB of unallocated space in front of the pre-existing partitions. Ubuntu could handle the expand-extended-partition-to-rear operation required for Round Two, but not the expand-extended-partition-to-front operation required here. Its automatic partitioning utility

wasn't quite up to the task. Repeat after me, class; "FDISK /MBR didn't work".

So Ubuntu 6.10 failed for partitions in Round Three.

Round Three, Test Five: Fedora Core 6

Fedora Core passed my initial dual-boot test (for the first time ever) in Round Two. I chose the same installation options again here, and it didn't crash this time either. Fedora Core 6 booted, but when I chose the "Other" option, I got **nothing**. For the only time in these 2007 tests, a seemingly correct XP selection couldn't boot. (Another indication that John did the right thing back in 2005). Just to be sure, I re-did the whole test for a second time, and got the exact same results.

Before the (unchanged) pre-existing partitions, PM8 reported a deep purple 101.9 MB Ext3 primary partition and a **yellow** 19,908.7 MB "Type 8E (Hex)" primary partition. (Just a tiny bit different in size from Round Two). Since I already knew what GP31 and cfdisk 2.12 would say, I didn't bother with them. All together now, one-two-three; "FDISK /MBR didn't work".

So Fedora Core 6 passed for partitions, but **failed** for not dual-booting XP in Round Three.

Round Three, Test Six: openSUSE 10.2 Deja Vu

I decided to give openSUSE one more chance; this time creating the partitions myself, using **only** the unallocated space on the hard disk. In 2005, when I created my own partitions for any of my dual-boot tests, I always used PM8 (so I'd **know** they were good). That wouldn't have worked this time, since I still wanted to find out if the openSUSE 10.2 automatic partitioning tool was capable of creating "good" partitions. I just wanted to remove the added complication of re-sizing the NTFS and extended/FAT32 partitions too. So I went with the openSUSE install routine's Expert option.

Before proceeding further, I must admit (with some embarrassment) that I haven't quite unraveled all the nuances of the Linux drive/partition naming conventions yet. This particular hard disk layout brought that little bit of ignorance to the fore. The NTFS partition, although located at the far end of the disk, was hda1. (Maybe because it was set active? I don't know). Without expanding the extended partition (hda2), I was limited to creating only the other two legally allowed primary partitions, which would come in as hda3 and hda4. (Sometimes, in previous operations, an extended partition named hda2 got "promoted" to hda3 when a new primary partition was created in front of it. Not this time). I really wanted to save face by just omitting the Linux names here, but as you'll see below, those two additional names became central to the issue.

When openSUSE says "expert", they mean "**expert**"!!! Their Expert partition tool required that new partitions be created by specifying starting and ending cylinder numbers. Talk about archaic. Now, I can say that I'm a partition expert while keeping a straight face (and without breaking out laughing), but it took **me** a few tries to get the results I wanted. Most people, I think, would be lost. As a side note, down among the control buttons (Create, Edit, Delete, etc.) at the

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bottom of the Expert partition screen was an LVM button. I stayed as far away from it as possible.

Following normal practice, I created a large Ext3 hda3 at the start of the drive, followed by a small Swap hda4. Then I hit a snag. In the bootloader section, the GRUB default target was set to hda4. I tried to change it to hda3, but the install routine just flat out **refused** to let me do that without messing up some other setting. After metaphorically banging my head against this wall for a while, I gave up, went back, deleted my two new partitions, and re-created a 1 GB Swap hda3 first, followed by an 18.54 GB Ext3 hda4. **Finally**, after that, the installation proceeded uneventfully; and XP and openSUSE both booted correctly.

PM8 saw a brown 1,027.6 MB primary Swap partition, followed by a deep purple 18,983.1 MB primary Ext3 partition, then the unchanged original partitions. All colors were correct. This proved what I already suspected from openSUSE's previous results; their partitioning tool can create good partitions, but it just doesn't make the cut when re-sizing them. While good to know, that didn't make any difference in the current test results. (Of course, FDISK/MBR didn't work this last time, either).

So openSUSE 10.2 **still** failed for partitions in Round Three.

Conclusions (For All Three Rounds):

Ranked (according to my admittedly narrow criteria) from "worst" to "best":

I've heard good things about Zenwalk, but from my perspective, I can't agree. It got a double failure in Round One; for no sound (although that **worked** in 2005), and for bad partitions. Due to that partition failure, it wasn't included here in Rounds Two and Three.

Yoper was once a rising star in the Linux world. However, internal reorganization and a dearth of new releases took a huge toll. At this point, a comeback will be difficult. Unfortunately, I don't have anything positive to say about the Beta version I examined. It failed in Round One for bad partitions, so it wasn't tested again in Rounds Two or Three.

Fedora Core failed because XP couldn't boot in Round Three. Furthermore, its use of LVM gives me pause. LVM has been a Linux option for almost ten years, but nobody else that I know about uses it. My guess is that it was developed to create a single large directory which could be spanned across a series of relatively small hard disks. With today's huge disks, that's just not necessary. Another sore point is that Fedora Core switched from MD5 to SHA1 checksums for downloads. Now, both MD5 **and** SHA1 have been cracked to varying degrees. If we were discussing encryption for security reasons, I'd argue for SHA2 at the very least; but we're **not**. In a download, all the checksum does is verify that the file didn't get corrupted during transmission. For that limited purpose, with more and superior tools available, MD5 is **by far** the better choice. When both the file **and** the checksum come from the same source, the **only** security you have is how much you can trust that source not to send you evil files. I suspect that someone at Fedora Core likes to implement esoteric options, not

because they're actually needed, but just because they're there. When I'm experimenting, I like to try wild and wacky alternatives. For daily productivity, I'm "plain vanilla" all the way. Fedora Core's seemingly opposite philosophy makes me leery. Despite its popularity, I can't recommend Fedora Core.

OpenSUSE is the second most popular Linux distribution. It created perfect partitions for my standalone installation, so the openSUSE partition creation utility is probably good enough for the needs of most users. However, its performance in my dual-boot installations showed that it's not quite as good as it should be. Add to that the sleazy patent agreement that Novell (its parent company) made with Microsoft, and I just can't recommend openSUSE.

Ubuntu is the most popular Linux distribution, and it almost jumped through all of my "hoops" here (just failing the last one). However, I get a very Gates-like vibe from Ubuntu founder Mark Shuttleworth. I wouldn't want to escape the clutches of one giant OS "octopus", only to fall victim to another. (That's why, although I've heard nothing but good things about Mac OS X, I won't be going there either). From my (admittedly narrow) perspective, I just can't recommend Ubuntu.

PC-BSD always installed correctly and worked correctly, and it certainly looked good. The **only** reason it's not tied for number one is because I have a few nits to pick with its install routine.

PCLinuxOS 0.93a wins, even though it's pre-release-one software. Right now, it's plenty good enough to receive my recommendation.

Final Wrap-up

None of the distributions I tested in 2005 was absolutely without fault, but two of them (SimplyMEPIS and Mandrake (now Mandriva)) were distinctly superior. Unfortunately, they've both since gone in directions that I can't support, so I couldn't recommend either of them now. PC-BSD was a distant third in 2005. It did much better here.

Of the seven distributions tested this time, **five** failed. PCLinuxOS won, with PC-BSD (an open source operating system that's **not** Linux) coming in a very close second. Either should suit the needs of a desktop user fleeing the clutches of Microsoft.

What's Next?

I'm not sure. Next month's issue of the ACGNJ News is the last one before the summer hiatus. I have a couple of ideas for new topics, but each could easily expand into multiple installments; and I wouldn't want to leave a cliff-hanger until September. I could do a "Bits and Pieces" article, weaving together fragmentary blocks of text that didn't make it into previous submissions (I've got several). Or, if we're all not sick of them, I could do a few more Linux tests. There's a new (since 2005) distribution that's now number eight in the Distrowatch Top 100, and a few more that I didn't look at before have moved up into the top 20. I don't want to scare any of you off, but we'll **all** just have to wait and see. ☐

SIG News

C/C++ Programming

Bruce Arnold (barnold@blast.net)

<http://www.blast.net/barnold>

This group is devoted to programming languages in general and C, C++, and C++ for Windows programming in particular. Each month a small but hopefully useful program (complete with source code) is presented for discussion.

April: Safer Browser - an Internet browser with safety features. This application program demonstrates the ability of the Visual Studio software to include an Internet browser window inside a standard C++ program. It allows creating a custom browser with special features. This application is designed to partially duplicate the functioning of a standard Internet browser. It may be used whenever diagnostics and/or extra safety is required. In order to go to a web site, just type the name in the Address bar at the top. A shortcut with that name as an argument may also be used. The Back Arrow (upper left) allows stepping backwards to sites already visited. Whenever a new address is provided, or the site code tries to jump to another site, a prompt message appears which allows the user to decide whether to proceed or not. The parachute logo represents the fact that you have much more control over your browsing. You will probably find it surprising that familiar web pages are so complicated. Often going to one page launches 5 others in the background without your realization. Tip: for safe web sites, just hit the Space Bar. Standard Hot Keys are provided: Ctrl-P for printing, Ctrl-C for copying, Ctrl-A for selecting all, and Ctrl-F for finding.

Our next meeting May 15. ☐

Macintosh Users

Keith Sproul (ksproul@noc.rutgers.edu)

This group is no longer meeting, but Keith is still available to help Mac users via telephone or email. ☐

Java

Mike Redlich (mike@redlich.net)

<http://www.javasig.org>

The Java Users Group covers beginner, intermediate, and advanced level Java programming. Primary focus is on developing useful/practical applets and applications, but can include related topics such as Java I/O, JavaBeans, Reflection, object-oriented programming and software design issues. Meetings are held the second Tuesday of the month starting promptly at 7:30 PM.

April 10: Technical Overview of Java Code Quality Tools.

Paul Furbacher demonstrated a number of code quality measurements and tools. Open source projects that analyze code such as FindBugs, PMD, and Checkstyle were reviewed with a focus on setting them up with Ant. Finally, Paul discussed the take home lesson from the warnings/errors these tools report.

Our next meeting May 8 ☐

Web Dev

This SIG is intended to be an open forum for all Website Development techniques and technologies, to encourage the study and development of web sites of all kinds. All languages will be considered and examined. Anyone interested please contact the Chairperson in charge. The current project is a CMS for the club. Anyone interested in starting a new project, come to the meeting and announce / explain. Provide as much detail as possible. One can also send projects to the ACGNJ Newsletter editor for inclusion in the next volume.

WebDev should be an all-encompassing development and examination forum for all issues, applications, OS, languages and systems one can use to build Websites. We currently have two Web dev languages .NET and Java as SIGs but the other languages and OS need to be investigated, examined and tested; Windows, Linux, UNIX, DEC, Vax, HP etc. Intel-PC, Motorola-MAC etc. **Our next meeting May 9.** ☐

DotNet

Jim Wong

<http://www.jimw.net/acgnj/>

Meetings are postponed until further notice.

Online Auction

Bill Brown (onlineauction@acgnj.org)

Due to overwhelming response to a seminar held on April 7, the membership decided to form a permanent group. The group will meet on the **first and third Wednesdays of the month.**

These are the eight topics for discussion. We will cover all types of online auctions, as members chose. The general format of the meetings will be from 7:30 to 10 PM. The first 45 minutes will be to discuss the topic for the evening. A short break will be taken, the remainder of the time will be for specific questions to the topic followed by general questions and bull session. During the entire time, online presence will be established and examples will be given on screen.

1. Getting Started: Different Auctions Registering. Buyer account, sellers account Navigating websites.
2. Buying and selling. An overview of searching, sniping, snuffing.
3. Finding things to sell Gnoming, Clearance, Bargain Bins, Flea Markets, Garage Sales, Solicitation
4. Listing an item. Choosing a category, Setting a Price. Buy it now strategies
5. Maintaining your sales. Revising and re-listing.
6. Collection and payment follow ups.
7. Packaging, shipping, Inventory management.
8. Going further. Ebay express, stores ☐

PHP?

Anyone interested in a new PHP SIG (Interpreted Script Programming Language), please get in touch with John Raff (jraff@comcast.net). PHP is a widely-used general-purpose scripting language that is especially suited for Web development and can be embedded into HTML. If you are new to PHP and want to get some idea of how it works, try the introductory tutorial (<http://us2.php.net/tut.phpv>). ☐

Genealogy

Frank Warren (kb4cyc@webwarren.com)

<http://www.webwarren.com/kb4cyc/gensig.shtml>

Genealogy SIG is for genealogists interested in computers and computer users interested in genealogy, and is a forum to assist members in furtherance of both endeavors. Meetings usually focus on genealogy more than on computers. We meet at 8 PM on the fourth Thursday of the month, but we do not meet in November or December. In addition to our Web page, we also have an electronic mailing list. Messages to the list should be addressed to gensig@webwarren.com. To subscribe, include the line "subscribe gensig" in the body of the message. **Next meeting May 24** ☐

Layman's Forum

Matt Skoda (som359@aol.com)

<http://www.acgnj.org/groups/laymans.html>

We meet on the second Monday of the month (no meetings in July and August) to discuss issues of interest to novice users or those who are planning to get started in computing. Watch our Web page for updates and announcements. ☐

NJ Gamers

Gregg McCarthy (greggmc@optonline.net)

<http://www.NJGamers.com>

www.lanparty.com

The next Friday Night Frag will be May 11, 6 p.m. to Saturday 12 noon — 18 hours for 5 bucks!

BYOC - Bring your own computer

BYOF - Bring your own food.

and if you don't like sitting on metal chairs... BYO chair! ☐

Firefox Activity

Firefox@acgnj.org

This SIG is intended to be an open forum for **all** FireFox and Mozilla techniques and technologies, to encourage the study and development of web sites of all kinds. All the browsers will be considered and examined. **Meeting third Monday of the month at 7 PM.**

The first meeting of the FireFox Activity was led by David McRitchie to discuss, argue and kick around many concepts and ideas. Web2 is definitely in the mix. All are encouraged to "think out of the box" about new web site design. All members and guests are invited to check out the design concepts and voice their opinion. ☐

Investing

Norm Wiss (cut.up@verizon.net)

http://www.acgnj.org/groups/sig_investment.html

The Investment SIG continues with presentations on how to use analysis programs TC2000 and TCNet. Large charts are presented on our pull down screen and illustrate the application of computer scans and formulas to find stocks for profitable investments. Technical analysis determines buy points, sell points and projected moves. Technical analysis can also be used on fundamentals such as earnings, sales growth, etc. **Our next meeting: May 10.** ☐

LUNICS (Linux/Unix)

Andreas Meyer (lunics@acgnj.org)

<http://www.acgnj.org/groups/lunics.html>

LUNICS is a group for those who share an interest in Unix and similar operating systems. While we do quite a bit with Linux, we've also been known to discuss Solaris and BSD too. We generally meet on the first Monday of the month at 8 PM at the Scotch Plains Rescue Squad. See the web page for directions and more information. **Next meeting May 7.** ☐

Window Pains

John Raff (jraff@comcast.net)

<http://www.acgnj.org/groups/winpains.html>

This meeting is a combination of the older PC Symposium, PC User Group and Random Access Session which are now defunct. The intent is to provide the members with Windows oriented application discussions both Microsoft and Linux style. The presentation will be directed toward the more heavy technological level of attendee, although newbies are welcomed.

May: How to Hookup Wireless Peripherals, by Mark Douches

June: MS Word and MS Excel Macros, by Paul Natanson ☐

Main Meeting

<http://www.acgnj.org/groups/mainmeet.html>

Evan Williams (nhpresgo@blast.net)

May: Bill Machrone

June: How to Determine the Value of Items to Sell on eBay, by Charles Taylor ☐

Guru Corner

If you need help with any of the technologies listed below, you can call on the person listed. Please be considerate and call before 10 PM.

Software

HTML	Mike Redlich	908-246-0410
	Jo-Anne Head	908-769-7385
ColdFusion	Jo-Anne Head	908-769-7385
CSS	Frank Warren	908-756-1681
	Jo-Anne Head	908-769-7385
Java	Mike Redlich	908-246-0410
C++	Bruce Arnold	908-735-7898
	Mike Redlich	908-246-0410
ASP	Mike Redlich	908-246-0410
Perl	John Raff	973-560-9070
	Frank Warren	908-756-1681
XML	Mike Redlich	908-246-0410
Genealogy	Frank Warren	908-756-1681
Home Automation	Frank Warren	908-756-1681
Operating Systems		
Windows 3.1	Ted Martin	732-636-1942

Discount Computer Magazine Price List

As described by the DealsGuy

	1 yr	2 yr	3 yr
Computer Games	\$10.95	20.95	29.95
Computer Gaming World	14.95	28.95	41.95
Computer Shopper1	16.97	32.95	47.95
Dr. Dobbs Journal	15.95	30.95	
Mac Addict	10.97		
Mac Home Journal	15.97	29.97	
Mac World	12.95		
Maximum PC	9.95	18.95	27.95
Microsoft System Journal	21.95	39.95	
PC Gamer	12.95		
PC Magazine (22/44/66 Issues)	25.97	48.95	68.95
PC World	16.95		
Wired	6.00	12.00	17.00

These prices are for new subscriptions and renewals. All orders must be accompanied by a check, cash or Money Order. Make payable to Herb Goodman, and mail to:

Herb Goodman, 8295 Sunlake Drive, Boca Raton, FL 33496

Telephone: 561-488-4465, e-mail: hgoodman@prodigy.net

Please allow 10 to 12 weeks for your magazines to start. For renewals you must supply an address label from your present subscription to insure the correct start of your renewal. As an extra service I will mail a renewal notice about 4 months prior to their expiration date. I carry more than 300 titles at excellent prices — email for prices. ☐

ACGNJ MEMBERSHIP APPLICATION

Sign up online at <http://www.acgnj.org/membershipApplication.html> and pay dues with PayPal.

	US/CANADA	FAMILY OF MEMBER (No Newsletter)	Dues	FOREIGN	STUDENT	SENIOR CITIZEN (Over 65)
1 Year	\$25	\$10		\$55	\$20	\$20
2 Years	\$40					
3 Years	\$55					\$45

Mail this application and your check to:
AMATEUR COMPUTER GROUP OF NEW JERSEY, INC., P.O. BOX 135, SCOTCH PLAINS, NJ 07076

New Member Renewal Address Change

First Name _____ Last Name _____ Phone _____

Mailing Address _____ E-Mail _____

City _____ State _____ Zip _____ URL _____

What topics would you like to see covered at club meetings? _____

Other Local Computer Groups		
Princeton Macintosh User Group: 7:15 pm 2nd Tuesday, Jadwin Hall, A-10, Washington Rd, Princeton, (609) 252-1163, www.pmug-nj.org	Linux Users Group in Princeton: 7 pm, 2nd Wednesday, Lawrence Branch Mercer Library, Rt#1 & Darrah Lane, Lawrence NJ http://www.lugip.org	New York PC: 3rd Thurs, 7 pm, PS 41, 116 W 11th St. For info call hotline, (212) 533-NYPC, http://www.nypc.org
Computer Education Society of Philadelphia: Meetings & Workshops at Jem Electronics, 6622 Castor Ave, Philadelphia PA. www.cesop.org/	Brookdale Computer Users Group: 7 pm, 3rd Friday, Brookdale Community College, Bldg MAN Rm 103, Lincroft NJ. (732)-739-9633. www.bcug.com	NJ Macintosh User Group: 8 pm, 3rd Tuesday, Allwood Branch Library, Lyall Rd, Clifton NJ. (201) 893-5274 http://www.njmug.org .
PC User Group of So. Jersey: 2nd Mon., 7 pm, Trinity Presb. Church, 499 Rt 70 E, Cherry Hill, NJ. L. Horn, (856) 983-5360 http://www.pcugsj.org	Hunterdon Computer Club: 8:30 am, 3rd Sat, Hunterdon Medical Center, Rt 31, Flemington NJ. www.hunterdoncomputerclub.org , (908) 995-4042.	NY Amateur Computer Group: 2nd Thurs, 7 pm, Rm 806 Silver Bldg, NYU, 32 Waverly Pl, NYC. http://www.nyacc.org
Morris Micro Computer Club: 7 pm 2nd Thurs., Morris County Library, Hanover Ave, Morristown NJ, (973) 267-0871. http://www.morrismicro.com	Central Jersey Computer Club: 8 pm, 4th Friday, Rm 74, Armstrong Hall, College of NJ. Rich Williams, (609) 466-0909.	NJ PC User Group: 2nd Thurs, Monroe Rm at Wyckoff Public Library, 7 pm. Maureen Shannon, (201) 853-7432, www.njpcug.org
Philadelphia Area Computer Society: 3rd Sat, 12 noon Main Meeting, groups 8 am-3 pm. Upper Moreland Middle School, Hatboro PA. (215) 842-9600. www.pacsnet.org	NJ Computer Club: 6:15 pm, 2nd Wednesday except Jul & Aug, North Branch Reformed Church, 203 Rt 28, Bridgewater NJ. http://www.njcc.org	Princeton PC Users Group: 2nd Monday, Lawrenceville Library, Alt Rt 1 & Darrah Lane, Lawrenceville, Paul Kurivchack (908) 218-0778, http://www.ppcug-nj.org

Classified

FREE TO MEMBERS. Use our classified ads to sell off your surplus computer stuff. Send copy to Classified, ACGNJ NEWS, P.O. Box 135, Scotch Plains NJ 07076 or e-mail to the editor, bdegroot@ptd.net. Classified ads are free to members, one per issue. Non-members pay \$10. Send check payable to ACGNJ Inc. with copy. Reasonable length, please. Deadline: 1st of preceding month. (For example, April 1 for May issue.)



<http://www.apcug.net>

Radio and TV Programs

Computer Radio Show, WBAI 99.5 FM, NY, Wed. 8-9 p.m.

Software Review, The Learning Channel, Saturday 10-10:30 p.m.

On Computers, WCTC 1450 AM, New Brunswick, Sunday 1-4 p.m. To ask questions call (800) 677-0874.

PC Talk, Sunday from 8 p.m. to 10 p.m., 1210 AM Philadelphia. 1800-876-WPEN, Webcast at <http://www.pctalkweb.net>.

MarketPro Shows

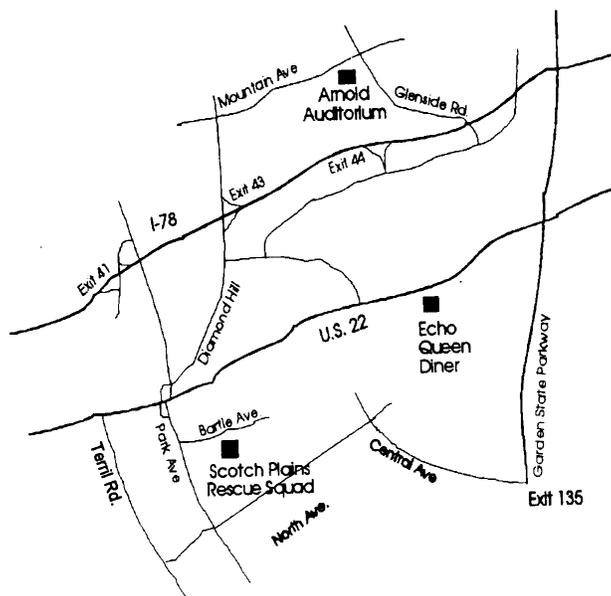
<http://www.marketpro.com/>

May 12: Parsippany Hilton, Parsippany

May 19-20: Raritan Center, Edison

May 26-27: Meadowlands Expo Center, Secaucus

June 30-Jul 1, Meadowlands Expo Center, Secaucus



Directions to Meetings at Scotch Plains Rescue Squad, 1916 Bartle Ave., Scotch Plains NJ

From New York City or Northern New Jersey

Take Route 1&9 or the Garden State Parkway to US 22 Westbound.

From Southern New Jersey

Take Parkway north to Exit 135 (Clark). Stay on left of ramp, follow circle under Parkway. Bear right to Central Avenue; follow to Westfield and under RR overpass. Left at light to North Avenue; follow to light in Fanwood. Right on Martine (which becomes Park Ave). Right on Bartle Ave in middle of shopping district. Scotch Plains Rescue Squad (2-story brick) is located on the right. Do not park in the row next to the building — you'll be towed.

From I-78 (either direction)

Take exit 41 (Scotch Plains); follow signs to US 22. Turn right at light at bottom of hill and use overpass to cross Rt. 22. Follow US 22 Westbound directions.

From US 22 Westbound

Exit at Park Avenue, Scotch Plains after McDonalds on the right, diagonally opposite Scotchwood Diner on the left, immediately before the overpass. After exiting, turn left at the light and use overpass to cross US 22. Bear right at bottom of ramp to continue south on Park Avenue. Turn left at the second light (a staggered intersection). Scotch Plains Rescue Squad (2-story brick) is on the right. Do not park in the row next to the building — you'll be towed. We meet on the second floor, entering by the door at the right front of the building.

From Western New Jersey

Take US 22 Eastbound to the Park Avenue exit. The exit is about a mile past Terrill Road and immediately past the overpass. Exit onto Park Avenue South and follow the directions above to the Rescue Squad building. ☐

Soft Hardware from Otterbox!

Judy Lococo (programs@kipcug.org), Kentucky-Indiana PCUG (www.kipcug.org)

Fort Collins, CO is a charming college town. I know, I've been there, done that and have the t-shirt. You would not expect to find a lot of businesses prospering in this relatively quiet town that wasn't geared towards students and faculty. However, I have discovered one that is worth further investigation, as they have some products that seem to be extremely useful in today's global mentality.

After having been awarded a new 8700 Blackberry by Ziff Davis for participating in a webinar, I finally found the time to switch the cell phone to this device, and synchronize it with all the contacts, calendar appointments, tasks, etc. that has glommed onto me from years of Outlook usage. But the holster that came with it seemed to always dial home, whether I needed to or not. It seems that unless the keypad was locked when inserted into the holster, some of the keys along the side of the keypad were depressed, thus ET was phoning home without realizing.

Enter Otterbox, from Fort Collins (<http://www.otterbox.com>)! They have cases for a lot of different toys we now consider indispensable. They have products for the Blackberry, for the Treo, for the iPod Nano, for laptops, etc., so it would behoove all y'all (I had to do that at least once...) to see what is available for your gadget du jour. Not only do these cases stop the phone home syndrome (poetic, isn't it?), but they are also shock resistant, water resistant, dust resistant, scratch resistant, and offer protection against extreme elements. The most significant discovery I have found is that you can use all the Blackberry features while it's fully encased in the Otterbox,

such as the track wheel, the keypad, the escape key, etc! And when you need to recharge the unit itself, a small plug removes from the side of the case to allow access, so you don't even have to remove the case for this veritably essential chore.

The company is very user-friendly, and seems to be perfectly accommodating, to ensure that you are satisfied with their products. The black and gray color isn't the most flamboyant scheme, but it will go with almost any wardrobe choices you have, and doesn't call attention to what you are doing. The molded rubber and o-ring seals are a bit on the bulky side, but really do provide an unbelievable amount of protection, and transform a fairly delicate instrument into something a lot more usable and carefree. The Blackberry itself is not skinny, so just a little more girth doesn't deter me from believing this is an extremely essential accessory, especially for less than \$130 US.

I am one of those people who think hardware is boring, as all it does is just sit there & blindly obey. But these superb soft hardware enhancements, that actually do what they purport to, without a lot of glitz and hype, aren't at all boring. They are practically a necessity.

Now, if they could only find a way to protect you from leaving it on the seat in the taxi!

This article has been provided to APCUG by the author solely for publication by APCUG member groups. All other uses require the permission of the author (see e-mail address above). ☐

ACGNJ MEETINGS

For the very latest news on ACGNJ meetings visit the ACGNJ Web Page (<http://www.acgnj.org>)

Tuesday, May 1, 2007

Board of Directors Meeting

Wednesday, May 2

7:30 P.M. - Online Auction, Bill Brown
(onlineauction@acgnj.org)

Friday, May 4

8 P.M. - Main Meeting, Evan Williams (nhpressgo@blast.net).

Monday, May 7

8 P.M. - Lunics (Linux/Unix). Andreas Meyer
(lunics@acgnj.org)

Tuesday, May 8

7:30 P.M. - Java, Mike Redlich (mike@redlich.net)
908-246-0410.

Wednesday, May 9

7 P.M. - WebDev SIG, Evan Williams (nhpressgo@blast.net)

Thursday, May 10

8 P.M. - Investing, Norm Wiss (cut.up@verizon.net).

Friday, May 11

6 P.M. to 5 A.M.- NJ Gamers. Gregg McCarthy
(greggmc@optonline.net), 732-721-6507. Break 8 to 10 P.M.

Monday, May 14

8 P.M. - Layman's Forum, Matt Skoda (som359@aol.com),
908-359-8842.

Tuesday, May 15

8 P.M. - C/C++ Users, Bruce Arnold (barnold@blast.net),
908-735-7898

Wednesday, May 16

7:30 P.M. - Online Auction, Bill Brown
(onlineauction@acgnj.org)

Thursday, May 17

8 P.M. - Dot Net, Jim Wong, no meeting.

Friday, May 18

8 P.M. - Window Pains, John Raff (john@jraff.com).

Monday, May 21

7 P.M. - Firefox Activity, David McRitchie (firefox@acgnj.org)

Thursday, May 24

8 P.M. - Genealogy SIG, Frank Warren

Tuesday, May 29

Board of Directors Meeting ☐

All meetings, unless otherwise noted, are at Scotch Plains Rescue Squad, 1916 Bartle Ave., Scotch Plains, N.J.
Directions and map inside back cover.