September/October 2005

$2.95

WASHINGTON APPLE PI

Join the Washington Apple Pi Presenters for the Third Annual Holiday Planning Meeting

Saturday,October 22
9:00 a.m. to 11:30 a.m.

Bethesda-Chevy Chase Regional Services Center

Free parking in an underground garage

Convenient Metro access

Check the Pi web site at www.wap.org for maps and directions

Learn tips and tricks for holiday cards and newsletters

Learn how to make neat gifts and decorations with your Mac.

Learn about the latest must-have peripherals and software for yourself and those you love.

Washington Apple Pi Presents

A Visit With Bob "Dr. Mac" LeVitus

Saturday, September 24
9:00 a.m. - 11:30 a.m.
Ernst Community and Cultural
Center Auditorium
Northern Virginia Community
College, Annandale Campus
8333 Little River Turnpike
Annandale VA

Nonmembers are Welcome

Topics will include:
- Doctor Mac Direct
- GeekCruises
- His 50 books
- Mac OS X Tiger

geekcruises.com

After the meeting join Bob from 1 pm to 2 pm at the Tysons' Corner Apple Store.

Be a Rock 'n Roll Star

If you want to make music with GarageBand, this session is the perfect introduction. The premise is that we'll record, mix, and master a complete rock and roll song—using guitar, bass, drums, and vocals, all in 1 hour.

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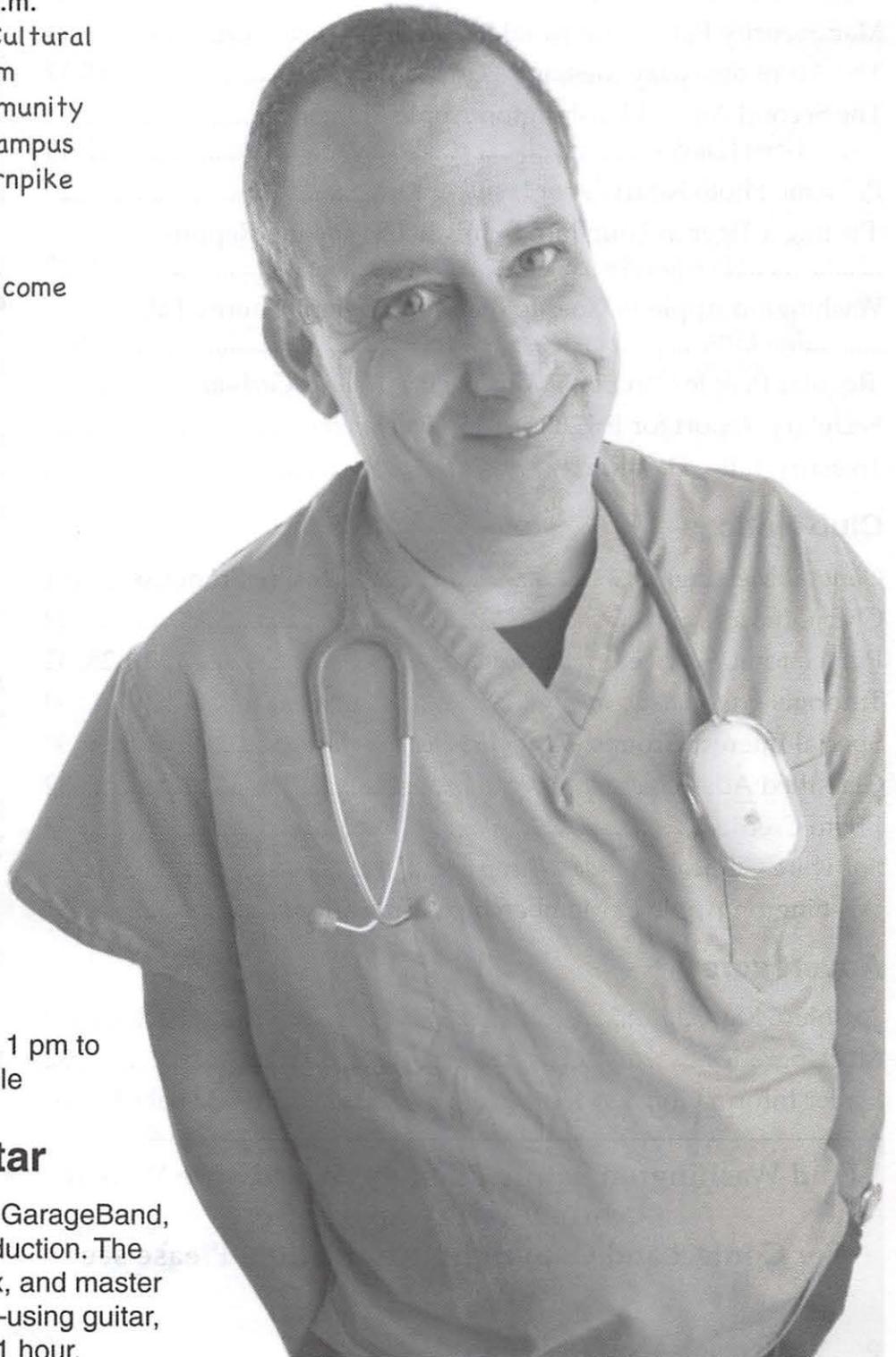Volume 27   September/October 2005   Number 5

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President's Corner

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Labor Day marks a turning point in many American households. People start getting serious again after the diversions of summertime. So it has to be with the Washington Apple Pi. The coming months will bring their usual mix of challenges and opportunities. On the whole these changes will improve the health of the organization as we have taken the steps we needed to take in order to live within our means for the foreseeable future. First, the good news.

Three new Board of Directors Volunteers

Thomas Carlson has joined the Board of Directors Class of 2007 to replace Abe Brody, who resigned. Tom is taking up the reins of VP for Publicity. While Tom has little experience in this area, he is taking up the task with enthusiasm. Everyone should do the best they can to pass along media contacts so that Tom can build up a solid database. That is an immediate challenge. Look elsewhere in this issue for Tom's take on Pi volunteerism.

At the August General Meeting Gabriel Roth and Stefan Shrier agreed to join the Board of Directors Class of 2008. They are newcomers to the volunteer ranks and we promised to give them an opportunity to learn the ropes. Gabriel's membership dates back to the very earliest days of the Pi while Stefan is a relative newcomer. They add a measure of diversity to the Board. Their presence is most welcome because it was becoming problematic to transact business. With four vacancies on the BoD and a couple of people away we actually had to phone one of the missing members in order to get a quorum for a vote on August 10.

The Board consists of three women and 10 men. Given the number of women in the Pi it might be nice to see some more women Board members.

We are now down to just two vacancies, both in the Class of 2008. The major prerequisite for serving on the BoD is a willingness to use electronic communication effectively. A great deal of discussion takes place between meetings and many of the relevant documents are only available by going on line. With all of the Vice-Presidencies staffed, newcomers to the BoD will have a good chance to find a niche for themselves between now and next June, when the classes of 2007 and 2008 will be taking on most of the major leadership roles.

Renovating the Pi Clubhouse

The Board and our landlord at 12022 Parklawn Drive have come to an accommodation that allows us to realize a $1500 per month reduction in the rent we pay at the cost of giving up some of the space we use. American Plant Food proposes to wall off our current classroom space and our current warehouse space and convert them to their own use. We expect to be able to use the current "lunchroom" space for classes and the Tuesday Clinic. The Board and some of the SIGs will also use this space for their meetings. This "multipurpose room" should work if all activities take reasonable care to respect each others' needs. We did look for space elsewhere, but the Parklawn Drive facility remained the most economical and convenient space for our use.

This renovation has to be viewed as an opportunity to be better stewards of the resources that our members make available to us. The work is being tracked and directed from the Pi TCS at *http://tcs.wap.org/topic?b=hero&top=1162*. Please check in there and do what you can to help. An e-mail to *frontdesk@wap.org* is the best way to offer your help. The Phone Robot at 301-984-0300 will also be happy to accept a voice message.

Retaining and Recruiting Members

The fall focus on Pi business will also bring the official launch of the "expiring Members Advance Calls" or "xMAC" as our acronym-loving fighter jockey VP for Membership has christened it. Volunteers will be calling members who are coming up for renewal within the next 60 days to touch base with them and to make sure that they are getting the most of the Pi. Bob reports some interesting findings from preliminary calls. With the great majority of mem-

bers expressing a desire to renew and practically no evidence of any discontent with what the Pi is doing. As with the earlier No Member Left behind program, most of the drops appear to be attributable to relocation, change of platform and the occasional passing away of a member.

It may be a mere statistical fluctuation, but we did record a net gain of eight members in the month of August. This is in contrast to the pattern of 10 to 15 net losses in all prior months. The xMAC program is ambitious, but it is better than sitting around waiting for bad things to happen. Bob Jarecke is the most engaged VP for Membership that the Pi has seen in recent memory. Send him an e-mail at vpmembership@ wap.org if you want to give him a hand. Bob will get back to you and quickly bring you up to speed and talking with your fellow Pi members. He guarantees that you will learn something and even enjoy the conversations about the Mac.

The Pi at the Fair

Elsewhere in this issue you will find Jim Little's description of our participation in the Montgomery County Agricultural Fair. Why did we go to an agricultural fair? To expose ourselves to some of the 200,000+ people who visit every year, that's why.

We may have gained a few members out of this, but of far greater value was the way in which twenty-eight of our members contributed four or more hours working together in teams of two to staff an Internet Cafe in collaboration with the Capital PC User Group and Montgomery Community Television. Quite a few people took advantage of the Cafe to check e-mail or do research on the Web. A goodly number of youngsters enjoyed internet games at nick.com.

We learned quite a bit from watching how CPCUG did their outreach. The alliances that we forged out of that collaboration may well lead to things that the Pi can do to boost its visibility in the future.

Fun you Might Have Missed

Each of the events listed below is described in detail elsewhere in this issue. Those who weren't there certainly missed something. The small core of members who did partake found some novel and interesting experiences as well as the kind of learning that our members expect.

Our June 25 picnic was marked by good food and good fun. Al fresco computing proved to be a popular sport, as did Ann Lesnik's Photo Safari game.

In spite of the failure in NVCC's handling of our facility needs on July 23 we had a very successful meeting in which Pi members shared their personal experiences in using Mac OS Tiger with a large and enthusiastic audience.

The August 27 "Getting Into Digital Photography" meeting was well received for the way Martin Schulman of Ritz Camera's Elm Street store in Bethesda answered the many questions tossed at him by the audience.

Fun Coming Up

On September 24 we will be playing host to Bob "Dr. Mac" Levitus. Bob is world-renowned as the author of 50 books on Macintosh subjects. He has performed at many Mac Users Groups and is always well received. Look for the meeting announcement elsewhere in the Journal and mark your calendar if you have not already done so.

Finally, those Pi members who have the foresight to make their reservations by October 1 will get the chance to take in a "Geek Cruise" to the Mexican Riviera. The presence of a wide range of Mac experts, including Bob Levitus, on the ship will allow travelers to fill those endless hours at sea with one of four tracks of detailed Mac and PhotoShop learning. If we get 10 people signed up we get a tidy discount on the cruise and the learning tracks. See page 5 for more information.

In Closing

The BoD is working hard to keep your experience as a Pi member varied, interesting, helpful and friendly. Keep your eyes open for new and exciting activities in the Journal and on our web site. Also, we will soon be launching our very own Blog page. If you have questions or comments please feel free to send them to *president@ wap.org*. Welcome back from your Summer travels and have a great Fall!

Washington Apple Pi Goes Geek Cruising

By Pat Fauquet

Imagine spending a week in February cruising off the coast of the Mexican Riviera on the Holland America ms Osterdam. Imagine exploring San Diego, CA, Cabo San Lucas, Mazatlan, and Puerto Vallarta. Imagine spending the days at sea learning about the Macintosh and Adobe Photoshop.

A number of Washington Apple Pi members are planning just such an adventure and would like their friends to come along. By booking as a group we will be able to save up to 20 percent on both the cruise and conference costs of the trip. To earn the discount we need 10 or more members to book as a group and so far we have at least 7.

The cruise will leave from San Diego CA and we will be at sea from February 4 - 11, 2007. Cabin prices begin at $998 and the cost of the conference is $795, before any discounts are applied.

The conference will include four tracks, New User, Power User, Photoshop: Essentials & Effects, and Photoshop: Photography and Workflow. It takes place while the ship is at sea. On the days the ship is in port, passengers can join in on shore excursions, shopping etc.

The conference faculty will include:

Chris Breen - Editor and Mac 911 columnist for Macworld Magazine and online editor for Playlist Magazine

Jack Davis - Author of the Photoshop Wow book series and a noted presenter

Bruce Fraser - Photoshop Color Management expert, author and presenter

Janet Hill - Apple Computer, Education Division

Andy Ihnatko - Author, Chicago Sun-Times Technology columnist, conference presenter.

Leo Laporte - Technology broadcaster, for radio and TV, This Week in Technology podcast producer, author

Bob "Doctor Mac" LeVitus - Author, Houston Chronicle and MacObserver columnist, owner of *DoctorMacDirect.com*

Deke McClelland - a popular expert and lecturer on Adobe Photoshop and the larger realm of computer graphics and design

Bert Monroy - considered one of the pioneers of digital art. He co-authored The Official Adobe Photoshop Handbook, the first book on Photoshop.

Sal Soghonian -AppleScript Product Manager at Apple Computer

Derrick Story - Managing editor of O'Reilly Network, author and photojournalist

Mark Swain - iMovie expert

Steve Wozniak - cofounder of Apple Computer, educator, philanthropist

Bob LeVitus will talk about the cruise as a part of his prestation at the September 24 General Meeting. You can learn more about the cruise at <http://www.geekcruises.com/>. Click on MacMania 4.5/Photoshop Fling III. There are several downloadable .pdf files that contain complete information about the cruise.

Please contact Pat Fauquet before the end of the first week in October at *vpprograms@wap.org*, at *patf@mac.com* or by phone at 703-495-8520 to participate in the group discount.

geekcruises.com®
EDUCATION THAT TAKES YOU PLACES

How I Chose a Laptop When My School Decided to Exchange Me

© 2005 *Lykara I. Charters*

In a quest to find ever more expensive ways to educate me, my parents are sending me off to England for a year of studying whilst abroad. With a brilliant sense of timing, they waited until aviation fuel was at an historic high and the dollar-to-pound ratio was at an historic low. This meant that shipping my 14"x17"x10", 40.1-pound iMac G4 was not going to be the most practical solution to my college computing needs. We needed something that would get through customs in a carry-on.

Our first thought was the Mac mini, with more than enough oomph to help me live out the rest of my college years in comfort and style and also the added bonus of being new and therefore desirable. Combined with a disposable monitor and printer purchased in the UK, I could set up a Mac wonderland in my dorm room and feel quite at home, apart from the kippers. Our thought bubble burst at this point, Sunday comic-style, when we learned that England, that backward bastion of tradition, does not believe that broadband Internet access is a birthright. There was no guarantee that my dorm room would have any connectivity at all and the idea of schlepping a Mac mini setup, however miniature, back and forth to a computer lab compelled us to think seriously about laptops.

This was very bad for me, because I had severe reservations about laptops. They are portable, which means they are theftable; their keyboards are small and not ergonomic; they don't have the same capabilities as a desktop machine; they are prone to being broken (but never by the owner, as tech support well knows). I have always used larger, more powerful machines and am, at this time, well adjusted (read: covetous) of my 20" screen. None of these reservations paid for shipping my iMac G4 to England and they certainly didn't solve the problem of religious pilgrimage to an Internet port.

I spent a great deal of time doing the same thing everyone else does: I read up on Apple's laptop offerings, I talked to everyone whose opinion I trusted, and I brooded that it was cruel to house students from overseas in rooms that had no Ethernet jacks. At first, I settled on the 15" PowerBook for showing more information on the screen at once (I'm famous for opening 27 windows at a time), speed comparable to my iMac, and a sleek aluminum case that I felt would comfortably make the transition into the professional world once I graduated. The keyboard, as a bonus, glows gently in the dark, which would make writing late night papers easier on my roommate, if not on me. Backup storage was not something I had to worry about; due to the foresight of my parents, I already had a formidable LaCie d2 external FireWire drive.

The PowerBook idea was run by the Washington Apple Pi forums on the TCS where it was intimated that the repair rates on PowerBooks was not what it should be. I was urged to look more closely at iBooks, with their plastic and more damage-resistant cases. I had dismissed them earlier for that very reason (the plastic case not having the same 'shiny' gem quality as the aluminum one) but the rumblings were that this was really a desirable aspect. A feature, not a bug.

Having run through Apple's Web site once again and nosed through a few reviews on third party sites, we made a family trip to the Apple Store to play with the display models and do side by side comparisons of the two laptop lines. The PowerBook was perceptibly lighter, even when compared to the smaller 14" iBook, but I had to practice some due diligence… and the weight differential wasn't that much or that big of a deal. A plastic case was less susceptible to warping, less endowed by physics with the ability to burn me if the laptop got overly warm, and more resilient to minor bumps and bruises. The nearest Apple Store to my University in England is about a 3-hour train ride away, so popping in for repairs was not a solution I could rely on. The sturdier iBook was beginning to be more attractive. It didn't have the screen real estate as my iMac, but it would fit in a backpack

and wouldn't mind accompanying me on my European conquest during school holidays. Also, I learned around this time that I wasn't going to have a roommate, so the glowing keyboard on the PowerBook was no longer quite as strong a selling point. (But I still wanted it.)

All the same, the 14" iBook was a better, safer buy… so we bought it. It came with a SuperDrive (which can read and write both DVDs and CDs) and Airport wireless capability; I equipped it with extra RAM to bring it up to 1.25 GB and christened it with a funky foreign name. Having spent several weeks getting used to working on a laptop, I upgraded to Mac OS X 10.4 and installed a bunch (more of a bouquet, really) of software that would help with photo editing and Web publishing. I'm not really interested in photo editing and Web publishing, but I owe it to my parents in return for a year of learning how to speak in a condescending accent. To save time and effort with Address Book and the like, I used Migration Assistant to perform a Dr. Frankenstein brain transfer from my iMac G4 to my new iBook; it was so successful that it even copied over settings that I had done incorrectly on my iMac and had hoped to change when setting up my laptop. Very thorough.

Of primary importance was ensuring that my parents and I would be able to see each other – literally. We conducted tests of iChat AV using iSight cameras (with Mac OS 10.3 and then 10.4, for comparison) and found that, in general, it works better when both the machines are running the same OS. We also put my digital camera through its paces and made sure the LaCie drive worked as well as it should. I wouldn't recommend any laptop on the basis of its sound quality, but I reserve the right to buy good speakers once I get settled.

My iBook is going to be a great companion in England and will make a fine extension to my desk workstation when I return. I had greatly exaggerated in my mind the drawbacks of a portable computer: a sturdy lock and common sense go a long way towards keeping my laptop from walking, the keyboard is not at all uncomfortable when placed at the right height (a health consideration at all times when typing), a well designed laptop backpack and a plastic case will stand between me and mine enemies, and Exposé will cover a multitude of sins for those of us who suffer from Let-A-Thousand-Windows-Bloomitis. As for the decreased abilities of a laptop versus a desktop, there is not much that an undergraduate like me can think of that will tax an iBook – but a girl can dream.

500 Million

This summer Apple held a contest to promote their iTunes Music Store. In just over two years, iTunes had grown from a Mac music organizing and playing package to a series of stores around the world to a (nearly identical) Windows software package. Along the way, Apple announced the purchase and download of half a billion songs, and on July 18, 2005, they announced that a woman in Lafayette, Indiana, had won ten iPods for family and friends, a gift card for 10,000 songs, and a paid trip for four to see a rock concert.

500 million songs is almost 4,300 years of continuous music. A great many analysts and computer industry leaders have called the iPod and the iTunes Music Store a "fad." It may be, but few fads create such profound changes in so many industries – computer, software, music, music appliances – in such a short period of time.

Mac Security: Physical, Mental, and Spiritual
Part III: Spiritual Security

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Note: an extended version of this article, plus its two companion articles, is available on the Washington Apple Pi Web site. The extended version has an extensive bibliography, with live links and illustrations. The three articles can be found at:

http://www.wap.org/journal/security/
http://www.wap.org/journal/security2/
http://www.wap.org/journal/security3/

Most people purchase a computer and assume it is an appliance. They want to play games, surf the Web, send and receive E-mail, write letters, and exchange photos of family and activities. Generally speaking, they "don't want to do anything fancy," unaware that each of these tasks

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Good security is like good driving. Learn good habits, and drive safely out of habit, not out of a brooding obsession with avoiding accidents.

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is quite complex, and requires far more power than the traditional "computing" tasks for which computers were named. As appliance owners, they want their computer to be almost invisible: something you can ignore if you don't have immediate need for it. They do not want to think about maintenance, and certainly don't give any thought to security.

But modern personal computers are highly complex machines, highly vulnerable to a variety of threats well beyond what you might associate with common household appliances. The security risks to a computer fall into three broad categories:

- Physical: protecting the physical and electronic components of your computer, including physical access to your machine.

- Mental: mental security can be summed up as "don't do dumb things."

- Spiritual: protecting your computer from those unseen, unsuspected demons and things that seem to come into your machine from nowhere at all.

Part I of this series (*Washington Apple Pi Journal*, May/June 2005), discussed the most common security threats to Macs: physical threats. Part II (*Washington Apple Pi Journal*, July/August 2005) discussed the next most common security threats, mental errors. Now we address the spiritual domain, at once the sexiest, the most talked about, and – for the Mac at least – the least common. But "least common" doesn't mean there is no threat. What you can't see, and didn't knowingly invite in, really can hurt you.

Part III: Ghosts, Demons and Berserkers

Look in a computer security book and you probably will not find an entry for "spiritual security." Listen to users, however, and they frequently describe their computers as "possessed," as "taken over by demons," and needing "an exorcist" to get rid of the problem. Something "sneaked into" their computer or "broke into" their computer and did all manner of mischief or outright harm.

Apple Computer has benefited from great press in recent years, comparing the relatively robust computer security of Mac OS X to that of Microsoft Windows. Few things "sneak in" to a Mac. Yet the brief, colorful, and increasingly frightening history of computer demons, wizards, and "things that go bump in the dark of your computer" features Apple Computer in a starring role, right from the beginning.

Electronic Warfare in Brief

One of the first descriptions of computers as weapons came in Robert Heinlein's 1966 novel, *The Moon is a Harsh Mistress*. The novel describes a political revolution on the moon that uses computer warfare as a key weapon in aiding the rebels. The theme linking computers and weapons

Four Critical Terms

Cracker: an individual who uses stolen information, specialized programs, or specialized knowledge to "crack in" to computer systems. Crackers are bad guys.

Hacker: a programmer that "hacks away" at a problem until he comes up with an elegant solution. The news media has confused this term with "cracker," much to the disgust of clever programmers everywhere.

Virus: a self-replicating program that inserts copies of itself in other programs or documents.

Worm: a stand-alone self-replicating program that spreads itself across computer networks.

became so common that, by the time the Mac was introduced in 1984, Apple's license agreement explicitly, and famously, banned the use of either the hardware or software for nuclear weapons research.

A few years after Heinlein's novel, in 1971, John Draper, later known more widely as "Captain Crunch," found a way to use a plastic whistle from a box of breakfast cereal to "attack" phone company computers over the telephone and get free phone service. Draper inspired Steve Wozniak and Steve Jobs to manufacture electronic "blue boxes" for their friends in order to reproduce this trick without a whistle. Draper later went on to write Easy Writer, the first word processor for the IBM PC (also available on Apple II).

John Brunner's 1975 novel, *The Shockwave Rider*, described computer "tapeworms," programs that propagate through a computer network. Computer researchers later formally adopted "worm" as the proper term for this type of program. This was followed in 1979 by Thomas J. Ryan's novel *The Adolescence of P-1*, which very accurately describes a computer virus in a story about artificial intelligence. Up to this point, speculative stories about computers were written before the birth of the personal computer.

Then San Diego State University mathematician and computer scientist Vernor Vinge,

intrigued by what he could do using nothing more than an Apple II and a modem, imagined life in the future. His 1981 novella, "True Names," described a world in which computer users envelope themselves in an artificial universe, and then manipulate that universe to influence the real world. The title comes from the use of pseudonyms to hide the identity of the users. Not only did the novella win a huge number of awards, the online community also adopted wholesale the language and culture he described.

The very next year, in 1982, the real world started to catch up with that of science fiction. Elk Cloner, an Apple II virus, had the honor of being the first computer virus found "in the wild," outside a computer research lab. It transmitted itself through infecting the boot sectors of Apple II floppy disks.

Shortly after the Mac was born in 1984, William Gibson's novel *Neuromancer* appeared, in which Gibson coined the term "cyberspace." It described a future world where computers are little more than commodities, and programmers sustain themselves doing piecework. Meanwhile, the world's networks are a vast battleground with corporations, governments, and rogue individuals fighting for information and power. After IBM introduced the IBM PC in 1981, Apple gained competition in the personal computer world, and in 1986 the PC gained its first virus, "The Brain." Written in Pakistan, this virus also demonstrated the international nature of computer attacks. 1986 also saw the first Trojan Horse program (only 3,200 years after the Greeks introduced the concept), PC-Write. When run, PC-Write (which, like "The Brain," ran on MS-DOS computers) acted as a functional word processor, but behind the scenes it deleted files and corrupted diskettes.

The next year, IBM's internal communications network was brought to a halt when a Christmas greeting replicated itself, over and over again, on servers throughout the world. A few months later, in 1988, Robert Morris, a computer science graduate student and son of a National Security Agency computer wizard, unleashed the first computer worm on the Internet, disabling

over 6,000 Sun and DEC computers. These two incidents, occurring just a few months apart, alarmed computer experts worldwide, and gave birth to the network computer security profession.

Neal Stephenson's novel, *Snow Crash*, published in 1992, describes a vast artificial reality spanning the world networks that has become so complex and so invasive that it brings radical changes to the world economy. Written after personal computers had started to proliferate, the title comes from the way a Mac computer screen looks after a crash: it displays random graphics, much like a broken television set showing "snow." Two years later, in 1994, the world saw the first non-virus computer network disruption. So many E-mail messages were written about a phony "Good Times" virus that E-mail systems throughout the world were brought to their figurative knees. This incident presaged the coming deluge of spam.

Microsoft's introduction of Windows 95 in 1995, with its lack of any serious attention to security, brought with it a flourishing crop of "macro viruses" by the end of the year. The success

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So does this worldwide war of ghosts coming in on the wire and demons unleashed on the unsuspecting really pose a threat to Macs?

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of the virus-enabled Windows 95 and Windows NT paved the way, in 1999, for the "Melissa" virus to infect tens of thousands of computers overnight, mailing itself to people listed in the address books of Microsoft Outlook users. The "Code Red" virus of July 2001 managed to do even better, infecting hundreds of thousands of computers worldwide and causing an estimated $2 billion damage over the course of a month.

A week after the World Trade Center and Pentagon attacks, on Sept. 18, 2001, the "Nimda" virus-worm infected millions of computers worldwide, spreading even faster and more intelligently than "Code Red." This speed record was shattered on Jan. 25, 2003, when the "Slammer" worm shut down Microsoft SQL Server machines worldwide. This incredibly tiny

worm is estimated to have successfully infected over 50,000 computers in less than ten seconds from its release. Not only did it attack large companies with Microsoft SQL Server installations, but also ordinary desktop computers running Microsoft Project or Visio Professional; these packages, usually unknown to the user, include a limited Microsoft SQL Server engine – which was infected. The worm generated so much traffic, trying to infect new machines, that large portions of the Internet were swamped with bogus packets for days.

The current record holder is the "Witty" worm, released on March 19, 2004. Produced just a day after public notice of a software vulnerability, "Witty" attacked and disables tens of thousands of computers. Significantly, it was written specifically to attack one vendor's computer security software.

In the first six months of 2005, the onslaught of invisible threats increased significantly. Mac fanatics argue, correctly, that most of these threats involve Windows, and leave Macs untouched. So does this worldwide war of ghosts coming in on the wire and demons unleashed on the unsuspecting really pose a threat to Macs?

Yes, the threat is real. But defenses are readily available.

Good Fences Make Good Neighbors

The easiest way to keep random strangers from entering your house is to have a stout door with a sturdy lock. And the easiest way to keep strangers from entering your home over a DSL or cable modem line is to install a hardware firewall. Hardware firewalls are inexpensive (starting under $100), and are often bundled with routing and switch functions that allow you to share a single DSL or cable connection with a number of computers in your home or office. The firewalls are usually set at the factory with a reasonable level of paranoia, leaving you to simply change the administrator name and password (if you don't, someone will guess it and break in) and, effectively, lock your doors and windows.

Unless you are a security wizard, avoid the temptation to get a firewall or router that al-

ware firewall bundled with Mac OS X is excellent, and in Mac OS X 10.4, a few new features – such as logging, blocking UDP traffic, and enabling stealth mode – make it even better. But the Mac OS X firewall has two huge disadvantages: (1) because it is software based, a clever virus, worm or Trojan Horse program could disable it, and (2) the average user probably will not understand enough about how it works to properly set it up. Use it, but not in place of a hardware firewall.

On the other hand, if you have a laptop, not only should you use the Mac OS X firewall – you should actually spend some time learning how it works. Laptops are designed to move, and the more you move, the more you are exposed to evil spirits trying to break in. The Mac OS X firewall may be the only real protection you have.

Close the Drapes and Windows

A firewall works by denying access to certain classes of computer services. By default, Mac OS X turns on *no* services, so a standard install of Mac OS X, combined with the firewall, should offer good protection. Right?

It does up until users start tinkering. The user might want to remotely log into the computer, so they add an exception for SSH to the firewall. The user might decide they want to enable file sharing, so they add an exception for personal file sharing. They may also add exceptions for hosting Web pages, allowing Windows computers to share files on the Mac, allow files to be moved back and forth via FTP, allow remote printing...

Each new exception forces the firewall to allow in more "stuff," and gives ghosts and demons more of a chance to invade your computer. "But," you say, "I'm not interested in FTP, or Windows file sharing. All I use my computer for is browsing the Web, maybe some iChat, maybe some E-mail..."

Browsing the Web is easy; no changes to the firewall are required. E-mail also doesn't require any changes to the firewall. But iChat, especially audio or audio-video iChatting, requires a number of holes in your firewall. In the Windows world, sending harmful programs over chat (or

A good firewall imposes order on computer use, much as good architecture imposes order on buildings. When the Grand Trianon Palace at Versailles was built for Louis XIV, the object was to provide a magnificent home with as much light as possible in an age before electricity. Massive windows and airy, open hallways gave the palace a feeling of openness, even on a dreary French day, while keeping the occupants safe from the elements. A firewall, similarly, gives the user a feeling of freedom as they traverse the Internet, while providing shelter from the unsavory elements. (Photo by Lykara I. Charters)

lows wireless access. It is pointless to build an electronic Maginot Line around your home and then invite paratroopers to drop in behind the fortifications. No matter how much you might want a wireless network for your home or office, statistics show that you probably will *not* figure out how to keep unwanted ghosts and goblins from dropping in. If you must have a wireless network, consider having it on a separate network, between your broadband connection and the hardware firewall protecting your desktop machines.

What about a software firewall? The soft-

IM or instant messaging) is a huge and growing problem. There is no solid assurance that Macs will forever remain free of similar problems.

So what should you do? If you want the sun in, open the drapes. At night, close them. Similarly, if you want to use file sharing, turn it on only as long as you need it – then turn it back off. If you are using iChat, be aware of the dangers – and turn it off if you aren't using it. The more network services you have turned on, the more holes you have in your firewall. And the more holes you have, the less the firewall looks like a citadel and the more it looks like Swiss cheese.

Wear a Seat Belt

Installing hardware firewalls and turning off services vastly cuts down on spooks and demons coming across a network. Not all invisible attacks depend on networks, however. Computer viruses, Trojan horse programs, and some worms can be spread by being embedded in a document, by simply residing on a CD-ROM or floppy disk or USB "keychain drive," or by connecting to a shared disk.

As of this writing, there are no viruses, Trojan horse programs, or worms that have any effect on Mac OS X. Just the same, these malicious programs represent a threat to your reputation if you inadvertently pass them on. It might seem silly to suggest that you need to take steps to protect others from threats that don't affect you, but you can either look at it in terms practical or eleemosynary. Practically speaking, Windows computers and Windows users vastly outnumber the comparatively small Mac world. Charitably, the Windows world needs all the help it can get.

By the time this reaches print, Symantec should have a Mac OS X 10.4-compatible version of their anti-virus warhorse, Norton AntiVirus for Macintosh, and McAfee will have a similar version of their anti-virus package, Virex. Both packages not only protect Macs from all known Mac OS X viruses (all zero of them), but also the full range of Windows viruses. Both packages use heuristic algorithms to detect and warn against "suspicious" activities that may not

match any known virus but could indicate an attack by something new. Both will scan incoming E-mail and Web connections for evil files. Both also will stay resident in memory, constantly checking on activity.

For those in the education, graphics, government, legal, and any other field that requires almost constant exchange of documents with outsiders, either commercial package is almost mandatory. The publishers aggressively compete to be the first to identify new threats and to get new anti-virus profiles out to their customers.

If you don't exchange documents with outsiders – either because you are a hermit or simply don't need to – you should consider ClamXav. This open-source antivirus package lacks the heuristic and memory-resident features of its commercial counterparts, and it makes no attempt to find older Mac viruses that predate Mac OS X (Virex and Norton do). But it is regularly, often daily updated with the latest Windows virus signatures, and is easy to install and configure. Plus, it is free.

Choose Your Friends Wisely

One of the biggest threats to your Mac is a Windows computer. This isn't flagrant anti-Microsoft bias, but truth borne out of the fires of hellish combat. If you have one or more Windows computers in your home or office, they are far more likely to be successfully attacked by ghosts and demons, far more likely to be infected by viruses and worms, and far more likely to fall victim to a Trojan horse program.

Professional security firms have tested the relative security of Macs and Windows machines through "honeypots." A honeypot is basically a standard Mac or Windows computer, taken out of its shipping box and hooked up to a network that is, in turn, connected to the Internet. No attempt is made to change the default settings of Mac OS X or of Windows XP. On average (the security firms quibble over the exact figures), it takes between twelve and forty minutes for a Windows XP machine to be "compromised" by invisible things coming in across the wire. Mac OS X machines, in contrast, sit quietly and spurn all untoward advances.

It is, of course, possible to armor a Windows machine against these threats. But while a Mac user needs to do *nothing* to Mac OS X to make it robustly secure, a Windows user must constantly check, patch, tweak and configure Windows to keep the ghosts and demons out. This is true at home or in your office, which means that, without constant effort, a computer inside your firewall – your Windows machine – might be taken over and used to launch attacks against everything else, from the inside.

In fact, compromised Windows machines are perhaps *the* leading cause of successful attacks on Mac OS X machines. In a recent case at a university, a cracker broke into the Windows machine used by a computer lab network manager and found a file listing all the accounts and passwords to the lab's hundred-plus Macs. Then the cracker cheerfully used the account names and passwords to enter the Macs. No muss, no fuss, no special knowledge: the cracker didn't need to hotwire the Macs since keys were readily provided.

Maintaining a safe network, at home or at the office, is far more difficult if Windows machines are introduced to the mix. Even a visiting laptop – from a vendor, or a college kid home from school – greatly increases the likelihood that evil things will be let loose.

There is no simple solution to this problem. If you have a Windows machine on your network, you'll simply have to spend more time securing your environment, and in particular spending time and money securing Windows.

Old Friends Can Hurt You

While a brand-new Windows computer can be a threat, an older Mac can also be a threat. Over the past few years, there have been several minor outbreaks of older, pre-Mac OS X viruses in the Mac world. The cause is, invariably, the same: older Macs.

Typically, a user decides that an old Power Mac 7200, say, is taking up too much room on the floor of the closet, so the user gives it to Aunt Jen. Aunt Jen is bright, college educated, and knows nothing of computers, so she accepts the computer in order to E-mail her nieces and nephews.

But the user forgot why the computer went into the closet in the first place. It was becoming unreliable, for no clear reason. It would freeze. It would reboot. It would do strange things. It was, in short, virus infested. And after years of sitting in a dark closet, not bothering anyone, it has been cast loose again on poor, unsuspecting Aunt Jen.

The second scenario is potentially even more harmful. In this case, the user decides to donate the machine to some good cause – a church, a charity, or possibly to a group that intends to use it as a prop in a play. The user decides it is too much trouble to reformat the machine, so *also* donates old tax records, letters, and passwords to anyone who happens to try and use the machine. This is technically poor mental security (covered in Part II), but the user often doesn't find out about it until discovering that their online bank records, health records, income tax records, E-mail storage, etc., have been compromised.

Older computers may indeed have good value. But erase the hard drives before you let them leave your custody. Your Aunt Jen and your bank records will both feel safer.

Get Regular Checkups; Take All Medicine As Directed

Without doubt, the cheapest, easiest way to keep your Mac in good spiritual health is to regularly check for system updates – and then install them. A shocking number of Mac users don't update their systems, or update them in such a haphazard and irregular fashion that, were they pets, the owners would be cited for abuse. This is very dangerous, for a computer system update is not only a way to protect your machine, but also a starting point for crackers eager to get into your computer.

The sad irony is that every software update is a roadmap into your computer. If a cracker can reverse engineer the update faster than you can apply the patch, the cracker will know how to get into your computer – and your computer will be defenseless. Every software update starts a race: can the good guys patch their systems be-

The Software Update preference pane in
Mac OS X should be set to check for updates
weekly, at a minimum. When an update
becomes available, the proper course of action
is to install it – not complain that it interrupted
what you were doing.

fore the bad guys break in?

In the Windows world, the situation is so
critical that computer security experts and some
lawmakers have seriously entertained the idea
of making it illegal to operate an unpatched
computer. A huge percentage of all computer at-
tacks are actually made by unpatched Windows
computers that were remotely taken over by
crackers, and then turned into "zombies" to at-
tack other computers. The Mac world, so far,
has escaped this problem, but the sheer power
of Mac OS X makes it a juicy target: a Mac OS X
"zombie" would be several times more danger-
ous than a similarly infested Windows machine.

Apply security updates. Apply system up-
dates. Unpatched software is by far the greatest
"spiritual security" threat there is in the world
today.

Physical, Mental and Spiritual

Keep in mind the lessons of your parents, teach-
ers and religious leaders. Physical security is use-
less without mental and spiritual security. Mental
security is useless without physical and spiritual
security. Spiritual security is useless without
physical and mental security.

Good security is like good driving. Learn
good habits, and drive safely out of habit, not out
of a brooding obsession with avoiding accidents.
Good habits, once learned, are not burdensome.
Don't dread and fear disaster, but instead enjoy
your computer – and make a habit of treating it
properly, so you can enjoy it even more.

An expanded version of this article, with an
extensive bibliography, can be found on the Pi's
Web site at:

   http://www.wap.org/journal/security3/

The Art of the Away Message

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Speaking as perhaps one of the last teenagers in America to get an Instant Messaging account, I can't speak very knowledgeably about the history of online chatting. There have been dozens of books written on the subject: I've read not a one. This is not a research paper. It would be cruel for me to write one during the summer, anyhow. These are just some observations.

Instant Messaging, or IMing, was billed as an easy, convenient, low-cost, and dare I say trendy way to keep in touch with friends. Later, loved ones were mentioned; most recently, businesses have begun to support various IM services so colleagues can work quickly and, supposedly, efficiently without the annoying conference calls of death or 'bat phones,' which everyone knows just look ridiculous. Convenient little guides have been published so that parents know what it means when their kids write:

+45+3 +#3 5+4|_3 4!r 0f Vr I)35+rV(+10N

or "taste the stale air of ur destruction," which I roughly translate as, "I have too much time on my hands and need more geography homework." But beyond the complete misuse of English and Roman numerals, there is a complex subculture of, you know, other stuff.

Most IM services, including iChat AV, come with a set of canned 'away messages,' little epitaphs of online death that announce to everyone on your buddy list what you are doing instead of talking to them at that moment. The standard roster of away messages (the ones most often offered by IM services) include, "I am away from my computer right now," "I am not available because I am playing a computer game that takes up the whole screen," "Eating," "Sleeping," and other such trivialities. iChat AV merely offers, "Away," which is not too original but does get to the heart of the matter: away messages were originally intended to be more informative than answering machines while serving the same basic function.

In addition to the standard fare, users are given the option of creating customized away messages, either for one-time use or to be saved in a catalogue for frequent display. (iChat AV lets you make customized available messages, but that's just because it's made by Apple and they think of things like that.) There are even Web sites devoted to sharing and suggesting away messages, though users have to judge for themselves how clever, "College: Producing alcoholics since 1892" really is.

Away messages have become vehicles for personal, social, religious, and political expression, not just your run of the mill "gone for apples" note on the fridge.

But… give a kid a school uniform, and they will find the surest way to be decidedly irregular. Away messages have become vehicles for personal, social, religious, and political expression, not just your run of the mill "gone for apples" note on the fridge. Young adults are willing, if not eager, to share their views on pretty much any topic in their away messages – blogs (Web diaries) in miniature. What with last year's elections, the instillation of a new Pope, shocking developments in the sports world, an ongoing war fought mainly by people in the 18-25 age range, and the normal trials and tribulations of living, away messages have been fascinating. Educational. Informative.

It isn't always that intriguing, though. Quotes are common, song lyrics popular, birthday announcements customary, and there might


You can tell a lot from an away message. The running man says the user has an AOL Instant Message account and hasn't bothered to customize it. These two messages are standard, canned messages for AOL IM.

possibly be someone online who actually uses their away message to tell you where they are. These, however, are considered to be poor efforts. Unlike with answering machines, it is literally *expected* that people respond to your away messages: it is cause for offense if no one responds to your brief, shrewd, and witty commentary on life. People (who I will obviously not quote) will go so far as to write sexist, racist, or otherwise insulting things to goad replies out of their friends; such messages are just illustrative of the high importance placed on real-time feedback and reassurance that people care what you have to say enough to constantly check your away message throughout the day.
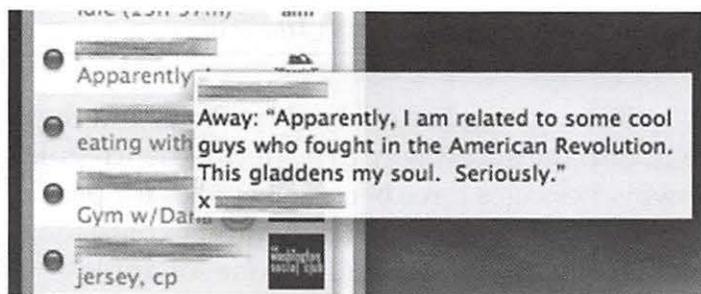
If you hover the pointer over your buddy list in iChat, the away message will briefly appear on the screen.

Now, against all legal advice, I am going to freely quote other people's words without attributing them:

-=*=-

I'm off saving the world. Please leave your tribute and other offerings at the altar.

I GOT BEDDING!!!

[a quoted conversation left as an away message]
User1: so I was thinking of a gift with my mom
User2: huh?
User1: for my family
User1: and I told her how you said it should be something indicative of America
User1: you know?
User1: so I suggested a Bible and a Gun

i put a big poster map of the US on the wall in the common room, but i'm taking it down because noone (especially Friend1, who i'm living with) thinks it's cool except for me. why does noone else think maps are sweet? i think most people secretly like to look at maps, but they won't admit it. well for any of you future visitors i have a sweet map of the US, but it'll be rolled up in my closet. you know, if you wanna look at it. in my closet.

if there isn't a football game, and I mean soon, I'm going to have to tailgate at a swim meet. that's just dumb.

Lege atque lacrima – playin' poker. [Which means "read 'em and weep" in Latin.]

The trombone is a harsh mistress.

I have to go, the rice is burning.

Before I graduate, I am going to invent a giant trebuchet to fling me to class each morning.

As a citizen of New Jersey, I officially declare war on the state of Maryland.

For every animal you don't eat, I'm going to eat three.

[A large variety of onomatopoeia words, such as:]

Guh. Snah. Mreah. Aroo? Heh.

Training with elite Panda Forces.

Nietzsche would have made a lousy husband.

I've been practicing my dinosaur noises. Akkkkiiiiaaaaaooowwwwrrrrr!

I made a face today and it wasn't very

pretty. This is why I need a digital camera.

Why has orange been the color of revolution lately? 3 countries and counting...

So I was discussing religion with a friend who doesn't believe in evolution, and I asked her about the appendix in humans, and she said it was an organ saved for Ascension. Ummm, no. People with appendicitis are not going to Hell.

The word 'tragedy' means 'goat song' in Greek.

-=*=-

Custom away messages: vanity plates for the mind.

Washington Apple Pi is more than just the *Journal* arriving in your mailbox. It also offers exciting General Meetings and Special Interest Group (SIG) meetings, special events such as the semi-annual Computer Show and Sale, Internet ISP services (dial-up connections, E-mail, private Web space), has active mailing list discussions, offers one of the oldest, most active Internet forums on the planet (the ubiquitous "TCS"), and one of the oldest Web sites. **Plug in to the Pi.**

Pi calendar — **http://calendar.wap.org/**

Pi Web mail — **http://mail.wap.org/**

Pi store — **http://store.wap.org/**

Pi forums — **http://tcs.wap.org/**

Pi Web site
 and portal — **http://www.wap.org/**

The Second Annual Washington Apple Pi Picnic

By Gene Haddon

The Second Annual Washington Apple Pi Picnic was held on June 25, 2005 at Cabin John Regional Park in Maryland from 10 am to 4 pm. The driving directions, posted on the web site, were foolproof. They included photographs of landmarks and directional signs. The weather was sunny and hot.

About 25 Pi members gathered to chat and to plug in laptops and to explore the picnic site. In addition to the copious supply of electricity for the laptops, the site offered a large athletic field, two long picnic tables under covered shelters, excellent grilling facilities, and clean rest rooms! The Pi supplied "fixins" for the grill and large chests of ice and soft drinks. Some members brought their own lunches, and others joined together for a pot luck lunch of salads and fruit and desserts to accompany the hot dogs. Everyone helped to finish it all off.

The Montgomery County Parks office supplies athletic equipment - a big bag full of balls, bats, horseshoes, etc. The day was too hot for organized sports, at least for this group. The main entertainment was talk and food. But we also had some lightly structured afternoon activities. Pat Fauquet brought art supplies for a CD decorating contest. Winning designs will appear on upcoming monthly CDs.

Our own graphic designer, Ann Lesnik, invents games in her spare time. She brought her Photo Safari Game. We divided into three teams. Each team was given a disposable camera. Ann's game has booklets describing categories of topics and photographs for the contestants to imitate with subjects and materials at hand. As the afternoon wore on, creativity waned and the stalwart players became sillier and sillier. Everyone had a grand time. At some future date, pictures will be developed, scores will be assigned and one team will be declared the winner.

Chuck Joiner of the MUG Center was a

guest of honor. We enjoyed a chance to talk with him about the new directions of the MUG world. Our picnic was a success, a relaxed social occasion enjoyed by all. It was good to see some people who rarely appear at General Meetings.

Getting acquainted. Herb Block, Steve and Ann Lesnik, Abe Brody and Jade Curtis. The large sack in the foreground is the Parks Dept Sports bag.
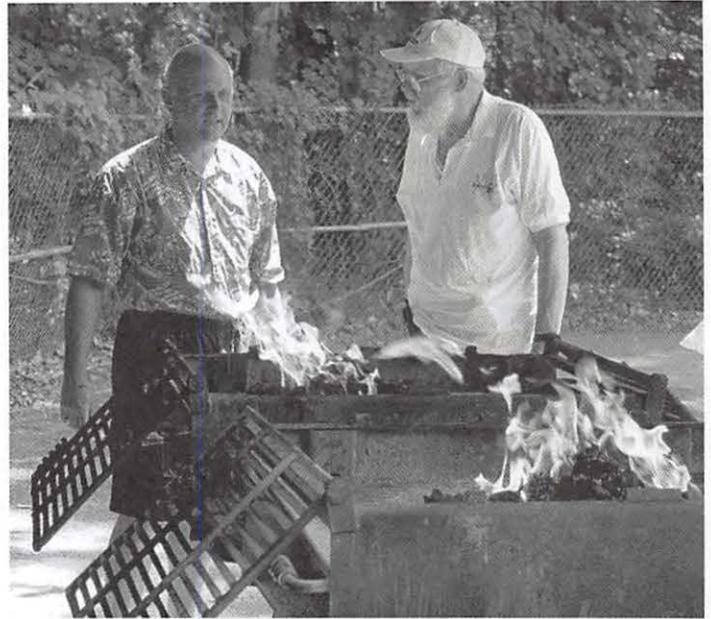
Jim Little and Ron Fauquet ready the grill.

The Guest of Honor - Chuck Joiner (middle) with Phil Shapiro and Pat Fauquet.
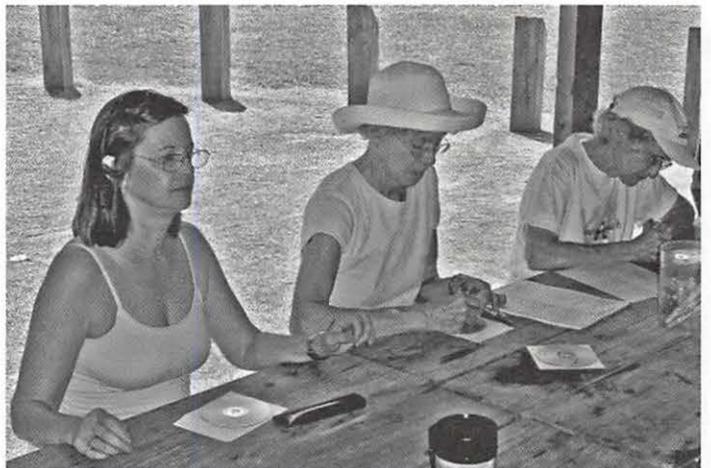
Fun and Games, Pt I - Cheryl lavoie, Gene Haddon, and Nancy Little design labels for Disk of the Month CDs

Insights on iSight - Dick Rucker, John Barnes, Abe Brody, Phil Shapiro, and Chuck Joiner play with John's iSight setup. It was linked to a Abe's setup in the other pavilion
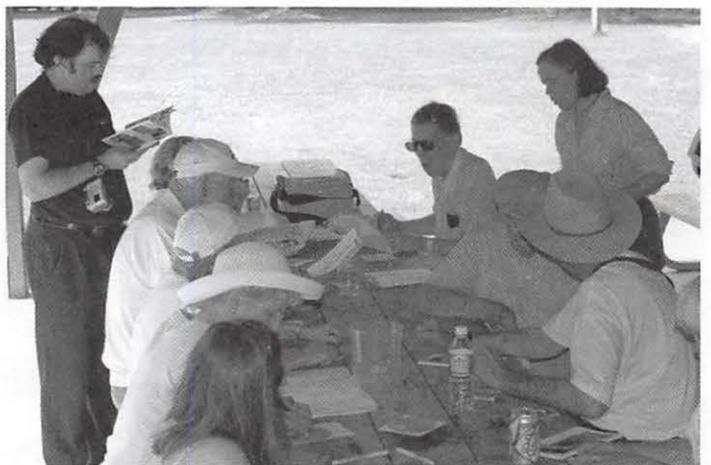
Fun and Games, Pt II - Participants mull over the rules for the Photo Safari

Chatting it up while waiting for the meat course. Add Phil Marchetti and Jay Miller to the attendance list.

There were plenty of delicious leftovers. (Photo by John Barnes)

Pat and John discuss the Pi past, present and future. Notice the bottled water, it was a big seller that day.

Some of the folks who were obscured in the photo above.

Unless otherwise attributed, all photos on these two pages were by Dick Sanderson.

Where the heck is the Pi

HOTLINE Listing?

The Hotline listing, with the names and phone numbers of members who can provide help on a variety of computer issues, can be found on the TCS,

   http://tcs.wap.org/

If you are having problems with your Pi account name or password, visit:

   http://tcs.wap.org/password

for assistance.

Pi Picnic Photo Safari

By Ann Lesnik

Years ago when neighborhoods seemed safer and children could play in the street, we used to have scavenger hunts going door to door. The parents would plan the event, gather all the kids and hand out lists of items to find. They then could have their grownup party without interference. We (the kids) would form up our teams, vote for a captain and plan strategy over the block of street we were assigned. Then we'd knock on doors and babble out the items we needed with eagerness much similar to Halloween night. What I remember best is the willingness and generosity of the neighbors, anxious to help to find those hard to get items. The lists were usually of little things, a #2 pencil, a feather, a penny with a certain date, etc. And even if our team didn't win, we had a blast and it made for lasting memories with friends.

Things are different now; scavenger hunts have to conform to the times. The one held at the June Pi picnic is a variant, whereby instead of getting items, you have to get photos of items.

So on a beautiful day, friends of the Washington Apple Pi gathered for the annual picnic. After firing up the grills, sharing lunch and having lively discussions of the latest Mac news, the instructions for the Photo Safari were given. Three teams formed up to compete and show how creative they could be.

Each team was given a camera and a booklet of the photos to find, capture or create. The booklet has many categories and choices to offer for variety and allow for teams to shoot what they like or do best, but only 22 photos can be final. The categories consisted of trying to recreate fine art, like the "Mona Lisa," or a forensic snap shot of a crime scene. Others are to depict a cartoon or find an unusual object in nature.

The teams were quite ingenious; one team did a nice metamorphic picture depicting the stages of man's development, and two teams did quite vivid expressions of the painting "The Scream."

In all the team that did the best also was the one able to create the most number of photos; otherwise the other teams were quite clever and if they had more time and inclination they would have been good contenders.

Contact Ann Lesnik by e-mail at *alesnik@ mac.com* if you would like to purchase a CD with the complete description of the game and all of the photos and scoring data.

Cheryl Lavoie portraying the enigmatic "Mona Lisa" for Team 1. This team consisted of Cheryl, Dick Sanderson, gene Haddon and Nancy Little. They were the eventual winners of the contest.

Tom Carlson's dismay at "Intel! No Way!" mimics Edvard Munch's "Scream" for Team 2

Ron Fauquet, Jay Miller, Chuck Joiner, and Phil Marchetti demonstrating "Metamorphosis."

Putting a Tiger in Your Tank! - July 2005 General Meeting

By Bob Jarecke, Pi VP for Membership

The Pi's General Meeting was held July 23 at the Annandale location of Northern Virginia Community College (NVCC), and if the number of questions about Mac OS X 10.4 were any indication, the event was a hit! Despite some initial facility set backs, including no audiovisual support, the program began on time. A goodly number of members showed up to take in the latest and greatest about Apple's latest Mac OS X iteration - Tiger. Pat Fauquet hosted the event with Dick Rucker and John Barnes assisting in separate portions of the presentation. The crowd was attentive and involved as each presenter's talk was politely interrupted with questions or comments. But, this was a good thing as this is just what our meetings should be about - "...helping users to help themselves." We closed the event out with the usual Door and Raffle Prizes and, for the second meeting in a row, Dick Sanderson won a copy of Photoshop Elements 3! What is going on?

Startup Problems

When the initial cadre of Pi volunteers arrived, the Forum area was not set up for our meeting and the air conditioning was not work-

John Barnes introduces the meeting while Pat and the NVCC technician finish the setup

ing. Nevertheless, the meeting volunteers and others pitched in to arrange the chairs, track down the NVCC support person, and start to set up an alternate venue for viewing the Keynote presentation Pat had prepared. A short while later the support person appeared and we had a projector and microphone up and running. Despite the warm temperature, I personally heard no complaints. Good recovery!

Pi President John Barnes announced the Pi's intent to help host an Internet Cafe at the Montgomery County Agricultural Fair. As he explained, the event is a great opportunity to meet potential Pi members and promote our club. John listed the dates of the fair and the hours of operation of the Internet Cafe. He solicited help from the audience to fill thirty four-hour blocks with two volunteers each. Some members had already offered to fill more than one time slot and when you read this, the results will be in.

Pat at MacWorld Boston

Before her formal presentation, Pat spoke a bit about MacWorld Boston, which had just concluded. She was enthusiastic about the opportunities this event, and others like it, offers to attendees. From book authors hocking their latest Mac publications, to offerings of tons of accessories for your Mac, iPod or iPod Shuffle, to wonderful presentations and enlightening workshops, this type of event provides a remarkable opportunity to learn more about the Mac and associated items. In Pat's case, her goal was to learn as much about Mac OS X 10.4 Tiger as she could. From the depth of, and details in, her presentation, she was off to a good start to understanding Tiger. Many members took notes furiously and we learned a lot.

About Tiger

Some of the highlights of Pat's talk included an introduction to Podcasting in iTunes which was a feature just added by the latest update. She ably demonstrated it by playing a novel podcast entitled "The One Minute Tip," a collection of short tips on how to do things on your Mac. She instructed us on upgrading and loading Tiger - a "fantastic" update. It was here that

she explained the rationale for, and gave tips on, backing up all your hard drive files and applications before you update. Her step-by-step review of Tiger installation was thorough. She mentioned a "gotcha" after installing Tiger: it might break any third party utilities and some applications. This would be a good time to check what updates are available for these broken files and then update them immediately.

Dick Rucker describes his experiences with the Migration Assistant.

Two other Pi members went on stage briefly to cover two additional aspects of Tiger. Dick Rucker told us about his experience using the Migration Assistant that comes with Tiger following a fresh install on a new hard drive. He was pleasantly surprised to see how well the Assistant fulfilled its promise to move files from another drive. After waiting a prudent period of time, Dick made the transition because, as the Pi's treasurer, he needs Tiger to operate the newest copy of our club's new bookkeeping software. The process went "swimmingly" and he had few problems afterward.

Spotlight on Spotlight

Next, John Barnes took the stage and gave us a real good idea of what Spotlight is and what it can do. Spotlight is a dynamite search tool, and it will dig to the depths of all files and documents to instantly retrieve whatever matches the text typed in the Spotlight window. This application is used within other applications; to demonstrate, John initiated a search within Apple's Mail application. Not only will Spotlight search From, Subject and To criteria but it can also find matching text from within the body of all your

emails - powerful, indeed! The real power of Spotlight in searching in the Mail app lies in its ability to create "smart mail folders" that allow searching on multiple criteria

Pat went on to demonstrate other features of Spotlight. She followed that by a brief demonstration of a few Dashboard widgets.

Our program ended with a crowd favorite - the raffle and door prize giveaways. July's big winners were Len Adler and Dick Sanderson. Len won a copy of *The Mac OS X 10.4 Pocket Guide*, while Dick walked off with the Adobe application *Photoshop Elements 3*. Next, each door prize winner came forward to select a giveaway of their choice. They were Charles Reintzel, Ross Hatch, Edward Maeder, Herb Block, John Dibella and Helen Barsalou.

Meeting End Notes

And so we concluded another successful Pi General Meeting. The crowd was a little larger than normal and that tells us we need to keep coming up with interesting topics. Also we are searching for other locations to host this meeting as the cost of the NVCC facilities are high, also we don't get nearly enough Maryland members to this location. With that in mind, October's meeting will again be held again in the Bethesda-Chevy Chase Regional Services Center. Check our web site (www.wap.org) for details on the meeting and how to get to it.

In conclusion, John thanked everyone for coming and restated our need for volunteers in many of our Pi activities. At last, we were off for lunch at the Pizza Hut. Mmmmmm, pizza - good!!

A large and attentive Audience was on hand to learn about the whys, wherefores, and "gotchas" of Mac OS X Tiger.

Washington Apple Pi Goes to the Montgomery County Fair

by Jim Little, VP for Volunteer Services

Two weeks before the fair Jim Ritz took six of the classroom machines and set them up with Mac OS 10.4.2 Tiger, several flavors of browsers and increased memory to at least 512 megabytes. All other applications were removed. This early preparation ensured that we had suitable working computers for public use.

On the day before the opening of the Fair, which was incidentally one of the hottest days of the year, John Barnes, Nancy Little and Jim Little carted these machines to the Montgomery County Fairgrounds. A joint venture of the Pi, Capital PC Users Group and Montgomery Community Television turned a portion of a a commercial exhibit hall into an Internet Cafe.

Donn Mader firing things up at the start of his shift

Four of these iMacs were set up on a long table giving access to four seated users at a time. Two machines were in reserve in case of problems. The CPCUG set up a similar row of PC machines. The public access TV crew occupied the final third of the booth. All of us shared a cable modem internet access thanks to COMCAST. With ethernet in every iMac, connection to the router/hub was simple. The dangers of life on a mixed network were demonstrated when we oc-
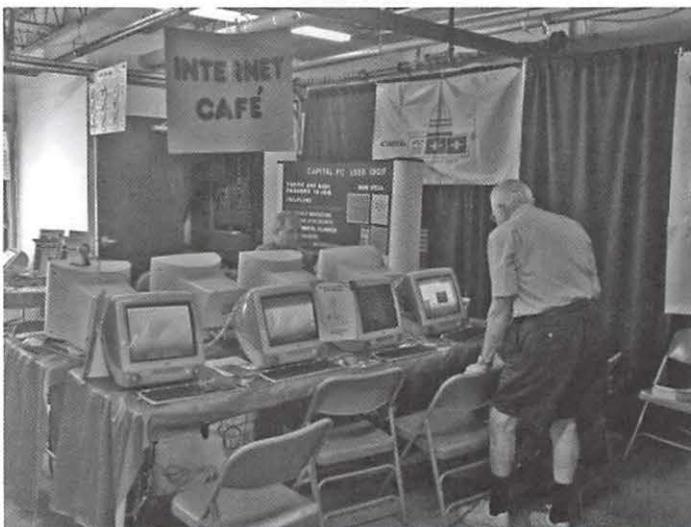

A look atthe PC side

cassional came up with bogus TCP/IP addresses from an improperly configured router over which we had no control.

The CPCUG folks also wired in a Linksys router that provided a WiFi access point, which we promtply made us of with our Airport cards. Not quite the safety of a properly setup Airport base station, but considering that there was no housing or traffic within range of the signal, it worked well.

The Pi was drawn to the Fair by the prospect of seeing tens of thousands of visitors over the course of the event, by the opportunity to work closely with the folks from the "other platform" and by the chance to meet up with the folks from our local community access TV supplier.

This final set up in an air-conditioned space in the commercial hall gave us a chance to show uninitiated fair attendees the workings of computer access to the world. And for those who

Dick Rucker learning a thing or two from some young computerphiles.

were computer literate, a chance to check mail, send messages and, yes, play some games on line. While no games were installed kids, of all ages found them at favorite web sites.

This also was nearly the end of a solicitation for help during much of July and August to fill fifty-two four hour work periods to insure that a member was always available to help users at the iMacs. Filling three shifts during the twelve open hours the building was open presented a challenge. And there were nine days that the fair was open! A combination of the faithful board members, office volunteers and response to both e-mail and personal phone messages finally filled the necessary positions.

Pi members donated more than two hundred hours of contact time to make all of this possible.

Every machine in both the WAP table and the CPCUG table shared a universal sign on screen for registering for door prizes. This insured that any machine could register for any or all prizes. This included the TV choice as well.

The iPod Shuffle Drawing

Our prize was an iShuffle that was purchased by donations from the Pi Board of Directors at their August meeting. During the fair over two hundred people signed up for further information and a chance for this door prize. Our randomizer that we use at regular meetings chose the winner. The winner is Madeline Lowery of Greenbelt,MD. She is a Windoze user, but was thrilled to receive the prize. We will soon be sending out e-mails to the 200 or so people who indicated an interest in hearing about the Pi when they registered for the drawing.

At times all seats were occupied. Lulls in demand left the seats empty. Some users needed details on the basic operation of the computer interface. A majority had no problems in the interface. Showing the new user the operation of the internet interface was generally successful. That is one reason why we had members on site. Some had never used any form of Mac machines,

others never had used any computer. Most of the younger kids were at home at the keyboard. Many had favorite game sites and the carnage on screen was amazing.

Pi members donated more than two hundred hours of contact time to make all of this possible. Not to be overlooked was the travel time and fuel burned. Admission to the fair for workers was by free tickets furnished by the fair. Any and all volunteer time is credited to the user in the Fair records. With enough hours one gets rewards.

Workers were free to use their passes to see the rest of the sights at the fair during hours outside their shifts.

Our honor roll of workers:

Leonard Adler, John Barnes, Herb Block, Robert Bort, Cynthia Cole, Jerry Eisner, Pat Fauquet, Fred Feer, Tim Holland,Robert (Bob) Jarecke, George Keitt, Bill Kingsley,Steven Lemon,Jim Little, Nancy Little, Donn Mader, Brent Malcom, James McGuinness, Edward Miller, Jay Miller, Joe Maris, Richard Nugent, Jim Ritz, Richard (Dick) Rucker, Richard (Dick) Sanderson, Paul Silverman, Eileen Wall and Madeline Yeh.

These twenty eight made it all possible.

How could you have a Fair without animals and farm machinery?

Regular People Can Be Pi Volunteers

By Thomas Carlson, VP for Publicity

It's nice that Washington Apple Pi has some experts and computer geeks who are so knowledgeable about everything Internet, everything email, everything for the servers in the back room including the voting machine, everything for TCS, and all the technical stuff. However, Apple Pi needs regular people, too – the ones who are part of the silent majority who don't feel they have special skills.

How do you recognize a regular people person? You see one in the mirror every time you brush your teeth, shave your face, apply make-up, and comb your hair (or reposition the few remaining strands) each day.

Regular people are the salt of the earth. They add the seasoning. They do have special talents. Most of the regular people have never been told they have special talents so they don't know it (yet). Each person can do something well that another person standing in line (to pay parking tickets, check out at the hardware store or cleaners, preparing to vote, queued for the toilet at the Kennedy Center during intermission) cannot do as well as you.

How regular people talents can be applied at Apple Pi

If you can follow a recipe and get an edible result after using the recipe two or three times, you have the talents for seeking perfection, attention to detail, the ability to overcome adversity, persistence, and the ability to follow relative detailed (but often not quite detailed enough) instructions.

If you like to talk to people about your experiences, this too is a special talent, especially if you can get them to talk about related relevant experiences. Some of our Apple Pi computer geeks are not good talkers; they hide behind email and TCS. Regular people like to see and hear from other regular people with similar interests. Listening to people you have encouraged to talk is a special talent.

If you can tell others how to do something – either verbal or written – you have a special skill we need. Telling how shows talents like organizing your thoughts, putting things in logical order, choosing appropriate word pictures or visual aids, and again persistence to refine the instructions so people who don't have your background will have the same success you had doing the task.

If you can seek out bargains when shopping for something you have never shopped for before or the technology has changed a bit since you last shopped (a decade or more ago), you have a special set of talents. Your special talents include doing research, finding sources, talking (or emailing) people about the product or service, establishing what the buy-won't buy decision items are, negotiating better price and documenting what you recommend and why are all special talents. Some of us don't do the documenting very well as we don't have a spouse or Board of Directors to "approve" our spending.

If you remodel or redecorate your home or office and everyone who visits is complimentary about your work, especially after turning a junk room into a multi-purpose room, you have special talents. Your talents include vision, organization, decision making (what to keep and what to throw), how to organize the clutter/materials that remain, how to have materials needed for each user/audience available in the new multi-purpose room.

If you enjoy going to new restaurants to eat or enjoy camping in state parks where you have never been before, you have special talents. One of your talents is being adventuresome and willing to try to do something new or somewhere new. You may be gregarious and like doing things as a group. These are special talents Pi can use.

There are tasks for talented regular people. You can't say you are not one of them because you saw yourself in the mirror.

Where do talented regular people do their volunteer tasks – at Apple Pi office? Not necessarily. Some tasks can be done in the luxury of your home, using your Macintosh computer, with delivery of your product by email or

stuffed/zipped email attachment. When working at home, no (non-family) Pi member can criticize you for working in your jammies or typing with only one finger (or using a blow tube) to type.

Other tasks, such as transaction processing and mailings, need to be done at the Pi office.

Working at home, you do tasks the way that works for you. Works best may mean taking an estimated two-hour task and dividing it into 15 minute segments as you can only allow 15 minutes quiet time while a child is napping.

Volunteers have considerable flexibility in how they do tasks.

How do special talents tie to volunteer tasks that Pi needs done?

• Follow a recipe – get list of new Pi members and mail information package confirming membership with membership card, recent Pi CD, and Pi service offerings to new members;

• Follow a recipe – produce duplicate copies of monthly Pi CD, putting new CD in its envelope sleeve and seal the envelope. Then prepare packages to mail to persons who have purchased CD through our web store or at a general meeting;

• Follow a recipe – process charge cards for purchases;

• Follow a recipe – update an Apple Pi web page. It's really simpler than you think. It takes a word or text processor and a browser, organization and attention to detail along with written instructions (a lucid instruction writer needs to do this part). Wouldn't it be a thrill to tell the kids or grandkids that you update the contents of "volunteer opportunities" (or another) web page at www.wap.org web site? They think you know nothing of computers. Surprise them by showing off your regular people talents;

• Talking to people – The Pi needs people to make follow-up phone calls to learn why regular people are not renewing membership. The key to this task is learning what it is that the Pi needs to improve on in addition to asking them into renewing their membership;

• Giving lucid organized instructions – explain something you have learned to do recently on your Macintosh that you thought was an

achievement. This could end up, with some assistance of a person with writing skills, as a *Journal* article;

• Reorganize/redecorate – The Pi offices need help. Especially since the Tuesday night materials room and the training room are reverting to the landlord as of October 1. The Pi offices do have a lot of space; we need to use the space more efficiently and find more multi-purpose ways to reuse the same room – at different times on the same day or on different days of week or month;

• Reorganize/redecorate – Organization and planning skills are needed to help when we give up the extra rooms. What is a logical plan for moving out of the extra space and where to put "keeper" stuff while trying to organize it into the remaining space, especially if waiting to build/buy bookcases, cabinets, something else;

• Adventuresome – Try new software and share your findings with Apple Pi members, posting findings on TCS or working with another volunteer/cohort to write a *Journal* article;

Other volunteer needs

The volunteer needs list is longer than what appears in this article. The list also changes over time.

If I volunteer for a task, do I need to resign from Apple Pi to give it up?

No. At the time you volunteer, you will work with the Vice President, Volunteers to pick a duration that is right for you. For some regular people, they can do an estimated two-hour task once a year or once every other month. Others like committee work that will accomplish their task over three or five months. Others want to apply their special talents until they excel at them and then work with a "how to" person to document the task for another volunteer to do – so after a break, our talented volunteer can do something similar but different – possibly building on newly developed skills or doing something totally foreign.

The Board of Directors, TCS Crew and Tuesday Night Clinic staff are all in need of regular people volunteers. Help us, please.

Secretary Report for FY 2004-2005

By Bob Jarecke, WAPi Secretary

This past year as the club's secretary has been a real learning experience. When I assumed this position, it was with the guidance that the duties were few and demanded little extra time: the task being to take notes at the Board of Director's (BoD) meetings and produce the minutes. Oh, gullible me!

It was obvious from the beginning there were pressing issues confronting the new 2004 board and help was needed. And so my work for the Pi expanded to include assisting with Pi activities and functions as well as helping out other VPs in their assignments. All this was "a good thing." I learned a great deal about the Pi and it's practices. I met the movers and shakers of the organization. And finally, I made some meaningful contributions.

Regarding the Secretary's duties, I tried to pick up where the preceding secretary left off, and this was easy enough considering he had left a generous paper trail. But prior to his term as secretary, BoD records were incomplete with some missing entirely. I sought out the past BoD records and attempted to reconstruct a full historical set of minutes. That task was quickly superseded by more pressing items.

A couple of events I helped out with -- Digital Edge and the December Garage Sale, enlightened me on how the Pi and its volunteers operate. Recruiting members was the main thrust of Digital Edge, while the Garage Sale focused on providing members and non-members access to all sorts of Mac related items with the ulterior motive of improving the finances of the club. In my opinion, neither event met their goals. They were not worth the "volunteer capital" expended. Following the Garage Sale, I offered this assessment to the Pi staff and suggested we reevaluate and even consider canceling the Garage Sale event entirely. Others did not agree with me and the jury is still out on the next Pi Garage Sale. [The Board decided in August 2005 to suspend the Garage Sale indefinitely due to a lack of volunteers.]

Other areas I became involved in were membership, programs and reclamation:

* The BoD, in an effort to stem a decline in membership, requested a telephone poll of recently lapsed members to learn their rationale for not renewing their membership. It also was to be an opportunity to try to persuade them to renew. The effort was titled No Member Left Behind and it was broadly outlined, but no one stepped up to do it. I offered to help and when it was obvious no one was managing it, I took it on. The results were mixed, but from it will come a new telephone-calling program which should yield better results.

* I also assisted the VP for Programs as he was new at his task and needed support and help. I volunteered to take notes of the general meeting and write an associated article for the Journal. I also elected to help by officiating at one of the general meetings in which Pi members presented various facets of the iPod and iTunes.

* Regarding my involvement in reclamation, I started doing an inventory of the storage room to identify what was there, what was worth keeping and what could be sent to salvage. This effort has ground to a halt because of a lack of full coordination with the overseers of the reclamation program.

In conclusion, from my experience, I would say the Pi Secretary position is an important position, and, while it is not linked to any one aspect of the organization, the position holder is free to jump in and assist wherever help is needed. I worked closely with the President on setting the Agenda for Board of Directors meetings and noted Action Items generated from board interaction. Resolution of these Action Items has been a specific focus and it is one effort to generate accountability. The next secretary will need to pick up where I have left off and further develop the position into one that can increasingly benefit the Pi.

[Bob also loaned the TCS Crew a Power Mac G4 Cube as host for the Pi Web site until something comparable could be acquired. The Crew greatly appreciated the loan, and the opportunity to work with such an elegant piece of equipment.]

Treasury Talk

By Dick Rucker,

Pi Treasurer & Bookkeeper

I became the Pi's Treasurer a year ago and took over the bookkeeping tasks as well when the Pi's paid bookkeeper left in May. Over this period, the most important of several changes was the transition from an antiquated accounting system to a more modern one built upon *AccountEdge, Network Edition* (AENE) from MYOB US. To find out more about this affordable accounting application, visit http://www.myob.com/us/

The new accounting system has been in use for two months, tracking the Pi's finances starting with the fiscal year that began 1 Jun 05. Learning it has been a trial-and-error process for me, assisted by MYOB's tech support, but I feel pretty comfortable with it now. We recently upgraded to the 2005 version of AENE and, fortunately, it runs well on both Mac OS X 10.3 (Panther) and 10.4 (Tiger). It provided the figures for the financial report sent to the board of directors and other Pi staff covering the first two months of the current fiscal year.

I also prepared a financial report that covers the previous fiscal year beginning 1 Jun 04 and ending 31 May 05. Both of these reports tell the same story with regard to the Pi's financial situation.

Overall membership continues to decline, but new memberships are up slightly. According to figures provided by Greg Bartolett, the volunteer who is developing an improved membership database, the Pi began that year with just under 1,400 paid members, and it ended the year with just under 1,200. Since dues from members account for most of the Pi's income, continued decline in membership could force fundamental changes in the Pi.

The Pi's tutorial program, which was reported to have earned over $18,000 three years ago and almost $10,000 two years ago, took in less than $3,000 last year. So far this year, we have had no income for lack of instructors, not lack in demand. If you'd make a good instructor, please step forward! The Pi uses both volunteer and paid instructors.

The Pi's optional telecommunication offerings to members brought in over $14,000 last year while costing just over $10,000 to provide. Since over half the costs are fixed, growth in the number of subscribers to our *Explorer* 56 kbps dial-up service would improve our profit margin significantly. We should be promoting this optional offering more aggressively than we do. This infrastructure provides many basic services to members, including office connectivity, the TCS forums and email.

The volunteers who repair sick computers collected over $9,000 in donations and salvaged parts sales; that includes their receipts from the Garage Sale last December. The Garage Sale itself made no money for the Pi. Sales of CDs, DVDs, and other merchandise brought in a little over $4,000.

Cost savings: The change last fall from a 96 page journal to a 32 page journal and to volunteer layout resulted in reducing the cost per issue from over $7,700 to less than $3,000. $2,400 of that saving came after President John Barnes volunteered to lay out the journal at no cost to the Pi. The remaining $2,300 saving came from cutting the size and weight of the journal and changing how it was printed. The total production cost for 6 issues of the Journal is thus reduced from approximately $45,000 to $18,000.

The Pi's lease on its office space at 12022 Parklawn Drive, Rockville, expires at the end of September. We have a signed agreement that lets us continue month-to-month at a reduced monthly rent of $2,000 including utilities. This is a saving of $1500 per month. In return we give up the classroom and the storage space for the reclamation project and reconfigure the rest.

We are also seeking more affordable space tohold our monthly meetings. The B-CC Services Center has proven to be useful, but we are looking for others, especially in Virginia.

These savings will help us survive as a club of users who love their Macintoshes and who want to share their experiences with others. Personally, I depend heavily on the knowledgable and helpful people who share their knowledge with other Pi members.

Club Notices

Officers and Board of Directors

President—John Barnes, *president@wap.org*
Secretary—Cynthia Cole, *secretary@wap.org*
Treasurer—Dick Rucker, *treasurer@wap.org*
VP Programs—Pat Fauquet, *vpprograms@wap.org*
VP Volunteer Services—Jim Little, *vpvolunteers@wap.org*
VP Publicity—Thomas Carlson, *vppublicity@wap.org*
VP Membership—Bob Jarecke, *vpmembership@wap.org*

Directors

William (Bill) Bailey, *wbailey3@cox.net*
Craig Contardi, *craig.contardi@wap.org*
Bill Diffley, *bdiff@mac.com*
Nancy Little, *nancy.little@wap.org*
Gabriel Roth, *roths@earthlink.net*
Stefan Shrier, *shrier@acm.org*
2 Vacant seats (terms ending 2008)

Volunteers

Telecommunications Committee Chair — Paul Schlosser — pauls@wap.org
Webmaster – Lawrence Charters – webmaster@wap.org
Mac Editor, Review Editor – Lawrence Charters– maceditor@wap.org
Tuesday Night Clinic – Jim Ritz — jim.ritz@wap.org
Calendar Editor – David Harris — david.harris@wap.org

Contacting Washington Apple Pi

Contact: Washington Apple Pi, Ltd., 12022 Parklawn Drive, Rockville, MD 20852. Business Office: (301) 984-0300 [Answering machine]
Web address: www.wap.org
e-mail address: office@wap.org

Office hours: You should not expect to find anyone at the office except as otherwise noted. Please check the listings for "Volunteer Days" at calendar.wap.org. These sessions are scheduled for several times per month to make best use of a limited supply of volunteer ofice workers.

Clinic Night - Tues. 7-9 pm

Please leave messages on the answering machine at 301-984-0300. This is an automated system that allows our volunteers to quickly respond to your needs without having to actually sit in the office.

We will try to to put an appropriate message on the answering machine if we have to cancel an activity.

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Tutorials

Dreamweaver - 2 session series

Instructor: Sheri German

Schedule - by Arrangement between Instructor and Students

Cost - $50 per session for Pi members, $100 for others.

Prerequisite: Intermediate Macintosh skills.

Enrollment - Send e-mail to *sheri.german@verizon.net*

Session 1 - Long considered the industry standard for visual web page editors, Dreamweaver is a deep, feature-packed program. This class will introduce students to the interface, teach them to define and organize a site, and guide them through the creation of a table-based layout that uses Cascading Style Sheets for all design and presentational elements.

Session 2- This second level course will take students deeper into the productivity features of Dreamweaver, such as templates, libraries, behaviors, assets, snippets, and extensions. We will continue work on our CSS table-based layouts and turn them into templates that will form the basis of a complete site.

Mac OS X Driving School

Prerequities: Pi membership, demonstrable intermediate to advanced Mac OS X skills.

Cost: To be Determined.

Schedule: To be arranged with students

Instructors: John Barnes, Bob Jarecke, Nancy Little

This is an experimental course intended to help people who are intermediate to proficient in the Mac skills gain full mastery over the Mac OS X user interface and applications that run under it.

Learn how to stay on the track and avoid crashing and burning as you speed through cyberspace. The course seeks to provide users with rools that they can use to expand their knowledge rather than recipes for repetitive tasks.

Most users need to improve their visual awareness and awaken their curiosity if they are to feel comfortable in the driver's seat. Good reflexes are also a must.

This course seeks to foster self-reliance through fundamental understanding of the file system, customization of the GUI, use of help resources, backup techniques. structured approaches to troubleshooting, and more.

If you are interested send an e-mail to *front-desk@wap.org* to be placed on the contact list. The course will begin when enough members have expressed interest.

Special Interest Groups

Be sure to check the WAP calendar at calendar.wap.org for meeting locations, times, and dates.

AOL - John Barnes (301) 652-0667 JDBarnes@aol.com

Apple IIGS - Lorin Evans lorin.evans@wap.org

Graphic Arts - www.wap.org/gasig

iLife - Hal Cauthen (703) 323-8934 chrgrhorse@aol.com

Mac Programmers - Aaron Burghart

Power Users - www.wap.org/power

Retired Persons - www.wap.org/retired

Apple /// - David Ottalini (301) 681-6136, dave.ottalini@wap.org

SIGs Needing Fresh Spark Plugs

AOL, Educators, Excel, Genealogy, QuickTime, Music, Teen, Retired Persons

If you have a special interest that would seem to warrant formation of a new SIG please send E-mail to *president@wap.org*.

WASHINGTON APPLE PI

Users Helping Users to *Help Themselves*

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WAPi Office
12022 Parklawn Drive
Rockville, MD 20852
(301) 984-0300 www.wap.org

New Membership Application/ Renewal Form

❏ *New Member or Family Membership*

❏ *Renewal (_____ WAPi #)*

*Name _____ Company _____

*Address _____

*City _____ *State _____ *Zip _____

*Home phone _____ Cell/other phone_____

*Preferred Email _____ Occupation_____

*Required for eMail

Please let us know what you use.

❏ G5   ❏ *Powerbook/iBook*
❏ G4/G3   ❏ _____
❏ *iMac/eMac*
❏ *PowerMac/Classic Mac*
❏ *Apple (   )*
❏ *DSL or Cable Modem*
❏ *Home Network*
❏ *OS X v. (   )* ❏ *OS 9* ❏ *OS 8*

WAPi has Special Interest Groups (SIGs), please check if you'd like to join, know more about or start a new one:

❏ *iLife (iTunes, iMovie, iDVD, iPhoto and GarageBand)*
❏ *Programming*
❏ *Retired*
❏ *Teen*
❏ *Graphic Arts*
❏ *Your Choice*
❏ _____

The Pi needs my help, I volunteer to:
❏ *Help at Monthly Meetings*
❏ *Work in the office or on the Journal*
❏ *Help Organize our Open House activity*
❏ *Teach (some paid positions)*
❏ *Telephone Committee*
❏ *Hand out Brochures*
  Thank you, we will call you.

FEES

Basic Membership and/or Renewal – includes 6 issues of The Journal, one email account and access to the TCS*. New members receive a one time kit which includes the latest Journal and CD, a member # and user ID for email and TCS* access. *(Please note if you live outside the US, contact us for postage charge to your location at office@wap.org)* $49 $49

TCS Explorer Dial Up Internet Service *(per year)* $96 $_____
Additional email accounts ea. Use reverse to indicate accounts $20 $_____
Student rate *(must fax or enclose copy of current Student ID)* $42 $_____
Current Pi Fillings CD $10 $_____
The Washington Apple Pi greatfully accepts your kind donation. $ $_____
                                                TOTAL ENCLOSED $_____

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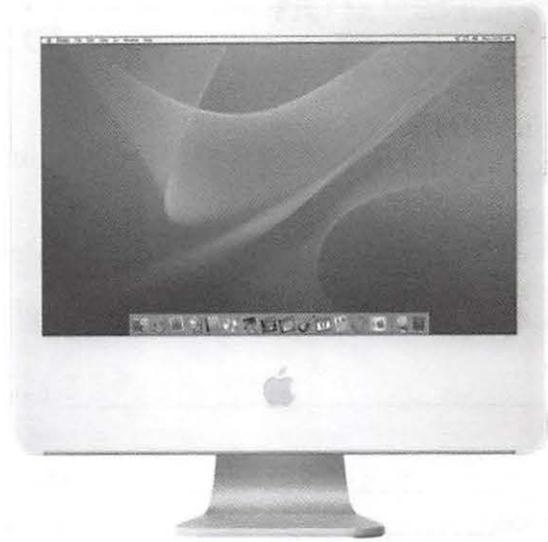
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E-mail to *office@wap.org* for rates and regulations. Pi members may place ads up to 25 words in length free of charge.

Products

- **Mathematical Software** - MLAB provides advanced curve fitting, numerical solutions to non-linear ordinary differential equations, linear algebra, graphics,statistics, and more, from a simple, scriptable command line interface. Further details from www.civilized.com.

Services

- **Mac Hardware, software, networks & training.** Apple factory trained & A+ Certified. Marchetti Associates LLC. 301-404-2210 or *phil@marchettiassociates.com*.

- **Macintosh House Calls - Upgrades, Repairs, Tutoring.** Contact John Barnes at 301-652-0667 or *jdbscience@mac.com*. Discount for Pi members.

-**Law Offices of Richard S. Sternberg** http://www.MetroWashingtonLaw.com/ (202) 530-0100

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Many businesses and trade associations have outsourced their email operation to HIS for convenience, cost savings, support, reliability, and for spam and virus filtering. Contact HIS at 301-255-0500, option 1, or sales@his.com, for more information.

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