January / February 2000

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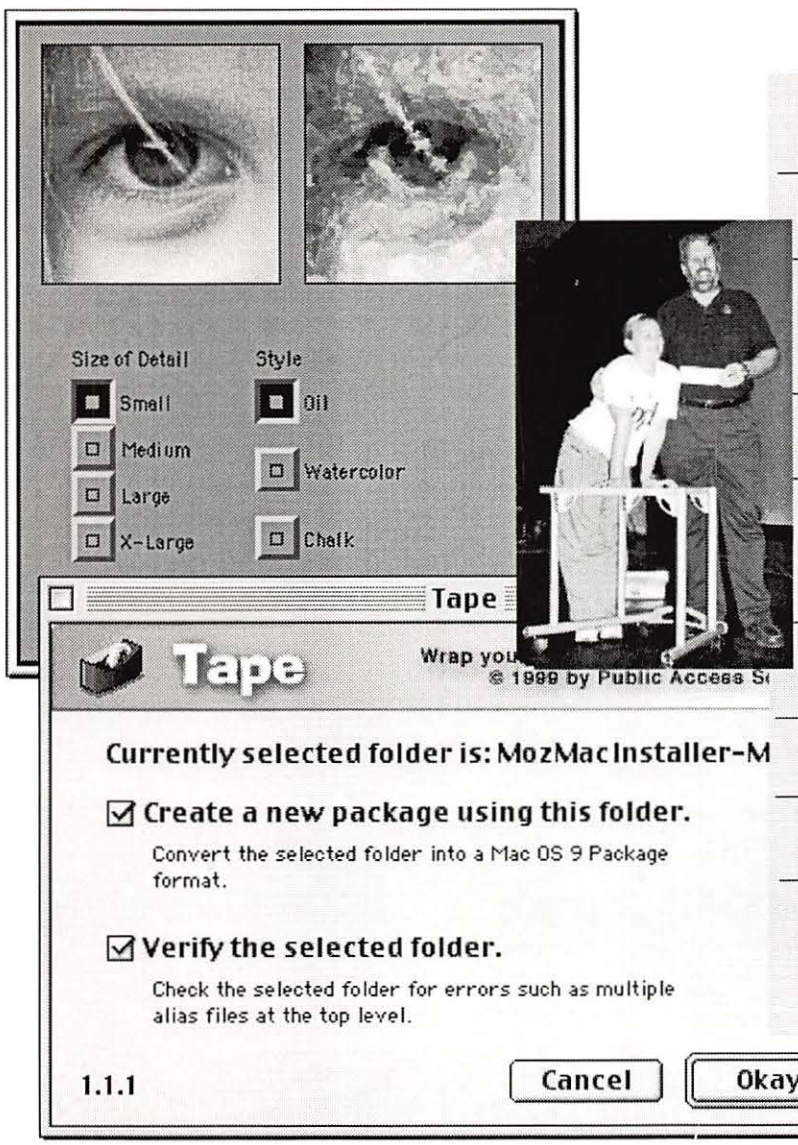
The Journal of Washington Apple Pi, Ltd.

WASHINGTON APPLE PI

Volume 22, Number 1



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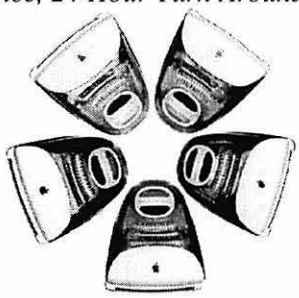

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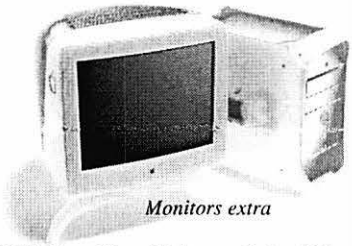

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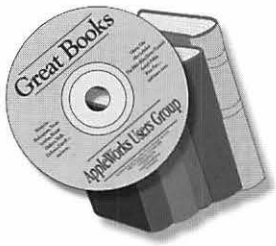

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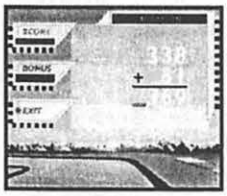

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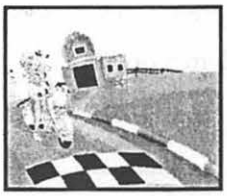

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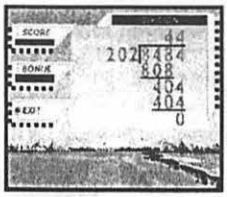

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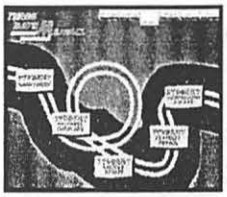

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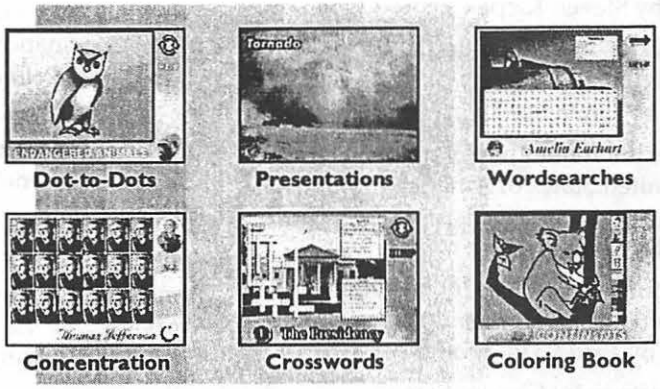

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Washington Apple Pi

This issue of the Washington Apple Pi Journal was created on a PowerMac, with proofing and final output on an HP LaserJet 5000 N.

The page layout program used was PageMaker 6.5 the word processing program was Microsoft Word 5.1; the principal typeface is Palatino (10/12) for the articles; and Avant Garde Demi for headlines, subheads, and emphasis. Charlemagne Bold for drop caps.

Cover Design: The WAP Journal cover design was created by Ann Aiken in collaboration with Nancy Seferian. The Capital artwork was illustrated by Carol O'Connor for One Mile Up, which donated it for use on our cover.

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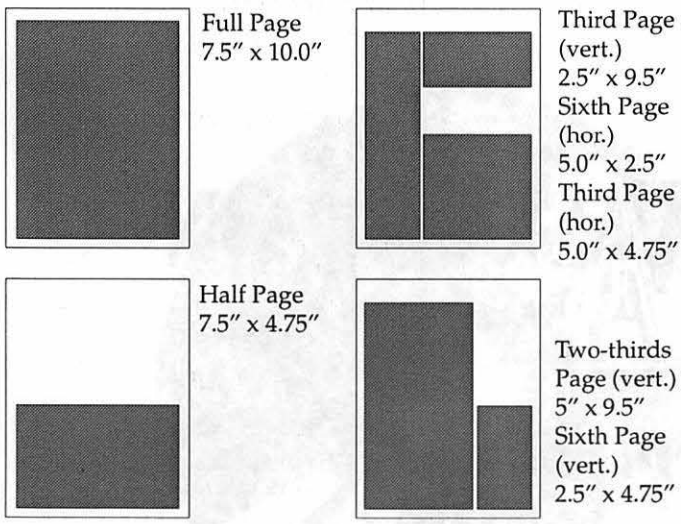

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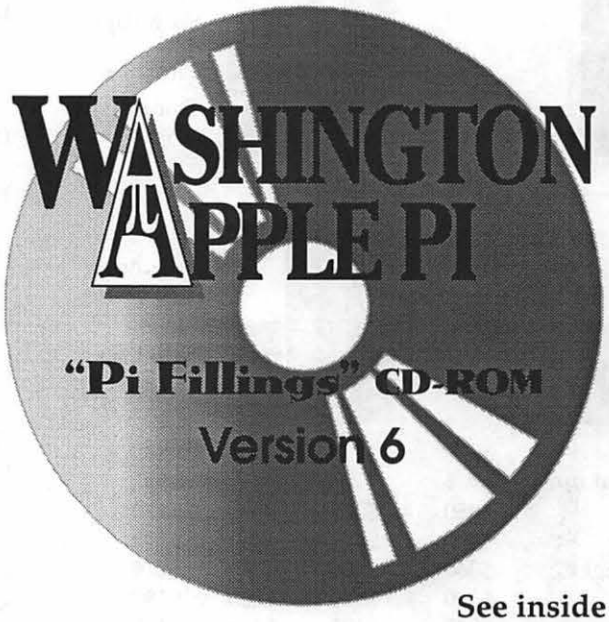

See inside back cover for more details

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Beyond the Pail

Moo Juice

THE LAST TIME you read this column, it was about our new inability to supply you with Macintosh OS updates. As you recall, Apple withdrew permission from us, and all other user groups, to redistribute directly to you the improvements to Mac OS system software. Interestingly, that column generated more mail to the editor than anything I have written in a long, long time. Most complained that I did not give them a name and address of some curmudgeon at Apple to whom they could send their yummy, rutty tutty fruity thoughts. I believed then and now that, even if such a person could be found, it would be a mistake to inundate the poor creature with assorted grousing and grumbling. There are, after all, just so many tanks available to guard important stuff.

Still, I wondered where the story was going. Well, wonder no more. Apple thinks their software updates are another untapped cash cow. So, they are now selling individual and bundled pieces for nifty change (plus shipping and handling). Think I am kidding? Point your browser to <http://til.info.apple.com/techinfo.nsf/artnum/n60006> and take a look. Our CDs were produced by volunteers; it took hours to develop each one, plus more of their time to process each sale. Do you now what Apple's overhead must be to generate those CD sets? Gee, think I can get them to let us redistribute the stuff directly to you?

And so the Pi plows new territory with its latest, Apple compliant, CD which is now available. After removing the Mac OS system updates, we invested serious time in crafting a new mix for Pi Fillings. We found ourselves with room for new families of Apple updates, new utilities, lots of drivers and a new diversion or two. We hope you will give it a try and let us know how our new mix feels to you.

"Apple undercut our local dealers in the 80s when it refused to allow them to sell the lower-cost Performa Mac computers found in national chains."

Anatomy of a Dying Breed

I'd like to switch subjects and try a short business refresher course. Do you remember when we were taught that there are four basic functions you can perform: addition, subtraction, multiplication, and division. The trick was to know which to do first, second, etcetera. Mathematicians helped out by giving us parenthesis to separate groups of items so as to make the process clearer.

For example, try this. Let's say you have the numbers 2, 3, 5, and 6 Given a problem like 2+3 x 6 - 5, you could come up with a very different answer if you added 2 to 3 (5), then multiplied that by 6 (30) and then subtracted the number 5 (25), than if you

added 2 to 3 (5), then subtracted 6 - 5 (1), and then multiplied the two results (7 and 1) for a total of 7.

The reason for multiple answers "only one of which is correct" is called order of operation. In math, like in life, things come together, interact, result in consequences when added to other events -- you get the picture. If you don't take into account order of operation, you will get an "answer", but don't count on it. If you don't understand order of operation, you will get an outcome, but you will be as baffled by what is in front of you as you were before it all began. I believe an order of operation exercise is being undertaken by Apple Computer, Inc. as it remodels its business practices. I believe what they are doing directly affects each one of us, and I, for one, need help understanding how to think through what is swirling around me. I am not thrilled by the good news that is being delivered.

My problem has to do with people and events, instead of numbers. It has to do with what *we* care about, or don't, and whether it will be too late when you and I finally figure out what has occurred and try to stick an oar in the water. There are several different movements that are coalescing around business decisions being made within Apple that may radically change our relationship with the folks who make and support our computing habit. You may not have thought about all this; don't believe it is a problem; don't care; or, don't believe you have any say in this. Well, for certain, you can't say it was not presented to you.

But, first a personal disclaimer: I come from the school that says there is a social costs to corporate decisions, and that you and I are way too often not part of the equation. Whether it be gas tanks in Pintos, automobile crash parts, or plastic soda bottles, you and I have to live with the downstream impact of their economic tinkering. The same holds for truth in labeling; when they tell us we are getting more retail choices, and we see them evaporating in front of our eyes, do you have an urge to send in more subscriptions orders to Publisher's Clearing House in hopes of improving your chances of winning?

One last thing. This is not a nostalgia piece. I am not pining for a return to the good old days. I do want all the players in this story to land on their feet; not for them to land on our feet or vice versa. All right, let's take a look at some retailing realities for a Mac store:

"...social costs to corporate decisions.... Whether it be gas tanks in Pintos, automobile crash parts, or plastic soda bottles, you and I have to live with the downstream impact of their economic tinkering."

Item 1: the network of independent retail stores selling Apple Computer equipment is a shell of its former self. Apple undercut our local dealers in the 80s when it refused to allow them to sell the lower-cost Performa Mac computers found in national chains. It further complicated their lives by the discount formula for them to qualify for the lower prices Apple charged national chains. The nationals never supported the Mac the way locals retailers did; people bought on the cheap, then came to their local store for assistance. Apple's Marketing Department blew off the complaints; dealers either walked or quit. The retail market for the Macintosh has never been the same. The result, cheaper Macs sold on the web, than can be had from the remaining local dealers, which results in a continuation of the downward spiral.

Item 2: the markup on computers and peripherals is razor thin. An independent typically has a spread of $35 - $50 between the cost of the merchandise and what you pay for it. You try running a business on that margin. For example, a Sears salesperson gets a 1% commission on your purchase of a Macintosh. And, you wonder why it is hard to get good help? An independent dealer typically makes up for that thin margin by selling software and services (repairs, installations, house calls, etc.). Nationals do it by selling lots of those other machines. Unsaid is that Apple is 'encouraging' its retailers to change from relying on retail sales to one where service, training and network installations and support provide the dollars to keep the business alive.

Decisions made by Apple restrict the ability of independent dealers to buy at the price being charged to national chains, even when they band together and purchase through a cooperative. Thus, an independent will find that it can purchase an iBook on sale at Sears (like you or I) for less than he can buy them wholesale. When was the last time Sears or Best Buy updated your OS? And, we are better off because?

Item 3: Apple once offered what was called price protection to a retail shop. If Apple dropped the retail price on a product, the dealer who had unopened stock could either return the higher priced items for a credit, or receive a credit on future purchases. The same was true for discontinued merchandise. An item that was acquired by a store within 30 days of it being discontinued, and still unopened, could be returned for credit. All that is history, and has been so for a while. Thus, when the new iMac was introduced at $999.00 in

(continued on page 87)

Washington Apple Pi

Board of Directors Notes
October 13, 1999 Meeting

[Note: these are not the full minutes of the Board of Directors; those may be found on the Washington Apple Pi bulletin board, the TCS, in File Transfer Area 5.]

Directors Present: Don Essick, Lorin Evans, Lou Dunham, John Barnes, Dale Smith, Pat Fauquet, Steve Kiepe, Dave Ottalini, David Harris, Dave Weikert, Brian Mason

Directors Absent: Lawrence Charters, Mary Keene

Members Present: Tom Witte, Neil Laubenthal

AFTER SOME preliminary discussion; the meeting was called to order at 7:37PM.

Lorin Evans discussed the next edition of Pi Fillings; specifically what did the group desire to use to fill the 80 or so megs of free space now that Mac OS updates were no longer authorized to be included on the CD. After some discussion, Dale Smith had a list of recommended items including: any other updates required for Mac OS9 compatibilities, additional drivers, large demo applications (WordPerfect, Nisus were mentioned), TIL files from Apple, and Copernicus 99 (a Sherlock clone with some nice features).

There was a brief discussion about writing a letter to Apple discussing their apparent short sightedness in taking OS update distribution rights away from user groups. No action was taken.

The board considered a letter regarding Explorer charges from a member and passed a resolution 8-2 (2 abstentions) authorizing the President to take action as discussed at the meeting.

David Harris asked what the requirements for a Slice remaining a Slice are; based on an email he received from the President of the Annapolis Slice. Lorin Evans will provide the information from the original charter to David Harris for further discussion with the Annapolis Slice.

After a motion by Dale Smith (seconded by Lou Dunham) approved unanimously, the meeting adjourned at 8:51PM. ■

Washington Apple Pi

Board of Directors Notes
November 10, 1999 Meeting

[Note: the Board had not approved the minutes of this meeting as of this writing. Full minutes of the Board meetings may be found on the Washington Apple Pi bulletin board, the TCS, in File Transfer Area 5.]

Directors Present: Lawrence Charters, Mary Keene, Dale Smith, John Barnes, Dave Ottalini, David Harris, Brian Mason, Dave Weikert, Lou Dunham, Don Essick, Lorin Evans

Directors Absent: Pat Fauquet, Steve Kiepe

Members Present: Tom Witte

THE MEETING came to order at 7:34 p.m. The minutes of the previous meeting were approved as amended.

Old Business

Discussion continued on the "Terms and Conditions" of the TCS Explorer Internet service. Some directors seem to feel that these terms need to be spelled out in full, as with contracts with commercial ISP services. Others point out that Washington Apple Pi is a club, that Explorer Service is "staffed" by volunteers, and it is priced far less than commercial services, so the terms should reflect the cooperative, consensus nature of a club, rather than a contract.

The nature and character of Pi Slices was discussed. The Board has stated that Washington Apple Slices are "wholly owned" by the Pi, and subject to control by the Board. But what, exactly, does this mean, especially in light of several developments over the past year? David Harris and Lorin Evans will examine the Slice charters and report their findings.

The forthcoming "Pi Fillings: Volume 6" was discussed. While there has been much talk about "the hole" left by Apple's refusal to license Mac

OS updates for distribution by user groups, other issues have been ignored. In the case of the Pi, the "Pi Fillings" CD-ROMs are also used as part of the "New Member" kits, and the lack of a replacement CD-ROM has created problems. The office has been sending out slips of paper saying the new CD-ROM will be sent to new members in the future (an extra mailing expense), so creating the new CD-ROM is a high priority.

New Business

An extended discussion centered on a desire to "interact" with members at the Garage Sale in December. John Barnes pointed out that, at most Pi functions, members are "talked at," and they are neither requested nor required to do much beyond show up. John would like to encourage far more members to actively participate in Pi activities.

A reprint from "Tropical Mac," the newsletter of the Gold Coast Macintosh User Group, highlighted one way to more participation: Gold Coast Mac changed their by-laws to require members to perform at least one act of service per year. Qualifying acts of service include fund raising assistance, setup and teardown assistance, SIG leadership, software demos and submitting a newsletter article.

TCS Easy Mail was discussed. Or, rather, the lack of materials on TCS Easy Mail was discussed. The office is unhappy with people calling and asking about the service, especially when there are no materials to provide the callers.

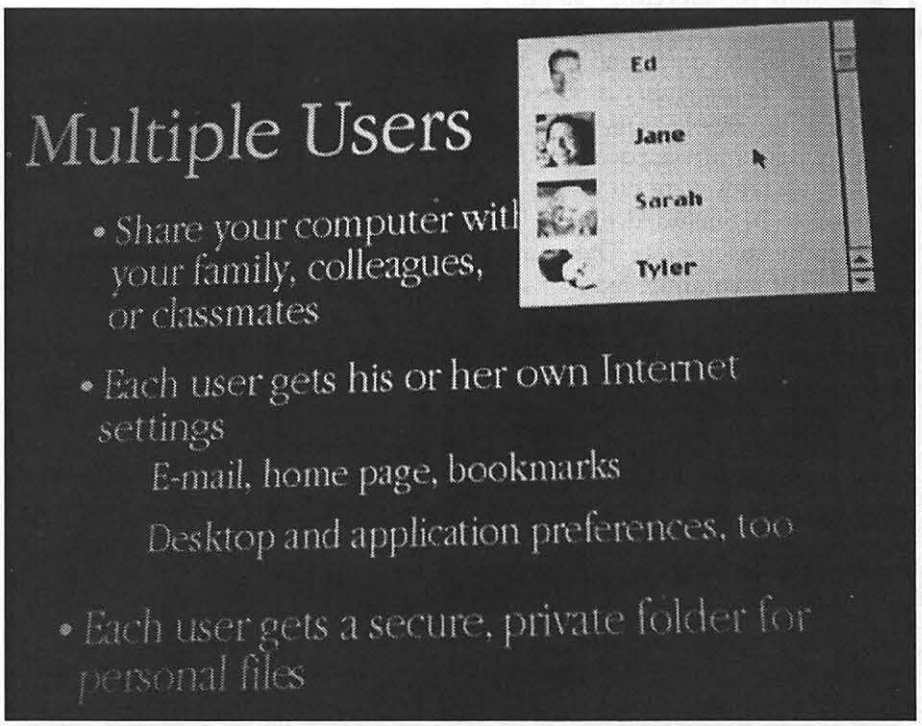
Tom Witte moved, with a second by Dale Smith, that the meeting be adjourned. After the usual out of order discussions, the motion passed at 8:19 p.m. ■

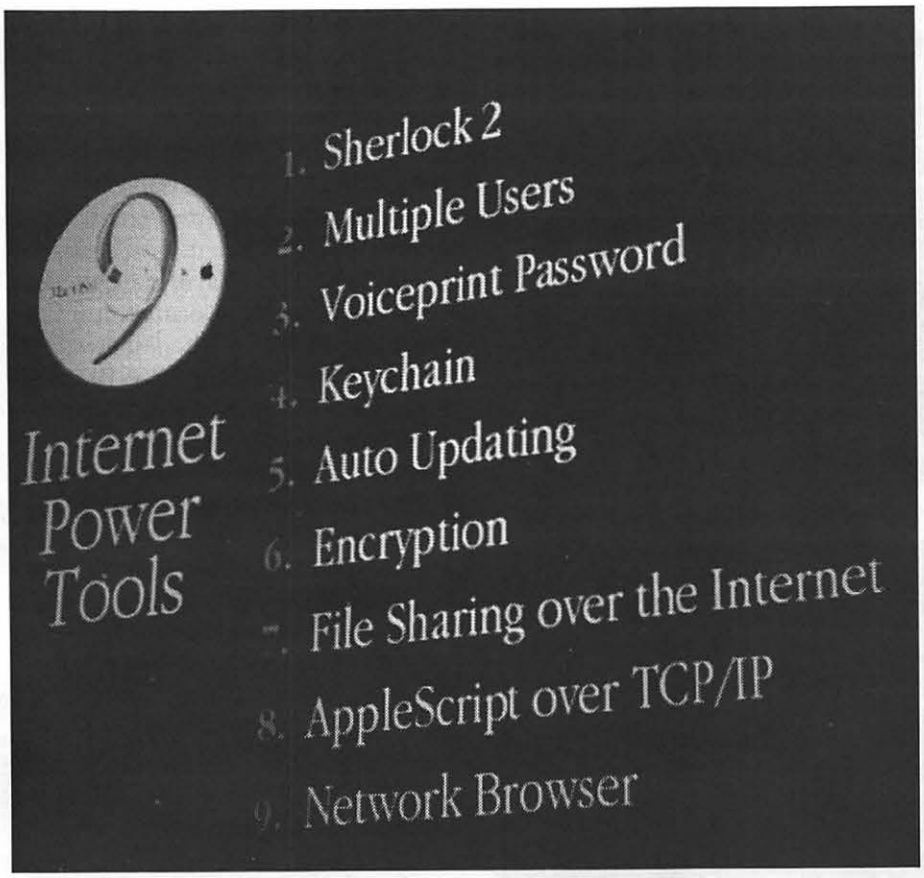
October General Meeting Notes

By Steven Kiepe, Vice Presidents for Macintosh Programs

A LARGE WAP crowd gathered at Northern Virginia Community College on the very morning of Apple's scheduled release of long-awaited Mac OS 9. Although a few lucky souls had already managed to get their hands on this latest operating system upgrade (some vendors had made it available at midnight), most of the crowd wanted an in-depth look at the enhanced system before making the jump. After Lawrence Charters finished dazzling the crowd with enlightened answers during the traditional question and answer period (or was it baffling with BS?), Apple Development Executive Barrett Thompson took the stage.

With trusty iMac and PowerBook in hand, Barrett provided an update on Apple's corporate strategy, current product lines and a brief map to the future. Although most folks in the audience had already seen an iMac, very few people had seen or heard of the new iMac DV edition (for Digital Video). Barrett reviewed this bargain priced home and small office digital video powerhouse including the top-of-the line Special Edition iMac DV, encased in a graphite colored shell. The DV series iMacs, with their 400 MHz G3 processors, FireWire ports, extra VGA port and more include





many of the features of comparable desktop video solutions costing several times as much.

Apple didn't stop with a hardware solution to desktop video. Instead, Apple's new *iMovie* application, available only as bundled software with the iMac DV, truly brings the words "plug and play" to desktop video creation. Barrett connected a standard FireWire equipped digital video camera to the iMac and then, completely within *iMovie's* intuitive interface, operated the camera, identified the segments of a video he was interested in, added transition effects and sound tracks, and output a complete movie back to the video camera. The entire process was completed without touching any button other than "power" on the camera. Apparently, he caused a lot of folks to get bitten by the home video bug as evidenced at November's iMac DV feeding frenzy at a local computer retailer!

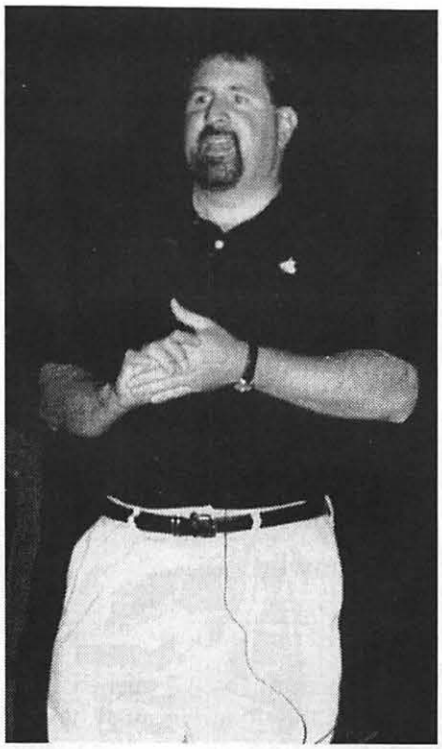
Barrett continued his presentation highlighting the release of the new G4 series Macs and the Apple's highly successful iBook introduction. Then it was time for the featured segment, Apple's new Mac OS 9. With over 50 new features, Barrett had to keep a fairly fast pace to cover them all in the time allotted. The audience was captivated from the beginning of "my voice is my password" log-on through the highly customizable individual settings for computers with multiple users, and onto the amazing Sherlock 2. With demonstration of new features like keychains (never worry about forgetting passwords to websites again), enhanced speakable item functionality, operating system auto-updating via the Internet and cross-Internet file sharing, this is a major rebuild of the Mac's operating system. Barrett took questions from

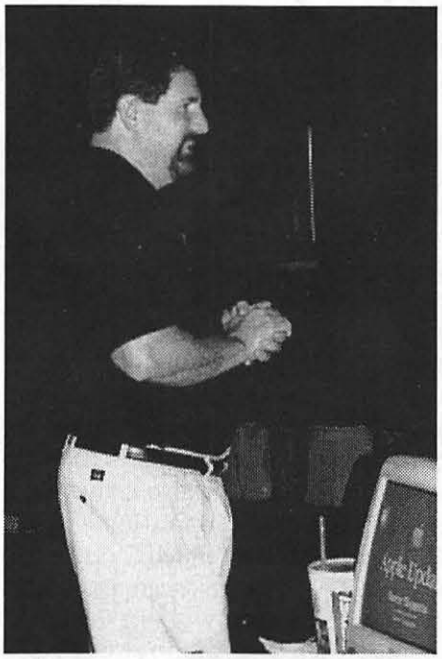
> "Although most folks in the audience had already seen an iMac, very few people had seen or heard of the new iMac DV edition (for Digital Video). Barrett reviewed this bargain priced home and small office digital video powerhouse..."

the audience until NOVA pushed the group out the door. He must have been effective because MacUpgrades, strategically stationed outside the auditorium door, managed to pick up a fair number of buyers of the new operating system!

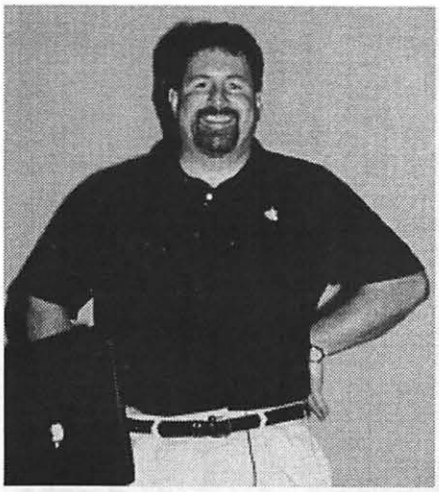
Throughout the meeting, Anthro Corporation's iCart was on prominent display. The iCart is a tubular steel framed, laminate shelved portable desk that is a must have accessory for new iMac Owners. Built of heavy gage steel and solid top construction strong enough to hold an adult or two, it comes in a multitude of colors to match the iMac's flavor selections. The iCart also comes in two different configurations; tall with an extended "hutch" top that is perfect for printers, scanners and the like; and short, without the additional extension. Anthro also offers a line of specialized accessory shelf, document and cup holder options.

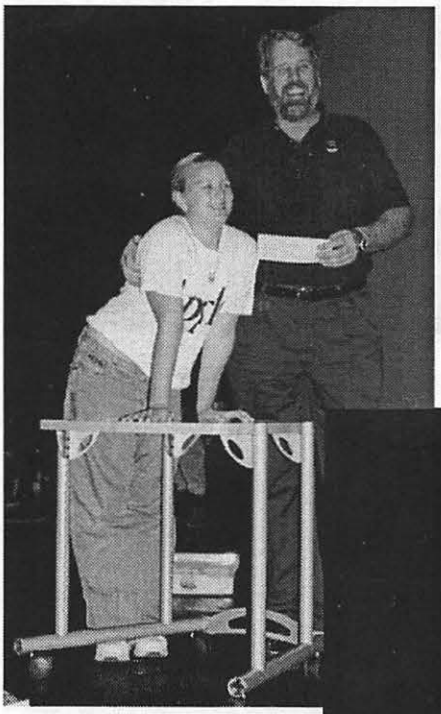
The iCart had been on display in the WAP tutorial room for the last two months. Anthro offers special user group pricing, a savings of 25% for our members. As a special gesture, Anthro donated the grand prize of the morning's raffle drawing, the

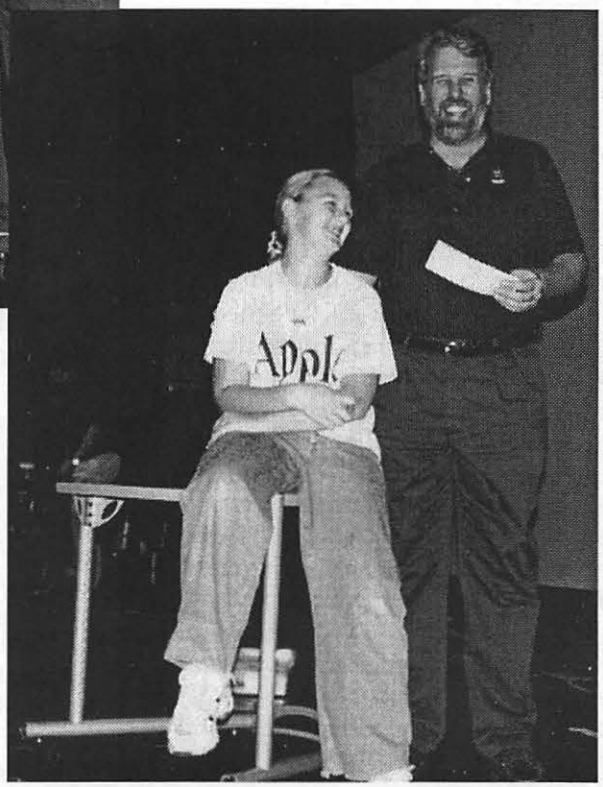




silver metallic iCart that had been on display. If I was more paranoid (ha!), I'd almost be suspicious of what happened next but here's the inside scoop. Dana Essick, the daughter of our former VP for Programs, literally put a stake in the ground that she was going to get the iCart for her birthday which just happened to be the same day as the general meeting. As name after name was drawn from the box for the other raffle items, she almost seemed to be computing the odds of her name being selected from the remaining pile. Finally, as the grand prize slip was drawn, Don Essick's name was announced. Needless to say, Dana got her birthday wish and Don went home a happy man. Happy birthday Dana and thank you Anthro!







Our other raffle winners included: Book winners - Bob Whitesel, *Dreamweaver*; Bob Vandegrift, *Fireworks*; Colleen O'Brien, *Quicktime and MoviePlayer Pro*; Caroline Quandt, *GoLive Cyberstudio*; Norma Kaufman, *Illustrator 7 WOW*; Clifton Bailey, *Mac Secrets 4*; Paul Simon, *WWW Color Pages Simplified*; John Quill, *Illustrator 7*; Harvey Bresler, *3D Studio Max*; Susan Ware, *Teamwork Notebook*; Robert Langer, *JavaScript*; Gabe Croft, *Hotdog Pro*; Bennett Kobb, *GoLive Cyberstudio*; and Curtis Parks, *The Hill on the Net*.

Tom Witte also had an opportunity to work his throwing arm passing tee-shirts to Dick Roblin, Bob Wilbur and Bill Durham. Finally, Lawrence Charters brought home 64MB of RAM donated by one of our generous WAP members. Congratulations to all of our winners. ■

November General Meeting Notes

By Steven Kiepe, Vice Presidents for Macintosh Programs

WHEN THINGS GO bad, all past successes disappear in a single moment (one screw-up wipes out 10 atta-boys). November's meeting certainly fell into that category. Our principle presenter, Adobe, did not make the meeting due to a scheduling mix-up. At the same time, your VP for Programs also failed to make an appearance. A cynic might suspect that I failed to attend because I knew that I would be burned at the stake for Adobe's absence but it was an unrelated occurrence, caused by a severe shortfall in paying attention. My apologies to all those who gave up their morning anticipating a program that failed to materialize.

A few folks threw themselves onto the sacrificial altar and tried to make a silk purse from this sow's ear. Lawrence Charters extended his question and answer period with some backup by Tom Witte while our Office Manager tried to run down both the Adobe guest speaker and yours truly. After that, Mary Keene conducted a mini-tutorial on graphics and crafts for the holiday season. Mary explained how to combine the techniques possible in computer drawing and paint programs with specialized papers and custom framing as an ideal way to create home made crafts, gift cards, packaging, T-shirt appliques and the like.

To try to gain some credibility back, we've been working hard on getting a quality program set up for next year. Our upcoming schedule looks like this:

December 11, 1999 - closed meeting, computer show and sale

January 22, 2000 - Corel will present their new programs *Print House* and *Print Office* as well as an update on their other Mac Programs. Additionally, Darek Mihoka, President, founder and lead wizard of Emulator Inc will present *Gemulator*, a combination hardware and software solution that lets you emulate a Macintosh on an Intel based computer (both presenters are confirmed).

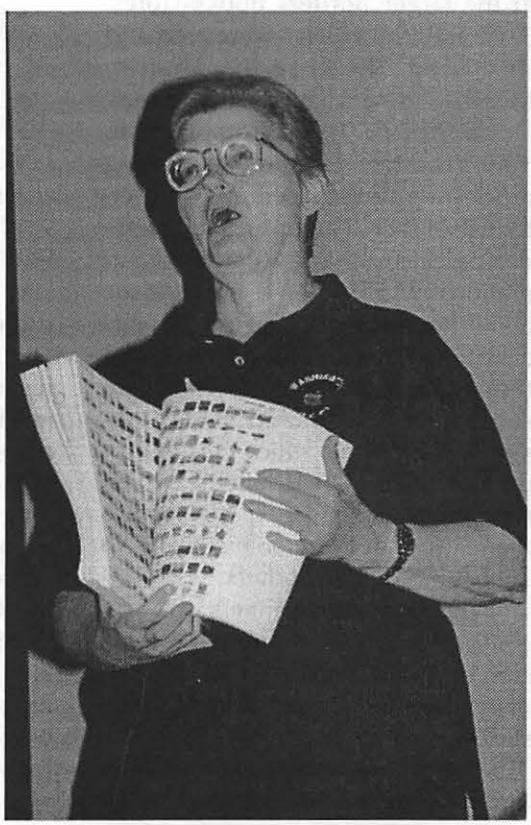
February 26, 2000 – Terry Davis of Asante is going to demonstrate a series of home networking solutions (confirmed) and 3dfx has indicated their interest in showing their new video graphics display cards for the Macintosh (tentative).

March 25, 2000 - Nova Print Explosion and Microsoft Internet Explorer/Outlook Express 5.0 (both confirmed)

I'll try to reschedule Adobe to join us in April and there are numerous other folks in the wings lining up for the rest of the spring and summer. We will also be scheduling a QuickTime festival in the spring although the date for that meeting is as yet undetermined.

A few good things did come out of this meeting. Adobe had sent ahead prizes for our drawing. Several lucky winners went home with extraordinary parting gifts. Michael Croft acquired a copy of *Page Mill 3.0*. Sheila and Richard Allen picked up *Image Styler* and Georgia Sadler was the lucky winner *of Photo Deluxe*. Ed Sutter is the happy owner of *Acrobat 4.0* and Paul Hertel picked up the grand prize, *Photoshop 5.5*. If you consider the suggested retail price of these prizes, these were exceptional prizes. Of course, when Adobe does make an appearance, there may yet be more prizes given away and that means more happy winners.

One last reminder about our big December garage sale —fill your holiday computer shopping needs with us or bring in your Mac for a tune up! Have a most joyous holiday season and we'll see you in January. ■



Minutes, Genealog SIG October Meeting

THE MEETING convened at ten o'clock on the second Tuesday of October, in the WAP office. With six members present, there were two new members. In place of an invited speaker, the meeting focussed on general discussions of genealogical experiences—a show and tell.

Karen Kyte brought in and showed us several magazines, including 'Heritage Quest,' 'Family Chronicles' which is a Canadian bimonthly magazine (phone 1-888-326-3496), and a half dozen copies of 'Family History Monthly,' a British magazine. All of these are available at the larger Borders Books stores. Several of the articles were read and discussed. In 'Family History Monthly' there is a regular column by David Tippey, 'Using Computers in Your Research.' His more interesting articles were on scanners, making better use of search engines, and the genealogical program 'Reunion/Generations.' Mr. Tippy was enthusiastic about Reunion, pointing out that it is easy to use, the layouts are clear, and the editable charts and the reports are superb. He also praised the PC version, Generations, which Leister Productions sold to Sierra Home, which now produces it. Generations copies the features of Reunion but seems to lag behind by one update.

The column on scanners was very comprehensive and caused a discussion on scanner sizes, OCRs, the use of hand scanners, and scanning photo slides.

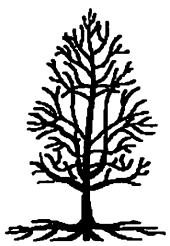
CJ Dwinell contributed a Reunion tip. The program will not accept as an entry a person unrelated to the family being worked on. Enter that person as a child of someone in the file. Once the child is accepted into the data base, the 'father' can be unlinked. The person will now have a file in the family.

Dwinell found a person at a wedding reception whose home was the Dwinell House,' built in 1865 in East Calais, Vermont.

Dwinell contributed this advice: When visiting Archives, give the attendant your whole list of books or other sources that you need to see. Although you can only see four items in any one day, when you return the next day the attendant will have the next four items waiting for you.

One way to get started in genealogy is to hire briefly a genealogist to help give you a feel for the scope of your project. It is also helpful to start in a small town that is a county seat. The clerks should be less busy, they might be interested, and they can help you decipher the county records.

Minutes, Genealogy SIG November Meeting



THE MEETING convened at ten o'clock on 9 Nov. in the WAP office, with six members present.

There will be no meeting in December. The next meeting will be at the same time and place, on 12 January 2000, unless there is bad weather. If the radio announces that the local schools will not open, then we won't meet. If the local schools are to open late, then we will meet.

Several members brought books and mgazines, which were passed around. Karen Kyte showed us a copy of 'Genealogy Online,' a book by E P Crowe, published in 1997, and a revised edition, published in 1999, subtitled 'Web Edition,' which she found at Borders in White Flint Mall. There were two commercial magazines, Heritage Quest, a glossy reference and advertising magazine of some 130 pages, and Everton's Genealogy Helper, with some 240 pages, available at Borders and both published bimonthly.

CJ Dwinell showed us a copy of NEXUS magazine, the publication of the New England Historical and Genealogical Society, NEHGS. The Society has a web site, <NewEnglandAncestors.com>. See the June minutes in the Sept-Oct 99 WAP Journal.

Several members have bought 'Genealogy Online for Dummies,' which has a CD in the back cover and which they find useful.

Karen has visited the Montgomery County Historical Society at the Beale House on Norbeck Road, Route 28. Jane Sween, there, was very helpful.

Monica Peck has visited the Maryland State Archives and Hall of Records in Annapolis, where Bob Barnes was very helpful.

Karen visited Jewell County, Kansas, which provides the seeker of information with a handy sheet of directions for finding various types of information. It contains many suggestions, including: Don't say 'I WANT TO SEE EVERYTHING YOU HAVE' about a person or place. She found the staff very courteous and helpful and came away with copies of several township plats showing the early or original owners of all the farms.

There is an advertisement on the inside front cover of our WAP Journal from the ClarisWorks Users Group, now the AppleWorks Users Group, for two very useful books at a low price. They are the recent remnants from the ClarisWorks inventory. The CWUG now has a 16 page newsletter and a web site, <cwug.org>. Their on-line catalog, however, does not list any titles of special interest to the genealogist. ■

Genealogy Schedule

THE GENEALOGY SIG meets regularly on the second Tuesday every month except July and August. All meetings are held from 10:00 AM to approximately noon in the Tutorial Room at the Pi Office in Rockville.

Topics and agendas are announced ahead of time whenever possible on the Pi electronic calendars posted on the TCS and the Explorer Service. They are also published in the Pi Journal when time permits .

Evening or weekend meetings of the SIG have been suggested by some. A volunteer is needed to initiate such meetings.

SIG Topics and Agendas

Prior meetings have covered such topics as the use of U.S. Census records for genealogical research, Civil War military and pension records, demonstration of members' favorite Internet sites for genealogy research, research at the DAR Library, resources of the Kensington LDS Family History Center, services and materials of the National Genealogical Society Library, and a presentation by Frank Leister whose company created and produces the genealogy software "Reunion."

Other meetings have been devoted to informal discussions of the use of the TCS, scanners and topics of concern to attendees, including discussion of members' experience with "Reunion" and other genealogical software.

The SIG topics have covered both how to do genealogy research and how to use computers in such research. By general agreement more emphasis is currently being placed on using Macintosh computers to record genealogical data as opposed to seeking genealogical information through computer sources. Special emphasis is placed on "Reunion" since it is the most widely used software by SIG members.

Bulletin Board

Conference 2, Board 12, on the TCS was established as the Pi Genealogy Board at the request of the SIG.

Upcoming Agendas

Besides general discussion, a presentation on scanners and genealogy is planned, and hopefully, Frank Lesiter will return in the spring ■

Linux SIG

A Proposed Special Interest Group for Washington Apple Pi

by William E. Byrd

SOME APPLE PI members may be unaware that Apple's MacOS is not the only operating system capable of running on Macintosh computers. Another popular and very powerful operating system that can run on Macintosh-compatible computers is known as Linux. Linux is a free operating system that was created around 1991 by a Finnish computer science student named Linus Torvalds. Torvalds used the Internet to recruit other programmers willing to help him improve his operating system. Several thousand programmers have worked on Linux, which is now seen by many experts as a viable alternative to both the MacOS and Microsoft Windows operating systems. In fact, Apple is basing its next-generation operating system on a relative of Linux.

What is Linux?

Linux is an operating system. An operating system is the low-level software that controls the behavior of every other program on your computer, such as your word processor and Web browser. An operating system also controls the physical hardware of your computer (for example, your disk drive and modem). Without an operating system, such as MacOS or Linux, your computer would be unable to send e-mail or save files to disk. Your computer would be useless.

Every Macintosh sold by Apple comes with its own operating system. Now called MacOS, this operating system creates the familiar look and feel of the Macintosh that users have come to expect. Programs running on MacOS use the operating system to display standard-looking menus, buttons, scroll bars, etc. The consistent appearance and behavior of these controls is one of the reasons that MacOS is easier to use than other operating systems.

The menus, buttons, and scroll bars used by programs running under Linux look and behave differently than those on MacOS, and Linux users must learn these new controls in order to use Linux effectively. The internal operation of the MacOS and Linux operating systems also differ significantly, with the consequence that Macintosh programs cannot run on Linux. Why, then, would anyone consider using Linux?

The Case for Linux

Anyone who is familiar with computers and is interested in an operating system that is more reliable and efficient than Apple's MacOS should consider Linux. If you are tired of restarting your Macintosh every time the program you are using crashes, Linux may be for you. When properly configured, computers running Linux can run for months, even years, without having to be restarted. Linux is also a very efficient operating system, and can run well on older computers with limited memory and disk space. Best of all, both MacOS and Linux can live on the same Macintosh, allowing you to switch between operating systems when you start your computer. This flexibility gives you the power and reliability of the Linux operating system, while still allowing you to access all of your favorite Macintosh programs.

In addition to being a great operating system, Linux comes with a variety of high quality application programs. GIMP, a very powerful image-manipulation program, is similar in functionality to the Adobe's popular (and very expensive) Photoshop application. LaTeX, a document preparation/typesetting system available on Linux, is my favorite program on any operating system. Professional typesetting programs such as Adobe's InDesign are just now matching the quality of the type set by LaTeX. The powerful and reliable Apache Web server is used by over 60% of all Web sites. The list goes on and on...

Incredibly, all of these programs are free. In this case, "free" refers to more than just the price. The original source code for Linux, GIMP, LaTeX, Apache, and many other programs, is freely available. Freely available source code means that anyone with sufficient programming expertise can fix bugs in any of these programs, and even add new features. This licensing scheme, known as "Open Source" licensing, benefits non-programmers as well. If a problem is discovered in a commercial program, such as Apple's MacOS operating system, users must wait until the vendor fixes the problem and releases the updated software. This process may take weeks or months. If a problem is discovered in a piece of Open Source software, however, chances are that an enterprising programmer will fix the problem and post the new version to the Web within days, maybe hours. That enterprising programmer might even be you!

" If you are tired of restarting your Macintosh every time the program you are using crashes, Linux may be for you. When properly configured, computers running Linux can run for months, even years, without having to be restarted."

Who Might Not Want to Use Linux?

Although extremely powerful, Linux is not particularly easy to install or configure. Also, many programs that run under Linux have steep learning curves. If you are just beginning to learn about computers, you probably won't want to dive into Linux. Instead, you may wish to wait for Apple's OS X operating system, which promises the speed and stability of Linux with a friendly MacOS-style interface.

Linux SIG: A Proposed Special Interest Group

As mentioned before, Linux is not known for its ease of use. For example, caution must be taken when setting up MacOS and Linux on the same hard drive. It is therefore wise to consult an experienced Linux user before installing Linux on your computer. The power and complexity of Linux application programs, such as LaTeX, GIMP, and Apache, also makes it useful to find other Linux users who are interested in the same applications.

As with any popular technology, of course, there are many books and Web sites devoted to Linux. Unfortunately, the vast majority of these resources are geared towards running Linux on IBM-compatible personal computers. What is needed is a community of users who are interested in learning more about Linux and are also familiar with Macintosh hardware and software. What is needed is a Linux Special Interest Group at Washington Apple Pi. The rest of this article gives an overview of the purpose, possible activities, and meeting schedule for the proposed Linux Special Interest Group.

Purpose

The purpose of the proposed Linux Special Interest Group (Linux SIG) is to:

- Promote awareness of Linux within the Washington Apple Pi community.
- Provide Washington Apple Pi members with access to the latest Linux software distributions.
- Help Washington Apple Pi members install, configure, and use Linux on their personal computers.
- Promote awareness of useful Linux tools that have been ported to MacOS.
- Promote awareness of the Open Source movement within the Washington Apple Pi community.
- Provide the Washington Apple Pi

community with accurate information about the Linux-style technologies that form the foundation of Apple's OS X operating system.

Activities

The Linux SIG may participate in some or all of the following activities:

- Duplicating CDs containing the latest Linux distributions for Apple Pi members.
- Holding a Linux "install fest", where experienced Linux users will help Apple Pi members install and configure Linux on their computers.
- Providing Linux tutorials in order to help Apple Pi members get the most out of their Linux installations. Possible topics for tutorials include:
  - Introduction to Linux
  - Linux networking
  - Using the GIMP image-manipulation program
  - Using the LaTeX typesetting system
  - Using the Apache Web server
- Testing the various distributions of Linux for the Macintosh to determine the strengths and weaknesses of each distribution.
- Contributing Linux-related articles to the Washington Apple Pi journal.
- Troubleshooting Linux installation and configuration problems on Apple Pi members' computers.
- Sharing Linux technology with other Apple Pi SIGs (e.g., LaTeX and Gimp for the Graphic Arts SIG).
- Porting useful Linux tools to MacOS.
- Creating a Washington Apple Pi Linux distribution.

Meetings

The Linux SIG will meet twice each month:

Linux SIG meeting - 3rd Saturday of each month, from 10 a.m. to noon. Items on the agenda of a Linux SIG meeting might include:

- Linux news.
- Linux tutorials.

" It is therefore wise to consult an experienced Linux user before installing Linux on your computer. The power and complexity of Linux application programs, such as LaTeX, GIMP, and Apache, also makes it useful to find other Linux users who are interested in the same applications."

- Product evaluations.
- Apple OS X news.
- Coordination of work to port Linux software to MacOS.

Linux Clinic meeting - 1st Wednesday of each month, from 7 p.m. to 10 p.m. Clinic meetings will be similar in spirit to the Apple Pi's Tuesday Night Clinic, and will focus on Linux installation, configuration, and troubleshooting.

A "kickoff" meeting for the Linux SIG will take place on Wednesday, January 5th from 7 p.m. to 10 p.m. The purpose of the kickoff meeting is to collect signatures from those interested in joining the Linux SIG, refine the scope, goals, and vision of the SIG, and to plan the agenda for the first Linux SIG Meeting on Saturday, January 15th.

All meetings of the Linux SIG will be held at the Washington Apple Pi office.

Open Issues

The following issues will be brought up for discussion at the Linux SIG's kickoff meeting:

- What is the Linux SIG's intended audience? Should the SIG focus exclusively on the needs of Washington Apple Pi, or should it be more ambitious and try to contribute to the global Macintosh community? Related issues include:
  - Should the SIG become involved in porting Linux tools to MacOS?
  - Should the SIG attempt to create and maintain a Washington Apple Pi Linux distribution for the Macintosh?
- Should the Linux SIG give equal treatment to both Macintosh and Wintel Linux distributions?

To Learn More

To learn more about Linux or the Linux SIG, please contact Will Byrd at wbyrd@fred.net.

Linux SIG Calendar

Linux SIG Calendar (January - March, 2000)

Date/Time	Meeting Type
Wed., January 5 /7 p.m.	Kickoff Meeting
Sat., January 15/10 a.m. - noon	Linux SIG Meeting
Wed., February 2/7 p.m.	Linux Clinic
Sat., February 19/10 a.m. - noon	Linux SIG Meeting
Wed., March 1/7 p.m.	Linux Clinic
Sat., March 18/10 a.m. - noon	Linux SIG Meeting

References

Kofler, M. (1999). Linux: Installation, Configuration and Use. 2nd ed. Addison-Wesley.

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Cure the winter blahs

by Mary Keene

OKAY, THE HOLIDAYS are over and you have survived another year but it is January and you are feeling tired, droopy and all you see are bare trees or maybe trees dressed in snow. You need something to change your viewpoint so you can see the joy in the weather and the beauty of the landscape. Here's the perfect cure—MacWorld July 2000.

Last year's experiment in a day trip to MacWorld was so successful we are going to do it again. For those of you new to Apple and new to the Pi, MacWorld is a major trade show held twice a year. It gives Mac people a great chance to get out to meet and mingle with all folks Macintosh. All those manufactures, software publishers, peripheral makers, etc., that you would like to give a piece of your mind, offer advice to, ask questions of or make suggestions to will probably be gathered under this single roof. Despite the hecticness, they are there to talk to users on all levels. Based on the prompt follow-up I got to many of my issues last year, I feel safe in saying that most of them will take your concerns seriously and follow-up with you. MacWorld is held on the west coast in January and on the east coast in July, formerly Boston, currently New York.

Last year we rented a tour bus with seats for 54 people and drove to the Big Apple to see the New Apples. We chose Thursday because of the 3 days, it is the only full day for exhibit hopping. On Wednesday, the first day, MacWorld opens with the keynote speech usually delivered by Steve Jobs around noon. After that, the exhibit floor is open but only until 6 pm. On Thursday, it is open from 10 am to 6 pm and on Friday, the show closes at 4 pm with many exhibitors closing up as early as 2 pm. So for a single day excursion, Thursday is the obvious choice for a one-day visit.

> "...MacWorld is a major trade show held twice a year. It gives Mac people a great chance to get out to meet and mingle with all folks Macintosh. All those manufactures, software publishers, peripheral makers..."

We hope to keep the cost similar to last year so here is what you will get for your money. The trip cost $60 per person round trip. It included a continental breakfast of 2 muffins, a bagel, banana, and a bottle of juice. We left Rockville at 5 am, took naps or ate breakfast until 7:15 am. Watched a great movie, "Short Circuit 2" until we pulled up at the Convention Center at 9:45 am.

Once there, last minute suggestions, tips and departure information and meeting place were reviewed. And then.....the Games Began. We got to register using iMacs, rows and rows of iMacs. We were given a badge that could be swiped at the vendors' booths in exchange for chances to win prizes, get more product information, be placed on mailing lists, etc. The Convention Center was large enough that we never felt too crowded but it did mean covering a lot of extra miles.

I talked to just about everybody on my list, got a lot of freebies, registered for everything I could, gave out lots of Journals to remind people who WAP is, and cajoled as many promises of speakers, merchandise prizes, special offers, etc. as I could. I saw a lot of new products, played with the new iBooks, listened to many speakers, observed many reactions to new products and in general, brought away an accomplished feeling.

Once back on the bus with all our goodies and loot, we conducted a Q & A session for the 90 minutes it took to arrive at the restaurant we had preselected. After a great dinner, we boarded the bus and napped until we arrived in Rockville at 12:30 am. It was a very tired band of adventurers that left the bus to head home and dream of this MacWorld while planning how to plunder the next one.

If this sounds like something you would like to try, then leave an open space on your calendar for MacWorld 2000 in July. You may send emails to the Pi office to be placed on the mailing list for the MacWorld trip so you can receive the information as soon as possible. Put "MacWorld Trip" in the subject line so we are sure you get on the right list.

If you were among our band of merry adventurers and have suggestions or comments on things you would like added, deleted or considered, send those in with the subject heading of MacWorld Trip. If you have suggestions for any other day trips you would like to take, let us know and if there is enough interest we will arrange it.

Now when the winter blues hit, you can sit back and make lists of who to visit, what to see and guess what the new rabbits will look like when Steve pulls them out of his wonderful, magical hat. ■

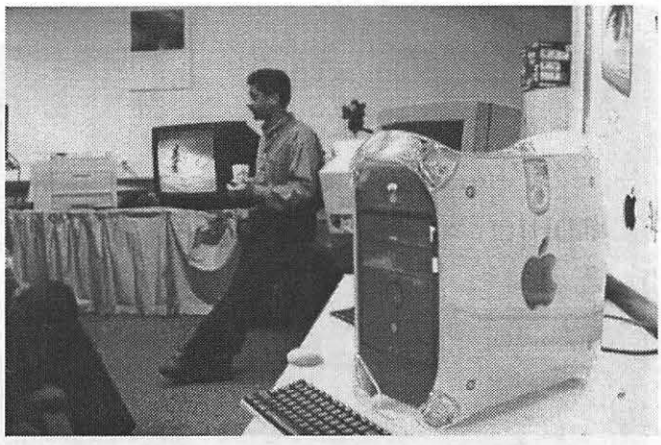
Graphic Arts SIG Report, October & November Meetings

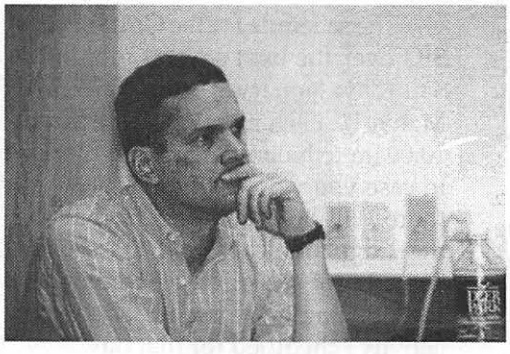
by Blake Lange

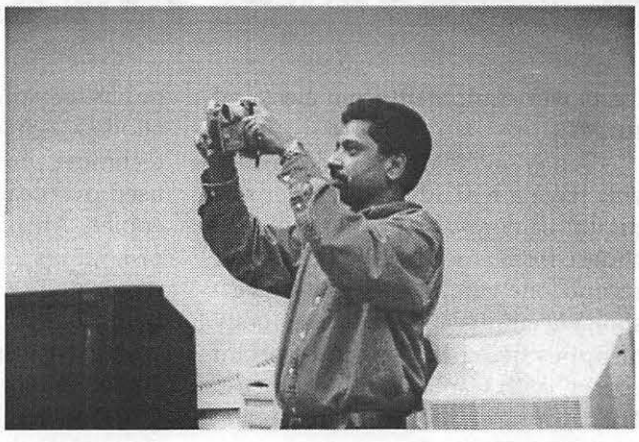
IN OCTOBER we had the rare treat of having our sponsor, Sonny Tohan, President of Mac Business Solutions, do a program on digital video. As might have been expected he waxed eloquent on the advantages of the Mac. Unabashedly, he stated that Apple was ahead of everyone else by years. He predicted it would not be long before there were a lot more successes like the Blair Witch Project, productions under $10K. Coincidentally, at the Montgomery College where the producers of the BWP were attending school, there has been such a high dropout rate in the video production courses that they are switching from PC's to Mac's.

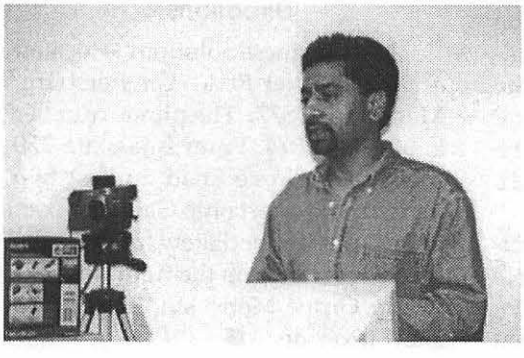
He talked briefly about the new iMacs with FireWire and a limited version of Apple's Final Cut Pro. He described it as having slower rendering. For a few thousand dollars anyone will be able to do video production. For 5 to 6 thousand one could produce videos that are full quality. Sonny compared success rates of sending out printed advertisements to sending out videos. The response to print is 2 to 3 percent while the response rate of those who sent videos is ten times that, at 30 percent.

"The response to print is 2 to 3 percent while the response rate of those who sent videos is ten times that, at 30 percent."



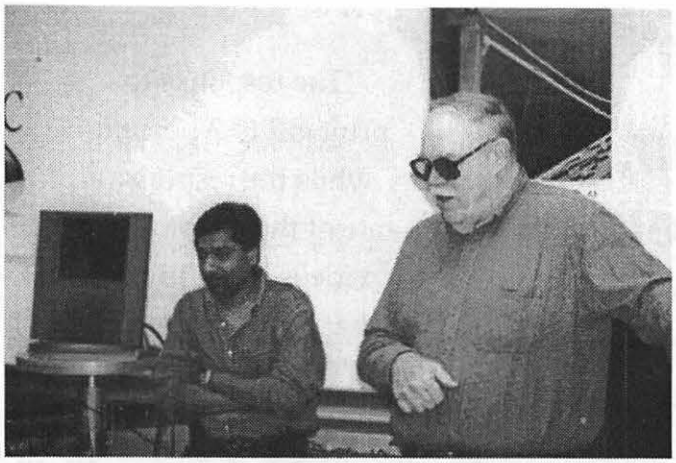


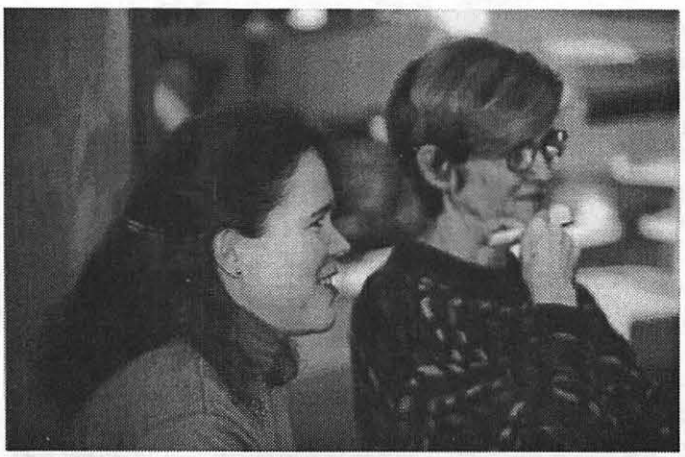




Before FireWire analog to video converters were available, video had to be brought in with video capture cards. In order to handle the 3.6 MB per second these cards required a disk array which cost about $15,000 three years ago and $5,000 a year ago. According to Sonny, however, upgrading the older processors such as 8600 to FireWire doesn't give one the horsepower needed for the video production job.

Related to that, Apple is now out of the upgrade business. They are making newer machines out of the lower quality parts that PC's use. It is much more important now to protect





the newer equipment from electrical surges.

Sonny said that digital video cameras have a real advantage over still digital cameras. With the ability to choose from any of the 30 frames per second one can always get the best shot. He emphasized that the quality of optics being the most important aspect, with Canon having the best. The meeting ended with a discussion comparing different scanners.

Attending the October meeting were Blake Lange, Bob Russell, John W. Laughlin, Linden Tucker Bell, Stuart Bonwit, Diana Buell, Harald Hoiland, Sonny Tohan, Dana Howe, Virginia Sheard, Russell Kirsch, Robert Allen, Arthur Hoiland, Kathryn A. Perrin, Marcia Marks, and Ed Goldstein.

For the November meeting we had a presentation on PowerPoint by John Barnes, scientist and Vice President for Volunteer Services of the Washington Appli Pi. He uses it for showing and talking about his work and for teaching. He told us there are several modes for working with the content. There is outline mode, slide viewer mode, and slides laid out on a viewing table. The real advantage is the ability to produce slides quickly.

John has an adversion to using the program with a computer setup. Too often he has seen presenters waste the time allotted them dealing with computer technical problems. Instead he has used overheads and hands out hard copies. An important aspect of the program is that presentations can be emailed. The PowerPoint viewer is free.

During his talk John demonstrated the various features of the program on the computer display. He showed us the ability to incorporate QuickTime movies and also the ability to draw on the screen during the presentation. When asked whether it was good at creating web pages he recommended using a real HTML editor.

Attending the November meeting were Blake Lange, Valerie Burghardt, Maria Marks, John W. Laughlin, Linden Tucker Bell, Helen

"He showed us the ability to incorporate QuickTime movies and also the ability to draw on the screen during the presentation. When asked whether it was good at creating web pages he recommended using a real HTML editor."

Dilley Barsalou, Diana Buell, Sonny Tohan, Russell Kirsch, Karen L. Klein, Robert Allen, Ann Lesnik, Cherie Worth, Laura Leigh V. Palmer, Glenda Adams, Janet Simmon, and John Barnes

Schedule

The schedule for the Graphic Arts SIG over the next several months is Saturdays January 8, February 12, and March 11. Each meeting will be from 10:00am to Noon. The rule of thumb, in case you want to figure out when there will be a meeting, is that the meetings are scheduled the second Saturday of each month except when the Washington Apple Pi has a major activity scheduled for that day.

Directions

Mac Business Solutions is located at 9057 Gaither Road, Gaithersburg, Maryland 20877. The phone number is 301-330-4074. From Interstate 270 and Shady Grove Road go East two lights, make a left onto Gaither Road, then almost immediately turn into the second entrance on the right from the Shady Grove Metro stop it is just a short taxi ride. ■

Microsoft and the Battle for Civilization

by Lawrence I. Charters

"WHAT TO DO about Microsoft" is a hot topic these days. Hype concerning the "end of the millennium" is beginning to die out (even though it doesn't actually begin until 2001). The Y2K Crisis, after hundreds of billions of dollars in repairs and updates, is considerably less threatening than it was prior to this huge effort. So, with a Presidential campaign serving as background noise, we contemplate the future of the world's most highly valued company: Microsoft.

And with it, we also contemplate the fate of civilization.

Microsoft and Y2K

What, exactly, does Microsoft mean to modern civilization? With a fairly modest number of employees, compared to other Fortune 500 companies, Microsoft emerged in 1999 as the corporation with the largest stock valuation in history. Its sales were a fraction of many other companies, and the company has only modest assets of real estate, equipment, and the other usual trappings of corporate wealth. It is a manufacturing company, but the goods it manufactures are fairly modest: keyboards, mice, joysticks and other minor peripherals. Most of its wealth, and fame, and power, comes from "manufacturing" software, the curious process of storing sequences of numbers in such a way as to produce word processors, spreadsheets, games and operating systems.

What else has Microsoft done? This single company was also the largest contributor to the Y2K Crisis. While countless news stories talked about old COBOL programs that needed to be rewritten to handle dates past 1999, and embedded computer chips that might cause your VCR, thermostat, or electric toothbrush to fail, the real story was elsewhere. More people spent more time, money and effort correcting, updating or eliminating programs written by Microsoft than all other Y2K activities — combined. Vast numbers of "Wintel" computers running various versions of MS-DOS (recall that "MS" stands for Microsoft) or Microsoft Windows were carted off to landfills (or "donated" to unsuspecting schools, churches and charities). Billions of lines of code written in various Microsoft programming languages were reviewed and revised. Tens of millions of "consumer" programs (chiefly Microsoft Word, PowerPoint, Excel and Access) were upgraded and updated. And special laws were passed to protect software companies — especially one particular software company — from legal liabilities surrounding the "Y2K Crisis."

Microsoft's most profound accomplishment, however, has been the assault on personal computing.

Microsoft and Personal Computing

Dating the beginning of personal computing is almost as difficult as dating dinosaur bones. In the mid-1970s, most of the computers in the world were large mainframe computers, staffed by legions of specialists.

"Most of its wealth, and fame, and power, comes from 'manufacturing' software, the curious process of storing sequences of numbers in such a way as to produce word processors, spreadsheets, games and operating systems."

Minicomputers, similar in operation but much less costly, were staging a strong challenge, but they were just as impersonal as their more massive cousins. Computers were centrally managed corporate assets, controlled by a select few who also controlled how the computers could be used.

Beginning in 1977, microcomputers began to challenge the stranglehold of the computer specialists. Radio Shack, Commodore, Atari, Apple and many other companies introduced "consumer" microcomputers, designed for use in homes and offices by people with no background or training in computer science. Control of these new "consumer" computers was not in the hands of a large team of computer operators, analysts and programmers; instead, individuals controlled microcomputers. Corporations decided what programs and tasks were suitable for the mainframes and minicomputers, but individuals made their own decisions on what to do with their microcomputers.

Initially seen as a passing fad, by 1981 even IBM had to concede that microcomputers might have some

value, so the computing giant introduced the IBM PC. IBM didn't really consider this PC as a true "computer," however; the model number used — 5150 — was from the same block reserved for computer terminals, and these terminals were only useful when attached to mainframe computers. Since the PC, in IBM's view, wasn't much use as a stand-alone machine, IBM didn't even bother to write much software for it. The operating system (available as an extra-cost option) was purchased from Microsoft (which in turn bought the operating system from another company, Seattle Computing), and the first word processor was a somewhat rough translation of an Apple II program. Clearly, IBM didn't think too much of "personal" computing and assumed buyers would soon come to their senses and attach these things to mainframes. Some did.

Most did not, and the rest of the 1980s saw a massive migration in computing power, away from centralized corporate strongholds and onto the desks of individuals. These "personal computers" were often seen as corporate vermin: beyond centralized control, ignoring corporate standards, performing unauthorized tasks.

While the mainframes versus microcomputer wars were raging, other trends were developing. The Internet was starting to connect large government and university campuses. Local area networks were starting to bloom in small and large offices. Standards were being created for exchanging information — text, pictures, sound, networking information — between computers created by different vendors.

Moving in to the 1990s, the mainframes versus micro wars were forgotten. Microcomputers had grown in power and capability, and mainframes from the previous decade, purchased for millions of dollars, were sold for scrap, eclipsed by the desktop wonders. Personal computers won.

For a while. Then the Standardization Wars began. Rather than cope with the various features (personalizations) of personal computers, large organizations started decreeing "standards." The former high priests of the mainframes, in their new role as corporate network managers, information managers and "knowledge specialists," decreed that only a very select group of word processors, spreadsheets, databases and operating systems would be supported. (Does this sound familiar?)

> "Microsoft, of course, loudly claims to be sensitive to the problems of its customers. Take, for example, the Y2K problem. Earlier this year, Microsoft's Web site posted some information on how the year 2000 might affect some Microsoft programs..."

Microsoft encouraged this, and pushed Microsoft Office — Microsoft Word, Microsoft Excel, Microsoft PowerPoint (all originally written for the Macintosh) as the "obvious" standard. Naturally, Microsoft argued, this wonderful suite of wonderful programs would work best with a wonderful Microsoft operating system — Microsoft Windows. Organizations were encouraged to ditch their "legacy systems" and adopt a full Microsoft "solution" —everything Microsoft. No Macintosh computers. No UNIX computers. No non-Microsoft operating systems, spreadsheets, graphics packages or spreadsheets.

The personal computer was now dead, replaced by the "standard" microcomputer. A Microsoft standard.

Microsoft: The Virus

Something else happened in the late 1980s and all through the 1990s: the rise of computer viruses. Originally imagined as an intellectual exercise by computer scientists and researchers, eventually "real" computer viruses escaped out into the world. The concept of "safe computing" evolved (adopted from the anti-AIDS "safe sex" campaigns), and included scanning new floppy disks and CD-ROMs for unwelcome guests. An entire cottage industry sprang into being, creating anti-virus programs to combat this malignant digital life form.

Then Microsoft changed the rules. With the introduction of OLE, later revised and renamed as Active X, Microsoft created a way for programs to directly talk to the Windows operating system. Apple, in the Macintosh operating system, already had nice, safe ways for applications to talk to the operating system, but Microsoft didn't like Apple's solution, and insisted on introducing OLE (and Active X) to the Macintosh.

And things went downhill from there. Poorly written Microsoft Word and Microsoft Excel macros, through the use of OLE and Active X, did undesirable things at the operating system level, such as deleting files. Inspired by this uncivilized behavior, vandals created the first Microsoft "Macro" viruses — the world's first cross-platform computer viruses — and fighting computer viruses went from being a cottage industry to a global war.

Hundreds of new Microsoft Macro viruses are discovered every month. In fact, well over 90% of all computer viruses ever discovered are Microsoft Macro viruses.

In 1999, very clever vandals decided to escalate the virus wars.

Rather than limit their attention to Microsoft Word and Microsoft Excel, the traditional "hosts" for macro viruses, they targeted the Active X components of Microsoft's E-mail programs, Microsoft Outlook and Microsoft Exchange, and the Active X components in Microsoft Internet Explorer. Suddenly, viruses were no longer limited to documents coming in through a floppy disk or CD-ROM; Microsoft's Web browser and Microsoft's E-mail systems could attack entire Microsoft-based networks at once, from the inside and the outside.

The Dark Side of the Force

Microsoft, of course, loudly claims to be sensitive to the problems of its customers. Take, for example, the Y2K problem. Earlier this year, Microsoft's Web site posted some information on how the year 2000 might affect some Microsoft programs, and offered to send customers a free "Microsoft Year 2000 Resource CD" if they just clicked on a link.

If you clicked on the link, and were using Microsoft Internet Explorer, you were taken to a page that allowed you to enter your name and mailing address. If you used any other browser — Netscape Navigator or Netscape Communicator, for example — nothing happened. Microsoft, apparently, was more than willing to help their customers, provided their customers conformed to Microsoft's definition of a proper Microsoft customer.

After this was mentioned in the press, Microsoft quickly changed their Web site, allowing even users of non-Microsoft Web browsers to request the CD-ROM. Several weeks later, the "Microsoft Year 2000 Resource CD," stamped with the date "June 1999," was shipped.

And it was quite a resource. Imagine, if you will, that you are a small business owner, concerned about your network of Microsoft Windows 3.1 computers with, say, a Microsoft Windows NT 3.5 file server, and lots of slightly dated Microsoft applications. You insert the CD-ROM in a drive and see just one document, a text file called "README.TXT." You click on it and see this notice:

> This disc contains Unicode file names and requires an operating system that supports the ISO-9660 "Joliet" CD-ROM file system specification such as Microsoft Windows 95 or Microsoft Windows NT 4.0.

Surprise, surprise! You were kind of hoping this free resource would help you salvage something from your rather substantial investment in Microsoft software. But — fooled you! — Microsoft thoughtfully encoded the information in such a way that less than current hardware and software —like yours — can't see whatever help the disc might contain.

Maybe the "reject all browsers but Microsoft's" incident was a mistake. Maybe shipping the CD-ROM in a form useless to most of the people who needed it was also a mistake.

But there is another possible name for this: arrogance. When you are Microsoft, you don't have to bend to the needs of your customers, if you can make the customers bend to your will, instead.

Microsoft Monopoly: More Than a Game

In the last months of 1999, Microsoft's monopoly power emerged as a major topic of discussion, in the courtroom, in the boardroom, and in the living room. On the one hand, there is ample evidence that Microsoft has used less than savory tactics to crush any real or threatened competitors. While Microsoft once claimed that Windows was a much better choice for businesses because it offered a wider variety of software than any other operating system —

> "More people spent more time, money and effort correcting, updating or eliminating programs written by Microsoft than all other Y2K activities — combined."

dozens of word processors, spreadsheets and database programs — this is no longer true. Microsoft has essentially exterminated all but token resistance to Microsoft Word, Microsoft Excel and Microsoft Access. The huge variety that allowed for the almost infinite personalization of the personal computer has been standardized into a gray, monolithic monopoly.

On the other hand, Microsoft apologists insist that, monopoly aside, Microsoft has contributed greatly to the economic health of the U.S., in particular, and the world in general. True, thousands of software companies have been destroyed, but look at the benefits of corporate standardization! Instead of having to struggle with different operating systems and data formats, everything can now be handled seamlessly in an all-Microsoft world. Why, even the hackers love Microsoft, for without such standardization, they wouldn't be able to wipe out all the corporate mail servers, Web servers and file servers with such ease.

OK, maybe that wasn't the best example. The **real** benefit comes from all the support industries created to handle all the Y2K and virus problems caused by such standardization. Wait,

wait — ignore that, too. The **real** benefit is, um...

Microsoft has used advertising and highly publicized (and tax-deductible) donations to counter the image of Microsoft as corporate bully. Cheery, feel-good commercials show kids using Microsoft programs to learn about the universe in schools and at home. Other commercials show children with terrible illnesses, smiling and happy in their hospital beds thanks to wonderful Microsoft programs. Vast donations by Microsoft, and Microsoft Chairman Bill Gates, have focused on the value — in the billions of dollars — of the donations. Usually unmentioned is the fact that these are not cash donations; with rare exceptions, Microsoft and Gates are donating Microsoft software, and the value is calculated at full retail price.

Some apologists have gone so far as to suggest all the legal proceedings against Microsoft be thrown out. The judge in the case, they argue, is biased. He is angry with Microsoft, and it is impossible to get a fair judgement from him because of this anger. True, Microsoft officials did forge various pieces of evidence for the court, then testified that the "evidence" was not forged, and then admitted that, well, maybe their previous testimony wasn't correct. They also testified that they hadn't said various things and then, when presented with transcripts (often E-mail transcripts), either admitted that, once again, their previous testimony might not have been correct. Or — here's an idea — maybe the E-mail didn't really mean what it said. But in either case, is that any reason to get angry with Microsoft, and develop a bias against them?

The world has changed. Do laws really apply to companies like Microsoft? Except, of course, such things as the law limiting Y2K software liabilities?

What to do?

What should we do about Microsoft? Fine them? They could pay the fine in, say, donated copies of Microsoft software. That way, in the future, poor Judge Thomas Penfield Jackson won't have to write his opinions in Corel WordPerfect (from Canada, no less), and can use some good old American software, like Microsoft Word!

Break up the company? One suggestion is to move Windows (in all its flavors) and other operating system components to one company, and all applications (word processors, spreadsheets, database packages, etc.) to another. That way, the Windows company would have to compete on a level playing field against UNIX, Linux, Mac OS, and other operating systems. The applications company, in turn, would be free to go beyond Windows and develop programs for UNIX, Linux, Mac OS and other operating systems.

> "Microsoft has essentially exterminated all but token resistance to Microsoft Word, Microsoft Excel and Microsoft Access. The huge variety that allowed for the almost infinite personalization of the personal computer has been standardized into a gray, monolithic monopoly."

"Open up" the Windows operating system code? This has been suggested by quite a few, but it ignores something: Windows isn't really an operating system, but a marketing term. Windows 3.1 has almost nothing in common with Windows 95, which has almost nothing in common with Windows CE, which has nothing in common with Windows 2000.

Or perhaps we could just make Microsoft more civilized. Have the company accept their responsibility for the Y2K crisis, and fix the problems, rather than use it as an excuse to market new products. Have Microsoft accept responsibility for the rampant virus problems, and get rid of the OLE and Active X links between applications and the operating system. Have Microsoft accept and follow true cross-platform standards, and work with Java, JavaScript, HTML, QuickTime, and other standards, rather than make up their own private, incompatible, Microsoft versions.

When raising children, parents focus on just a few skills: teaching children to accept responsibility for their own actions, teaching them to be civil and respectful of their peers, teaching them to get along. When they acquire these skills, we consider them grown up.

It is well past time for Microsoft to grow up. ■

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Redmond on the Potomac

United States of America v. Microsoft Corporation

A Note From The Editor

There is an anti-trust case working its way through the District Court in Wahington, DC. It involves the US goverment on one side and Microsoft on the other. Computer users should know more about this case than the cursory material that is available via the mass media. Others cases that fall into this same category include the Advisory Commission on Electronic Commerce <http://www.ecommercecommission.org> [typically referred to as the Internet Sales Tax Commission] [1] and the AT&T breakup handled by Federal Judge Harold Greene. What you will read is not a call to arms. You are not being asked to send e-mail to anyone. But whether you feel like getting involved or not, the outcome will affect each of us. Thus, you should at least have a level of knowledge that rises above the noisy clutter that is typical of both print and on-line journalism.

Anatomy 101

A WASHINGTON story usually has at least four parts: an issue properly framed and timed; what passes for factual material; some smoke and mirrors (aka, spin) on both the facts and outcome; and some kind of an outcome. This story has only the first three parts. It is possible that by the time you read this, Judge Robert Penfield Jackson will have released his Finding of Law – that is given the facts as previously determined, he will rule on what areas of the law, if any, Microsoft has broken.

This is not a short story; but it is very readable. We broke the story into three parts. Part I is a summary of the Findings of Facts by Judge Jackson [2]. That is followed by an explanation of the role of these findings in the overall proceedings. Part II, entitled Give Microsoft Some Credit, is to remind us of the other side of this story. Finally, Part III contains some thoughts on the impact various outcomes could have on Macintosh owners. If you are familiar with the finding of facts by Judge Jackson, then try Part III, beginning on page 91. References are found at the end.

This article is courtesy of MWJ, the Weekly Journal for Serious Macintosh™ Users. We wish to thank the publishers for permission to reprint.

Part I - Findings of Fact

For those who have not a clue as what this is about, the United States government alleges that Microsoft Corporation is using it dominance in the personal computer market to thwart, via non-competitive means, the entry of others into that market. A one line summary of the case to date would be that Judge Jackson agrees that the facts uncovered by the the anti-trust division of the Department of Justice shows such a pattern. To wit:

I. Microsoft Holds Monopoly Power

Quoting paragraph 33 of the findings: "Microsoft enjoys so much power in the market for Intel-compatible PC operating systems that if it wished to exercise this power solely in terms of price, it could charge a price for Windows substantially above that which could be charged in a competitive market. Moreover, it could do so for a significant period of time without losing an unacceptable amount of business to competitors. In other words, Microsoft enjoys monopoly power in the relevant market." This comes back to a classic definition of a monopoly - a business that holds such sway over a market that it can essentially set its own price without fear of losing business. It matters not whether Microsoft has gouged prices; it only matters that the court finds it *could* if it so desired. Standard Oil was not price-gouging when it fell victim to the trustbusters; in fact, it had been *lowering* oil prices at the time. Yet the antitrust laws hold that even the power to arbitrarily raise prices with no ill effect makes a company's actions worth special scrutiny.

> "...put in the legal record that no matter what Apple does, it will not be able to compete with Windows except as a niche alternative. Apple realists have admitted this for years, but it's still difficult for some to accept as part of a legal finding of fact."

Judge Jackson's findings spend many pages after this point outlining evidence presented that he believes shows Microsoft's monopoly power. He divides it into three broad categories.

π

I. The Facts Themselves

• Microsoft's OS market share is extremely large and stable.

You knew this - despite the resurgence of Mac OS and the insurgence of Linux, Microsoft holds "well above eighty percent" of worldwide PC operating system market share. The court mostly focused on the market for Intel-compatible operating systems, making Microsoft's monopoly even more clear, but took pains to note that even if Mac OS were included, Microsoft would still hold an extremely large and stable market share. (The reverse, by the way, is not true - Apple may hold a monopoly on PowerPC-compatible operating systems, but it would not do so if you included the broader personal computer OS market, meaning these particular findings don't seem to endanger Apple from lawsuits wanting the company to open the Mac OS to cloners again.)

• Microsoft's market share is protected by a high barrier to entry.

Judge Jackson spends a huge amount of time discussing what he eventually calls the "application barrier to entry" - the chicken-and-egg problem that new operating systems can't get off the ground because there are no applications for them, and developers won't write applications for new operating systems because not enough people are using them. Microsoft argued strongly that the existence of Linux, BeOS, Mac OS, UNIX, and other operating systems eliminate any monopoly power the company might hold. The judge did not buy it, with specific reasons in each case.

Judge Jackson found that operating systems are all about applications - without application programs to make the operating system do useful things, the OS itself is more or less a novelty. Writing in paragraph 40, he says: "Just as Microsoft's large market share creates incentives for ISVs [independent software developers] to develop applications first and foremost for Windows, the small or nonexistent market share of an aspiring competitor makes it prohibitively expensive for the aspirant to develop its PC operating system into an acceptable substitute for Windows. To provide a viable substitute for Windows, another PC operating system would need a large and varied enough base of compatible applications to reassure consumers that their interests in variety, choice, and currency would be met to more-or-less the same extent as if they chose Windows. Even if the contender attracted several thousand compatible applications, it would still look like a gamble from the consumer's perspective next to Windows, which supports over 70,000 applications." The judge earlier wrote that the major drawback to the Mac OS is a lack of applications. If an OS lives or dies based on applications, and an alternate operating system would need more than "several thousand" applications to seriously compete, there is no competition for Windows today.

What's more, Jackson goes on to note that since developing software is so expensive, vendors must first target the largest market - Windows. After that, porting applications to other operating systems can be prohibitively expensive, ensuring that most applications are Windows-first and Windows-only. These findings are rough for Apple. They put in the legal record that no matter what Apple does, it will not be able to compete with Windows except as a niche alternative. Apple realists have admitted this for years, but it's still difficult for some to accept as part of a legal finding of fact.

The court rejected Microsoft's other claims of competition one by one. Linux and UNIX run on servers, the court found, not on typical personal computers, the market the court defined as relevant. Even though Linux is getting lots of attention, the applications necessary to make it a Windows competitor just haven't materialized. And the court doesn't think they will: "It is unlikely, though, that a sufficient number of open-source developers will commit to developing and continually updating [for free, or for the public good] the large variety of applications that an operating system would need to attract in order to present a significant number of users with a viable alternative to Windows. In practice, then, the open-source model of applications development may increase the base of applications that run on non-Microsoft PC operating systems, but it cannot dissolve the barrier that prevents such operating systems from challenging Windows." BeOS only has about 1,000 applications, and can only successfully occupy its niche market because vendors load it on systems alongside Windows, not instead of Windows, meaning it's not on any course to replace or seriously challenge Windows in the marketplace.

The judge cited internal Microsoft documents where the company said the biggest competition to Windows was pirated copies of Windows, and that it did not even consider the price of "competing" operating systems in pricing Windows 98. In fact, just before Windows 98 was released, Microsoft actually raised the price of Windows 95 to the new Windows 98 level, just to make sure OEMs had no reason to continue using the older version when Microsoft wanted the new version on all new computers. "In a competitive market, one would expect the price of an older operating system to stay the same or decrease upon the release of a newer, more attractive version. Microsoft, however, was only concerned with inducing OEMs to ship Windows 98 in favor of the older version. It is unlikely that Microsoft would have imposed this price increase if it were genuinely concerned that OEMs might shift their business to another vendor of oper-

ating systems or hasten the development of viable alternatives to Windows."

Microsoft said Java and network computers threaten its market share; Judge Jackson rejected that argument as well. Java can't support personal productivity applications yet, meaning it's no competitor to Windows even if there were tens of thousands of applications. And network computers, according to the court, aren't in any danger of replacing PCs anytime soon. "Another reason for the limited demand for network computer systems is the fact that few consumers are in a position to turn from PC systems to network computer systems without making substantial sacrifices; for the network computing option exhibits significant shortcomings for current PC owners and first-time buyers alike. The problems of latency, congestion, asynchrony, and insecurity across a communications network, and contention for limited processing and memory resources at the remote server, can all result in a substantial derogation of computing performance."

And, in any case, what might happen to Microsoft down the road does not change what Microsoft is doing today, the court found. "Microsoft recognizes that new paradigms could arise to depreciate the value of selling PC operating systems; however, the fact that these new paradigms already exist in embryonic or primitive form does not prevent Microsoft from enjoying monopoly power today. For while consumers might one day turn to network computers, or Linux, or a combination of middleware and some other operating system, as an alternative to Windows, the fact remains that they are not doing so today. Nor are consumers likely to do so in appreciable numbers any time in the next few years." So there.

• Microsoft's customers lack a commercially-viable alternative to Windows.

Judge Jackson found that computer manufacturers, known as "original equipment manufacturers" or OEMs, "are also surrogates for consumers in identifying reasonably-available commercial alternatives to Windows. Without significant exception, all OEMs pre-install Windows on the vast majority of PCs that they sell, and they uniformly are of a mind that there exists no commercially viable alternative to which they could switch in response to a substantial and sustained price increase or its equivalent by Microsoft." There's that definition of monopoly power - Microsoft could price-gouge if it chose and its customers would have nowhere else to turn. This power, the inherent danger of any monopoly, is why businesses in such a position find themselves more stringently regulated.

"Microsoft argued strongly that the existence of Linux, BeOS, Mac OS, UNIX, and other operating systems eliminate any monopoly power the company might hold. The judge did not buy it, with specific reasons in each case."

You might think that vendors of other Intel-compatible operating systems would take umbrage at this complaint, but not so: the court found that "other vendors of Intel-compatible PC operating systems do not view their own offerings as viable alternatives to Windows." BeOS, as noted, only ships on PCs that also have Windows installed. OS/2 Warp, though still for sale, costs about 250% of Windows' price. Linux is excluded from the mix as the Judge finds it primarily to be a server operating system. Although Microsoft also is a heavy presence there, with Windows NT, the complaint is that Microsoft used its monopoly power to try to take over the Internet Browser market through bundling Internet Explorer with Windows 95 and Windows 98. Windows NT is not included here, and the court therefore properly excluded it, Linux, and UNIX from consideration in the main.

The findings go on and on with empirical evidence of Microsoft's monopoly - setting the price for Windows 98 upgrades almost twice as high as would have been profitable just because they could, charging different OEMs different prices for Windows depending on how closely they follow Microsoft's wishes.

II. Microsoft Punishes Companies that Reisist It

The court uses the term "punish" to describe Microsoft's behavior, with its monopoly power, towards companies and customers that do not fall in line like good little Microserfs. This is where Microsoft really, really lost bigtime with the court. Every time the plaintiffs (nineteen state attorneys general and the US Justice Department) outlined a case where Microsoft allegedly tried to use its Windows monopoly to bully another company into submission, Microsoft offered a counter explanation attempting to show its behavior as aggressive, but not illegal. In every one of these cases, the court believes the plaintiffs' version.

Judge Jackson found that Microsoft attempted to divide the browser market with Netscape, promising the start-up no competition on platforms other than Windows if Netscape left the Windows browsing platform to Microsoft. He found that

Microsoft tried a similar tactic with Apple over QuickTime, promising technical concessions in Windows Media if Apple would stop making QuickTime for Windows, and threatening retaliation if they didn't: "Microsoft's representatives made it clear that, if Apple continued to market multimedia playback software for Windows 95 that presented a platform for content development, then Microsoft would enter the authoring business to ensure that those writing multimedia content for Windows 95 concentrated on Microsoft's APIs instead of Apple's. The Microsoft representatives further stated that, if Microsoft was compelled to develop and market authoring tools in competition with Apple, the technologies provided in those tools might very well be inconsistent with those provided by Apple's tools. Finally, the Microsoft executives warned, Microsoft would invest whatever resources were necessary to ensure that developers used its tools; its investment would not be constrained by the fact that authoring software generated only modest revenue." The court also found that Microsoft similarly threatened Apple with the discontinuation of Microsoft Office if Apple didn't make Internet Explorer the Mac OS's primary Web browser. This is not an abuse of monopoly power, as Microsoft doesn't hold a monopoly in the Macintosh market, but the court says it shows that Microsoft would be willing to dump a profitable product just to gain leverage in the Mac market over Netscape Navigator, since Microsoft couldn't use its *own* monopoly power on Mac OS.

The court sided with the plaintiffs in finding that Microsoft had withheld Windows 95 from IBM because IBM insisted on shipping its own integrated productivity product (SmartSuite) with its own personal computers, threatening Microsoft's sale of Office - an almost-textbook case of using monopoly power in one area (operating systems) to try to dominate another (application programs). Microsoft raised the price of Windows substantially to OEMs unless they shipped an operating system pre-installed on all but a "minute fraction of their machines," reducing piracy for Microsoft but making it next to impossible for customers to buy a PC *without* Windows. The court does not yet indicate which, if any, of these actions violate antitrust law, but it finds that they really did happen. Microsoft *did* these things. Not "allegedly," not "reportedly," but factually as determined by a court of law.

And, in what may be the most deadly blow to this part of the findings, Judge Jackson found as a matter of factual record that Microsoft meddled in these affairs to preserving its own power: "Microsoft's interactions with Netscape, IBM, Intel, Apple, and RealNetworks all reveal Microsoft's business strategy of directing its monopoly power toward inducing other companies to abandon projects that threaten Microsoft and toward punishing those companies that resist."

III. Actions Harm Consumers

The entire point of the antitrust laws is to protect consumers from being forced to rely on a single company for a necessary good or service. Again, recall that monopolies themselves are not illegal, but their actions may be, especially if they harm consumers. The court found that Microsoft did harm consumers, specifically in the main thrust of the case - integrating Internet Explorer into the Windows operating system.

"Microsoft's actions have inflicted collateral harm on consumers who have no interest in using a Web browser at all," the court writes. "If these consumers want the non-browsing features available only in Windows 98, they must content themselves with an operating system that runs more slowly than if Microsoft had not interspersed browsing-specific routines throughout various files containing routines relied upon by the operating system. More generally, Microsoft has forced Windows 98 users uninterested in browsing to carry software that, while providing them with no benefits, brings with it all the costs associated with carrying additional software on a system."

Judge Jackson found that "There is no technical justification for Microsoft's refusal to meet consumer demand for a browserless version of Windows 98. Microsoft could easily supply a version of Windows 98 that does not provide the ability to browse the Web, and to which users could add the browser of their choice. Indicative of this is the fact that it remains possible to remove Web browsing functionality from Windows 98 without adversely affecting non-Web browsing features of Windows 98 or the functionality of applications running on the operating system. In fact, the revised version of [a] prototype removal program produces precisely this result when run on a computer with Windows 98 installed."

Microsoft repeatedly argued that this program and similar methods didn't remove Web browser functionality from Windows, but rather stopped you from invoking it through normal ways. The court clearly did not buy this argument. "To uninstall a software program or to remove a set of functionalities from a software program, it is not necessary to delete all of the software code that is executed in the course of providing those functionalities. It is sufficient to delete and/or modify enough of the program so as to prevent the code in question from being executed."

All this amounts to another factual finding of harm. "Microsoft has harmed even those consumers who desire to use Internet Explorer, and no other browser, with Windows 98. To the extent that browsing-specific

(continued on page 88)

Book Review: *The Inmates Are Running the Asylum*

Why High-Tech Products Drive Us Crazy and How to Restore the Sanity

by Paul Chernoff
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"Interface design is about making a feature look good; interactive design starts with figuring out the user's needs. Good interactive design results in easier-to-use products..."

The Inmates Are Running the Asylum by Alan Cooper. Indianapolis: Macmillan Computer Publishing, 1999

WOULD YOU trust a computerized refrigerator to order food for you? I wouldn't. My life is already filled with difficult-to-use high-tech devices. My entertainment center's remote controls are too complex. I can program my VCR, but most people still cannot set the time. A best-selling word processor prohibits me from manually numbering paragraphs. It seems that whenever you combine a device, such as a clock, with a computer chip, you end up with something that is more difficult to use than its uncomputerized counterpart.

Alan Cooper is on a mission to make computerized products and software easier to use. He finds the problem is poor interface—or interactive—design, not technology. In *The Inmates Are Running the Asylum*, he presents "the business case" for good interactive design. He shows how bad things are, why they are bad, the benefits of good design, and an approach for successful interface design.

Cooper prefers the word "interaction" over "interface." He feels that interface design encourages programmers to think that a user interface can be slapped on for superficial aesthetics after they write the bulk of the code. Interaction design is much deeper and starts with the user's goals. Interface design is about making a feature look good; interactive design starts with figuring out the user's needs. Good interactive design results in easier-to-use products that meet consumer needs and cost less to create. Many non-programmers create computer products, often in the guise of spreadsheets and databases and should be concerned about the design of what we produce.

Cooper has been on both sides of interactive design. He is a programmer, and his projects include SuperProject and Microphone II for Windows. He is the father of Visual Basic and now heads Cooper Interactive Design. He has the utmost respect for programmers, being one himself, but points out that they rarely make good interactive designers.

While Cooper is not a Macintosh fan, this book is of value to Macintosh enthusiasts. The Mac rests on good design in hardware and software. Mac fans expect well-designed software with a superior interface. That is not to say that Macintosh software should slavishly follow the Macintosh interface guidelines, although we do prize consistency, but that it should be elegant and user-oriented.

Why Is There So Much Bad Software?

Why do we put up with poorly designed computer products? For the same reason we are impressed by a dancing bear. We are so impressed that the bear can even dance that we don't care if it can't dance well. Consumers put up with an awful lot of garbage because they are impressed that computers work, even if they are almost impossible to use. We either apologize for the sad state of affairs and defend the computer for what it can do (this describes most programmers and "power users") or just grit our teeth and carry on. Very few people try to fix problems.

Software publishers and developers usually deny there is a problem. Interface design is often an afterthought and done too late to change how the software or computer devise works with the user. Interactive design needs to be well under way before coding is done. Too often the interface is designed by people with no knowledge of interface design, which is why Cooper is trying to convince people heading companies of the need to hire interactive designers and

make them important to the product design and development process.

Currently, programmers usually do design work, and it is a rare programmer who is good at both coding and interactive design. Cooper considers Bill Atkinson and Andy Herzfelds, programmers of the original Macintosh, to be "probably the two most talented, creative, and inventive programmers ever." However, Cooper feels that the General Magic device they created failed because it was "*engineered* and not *designed*" (emphasis in original). A professional interactive designer is needed for every project.

However, most programmers think they know best and refuse to bow to anyone's demands. Too often they design for themselves and not the typical user. They often love complexity and look down on people who do not. This works for games, where the user wants to discover the rules of the game on his own and enjoys being overwhelmed with choices, but not for someone who wants to set his or her alarm clock or write a memo. The most telling story is of the Amazon.com 1-Click interface. Jeff Bozos, Amazon's president, presented the 1-Click design to his programmers. The programmers insisted on inserting a confirmation dialog box, resulting in a 2-click interface. Even Amazon's president had a difficult time convincing the programmers to remove the confirmation box.

There is a need for professional interaction designers. Programmers are concerned that if someone else does interactive design, they won't have anything interesting to do. Cooper argues that interaction design is only a small part of software design. Interaction design is limited to the interface, so programmers still do a great deal of design work.

Another common problem is prototypes turning into products. Prototypes are only supposed be created for demonstration and proof of the concept. But sometimes they work too well, and someone decides they should become the final product. There are several reasons for this such as an executive deciding that the prototype is ready for commercial sales after viewing a dog-and-pony show. Often someone decides to base the final product on the prototype in order to "save time and money." In most cases, the prototype is made out of spit and bailing wire and does not have the right foundation or architecture for a full-featured system. In reality, it is cheaper and quicker to throw out the prototype and reprogram the actual product from scratch.

Which comes back to the one main reason interactive design is not done: people believe that there isn't time for design—which is often viewed as fluff—when in reality, a good design saves time and money.

The rush to produce software often results in substandard products. In most cases, we see badly designed software competing against badly designed software so that there is no lack-of-sales penalty for producing crap. Cooper argues that a well-designed product will beat a product that seems to dominate the market. Poorly designed software endears little loyalty, which is why Netware, a well-engineered product with a lousy interface, lost much of its market share to alternatives including NT and "even AppleShare." Apple, in contrast, was able to hold onto its many customers during its dark days out of loyalty inspired by good design.

How to Design Good Products

While Cooper did not write a "how-to" book, the last part of the book describes his approach to interactive design. He says that it is important to design for the user, but there is a problem. You never know who your user is. Rather than spending endless hours and dollars on market research, he recommends creating a detailed persona and designing for it.

A persona is a hypothetical person. It has a name, family, and motivation. Cooper provides excellent examples from projects he has worked on including the Logitech Scanman. A general rule is, avoid designing for a broad audience and try to help solve a real person's problem. Witness: wheeled luggage was designed for flight crews but became a product popular with the general public.

Apple's iMac might be a case where designing for a narrow audience produced a successful product that went beyond the target audience. The iMac was designed for the first-time computer owner, yet most purchases are made by people who already own a computer. If Apple had tried to make a Mac model to attempt to please everyone, it probably would have pleased no one. Many design decisions (such as eliminating the SCSI, ADB, and serial ports) simplified the machine. Compare the number of ports on an iMac to those on the eOne, a Wintel iMac lookalike. Which offers a more confusing array of ports?

Designers should not blindly copy other designs. Many design conventions do not work well. Many users find dialog boxes annoying and often don't read the warnings they display. A test was done by taping $50 bills to the bottom of a chair and having a person sit in the chair and run a computer program. During the test, a dialog box appeared on the screen telling the person to take the $50 bill. In most cases, the $50 bill remained taped to the chair. Programmers love dialog boxes, but most users don't read them. Use things that work.

The key word is *design*. Don't just respond to a bunch of user requests for new features. Design a product that solves problems. This means that you must understand what the user is trying to do and the larger goals.
Apple and Microsoft

Inmates is not a study of the personal computer industry, although Cooper criticizes Apple and

Microsoft. He only refers to them to show the importance of good design, and any discussion of the two companies is peripheral to the book. He feels that both companies discourage other companies from innovative interface design and then blatantly violate their interface rules in their own products.

Microsoft has a very costly design—or nondesign—process resulting from attrition. Good design eventually manifests in a Microsoft product after 3–5 generations. The source of the problem is that Microsoft is the home of arrogant programmers. While Microsoft does employ professional interface designers, programmers are in control of product design, and one result is that products are designed without much concern for interactivity. Good products eventually evolve after a few versions have been released to the public. Microsoft can afford this costly and inefficient interface design process owing to its large bank accounts. Unfortunately, most other software companies emulate Microsoft's wasteful design process and often fall by the wayside.

Cooper has less to say about Apple: "And that devotion to design and attention to the details of interaction have created for Apple a customer loyalty that borders on—and frequently transgresses into—fanaticism." Otherwise, he feels that "Apple's technological prowess is good, but not great. From a capability point of view, Apple is no better than Microsoft in innovation." Apple's blunders of the past decade would have killed any other company, but its use of design earned it incredible customer loyalty. "The Mac fulfilled the user's needs only as well as Windows ever did, and in many cases less well, but the fulfilling of needs isn't the vital ingredient in market success." Apple's design-inspired loyalty caused many customers to ignore superior solutions. He feels that Apple is fixing its problems and will become a company worth paying attention to again.

This brings out the only contradiction in the book. If Apple offered superior interactive design, why does it not make, in his opinion, a superior computer? Cooper says Windows computers are superior to Macs in most cases. So isn't the superior design of the Macintosh worth something to him? Is Apple's good design only of a shallow nature, did Apple screw up so badly that great design doesn't cover its faults, or did Microsoft Windows eventually catch up to the Macintosh during Apple's bleak years? Or does this opinion reflect Cooper's background as a programmer? I could make a case that Apple's superior design did not make up for other deficiencies in the Macintosh, but he does not fully explain his case. While this issue is not important to his business audience, it is of interest to we Mac people. And while it is peripheral to his book, if he brings up how the Mac's design inspired user loyalty, he owes it to the reader to explain how the Macintosh's design does not translate into a better product.

> "Apple's iMac might be a case where designing for a narrow audience produced a successful product that went beyond the target audience. The iMac was designed for the first-time computer owner, yet most purchases are made by people who already own a computer."

I also think he misses an important point. Apple does not force any software company to follow its interface guidelines. The true force behind design consistency in Macintosh software comes from the users, and Macintosh users are more demanding of good interaction design than are Windows users. When a company makes a stupid change in how an application works, such as making ⌘-W do something other than close a window, I hear users complain. I think that Macintosh users, while accepting the dancing bear too often, are more likely to select software based on a superior interface than on what is popular than are Windows users.

So why does *Inmates* use the command cloverleaf (⌘) as a section separator? I guess it came from some Macloving book designer who wanted to show his or her blind, fanatical loyalty to Apple.

What of Consistency?

Cooper never directly brings up the issue of consistency. I get the impression that he looks at each software package on a case-by-case basis and does not value consistency of use. This is not a fatal flaw because a persona could be created that values consistency. But it is odd that he does not bring up this issue except in attacking Apple and Microsoft's' design guidelines. I wish he had addressed this issue.

For example, he praises Kai's graphic products because feels they address a very narrow audience that values complexity and the game-like attributes of functional discovery. I have heard people from this audience complain about Kai's idiosyncratic interfaces. People complain about how they force you to throw out everything you know about how to use software and not about their complexity or the sense of adventure in using them.

Conclusion

Inmates is an important book for anyone interested in computers. It is entertaining and enlightening. Since many Macintosh users value good design, it gets us to think more about how much better our software should be. I now have less tolerance for software that does not remember that I want my calendar to default to monthly view and not daily, darn it. At the very least, we can be more demanding about the products we buy and think about design more. For product creators, Cooper's approach is sure to result in superior products.

Cooper's book has made me realize how lucky I am to have worked for a company that designed products before creating them. I have worked on projects that were started before the design was even started, because management was in a hurry, at a huge cost and many, many missed deadlines.

Inmates is not an interface cookbook. Cooper's argument for good interaction is irresistible. Coupled with a clear, simple, and entertaining writing style, *Inmates* is must reading for anyone working in technology fields or interested in improving computer products. Despite being a "business" book, *Inmates* is extremely readable and valuable to consumers and programmers. ■

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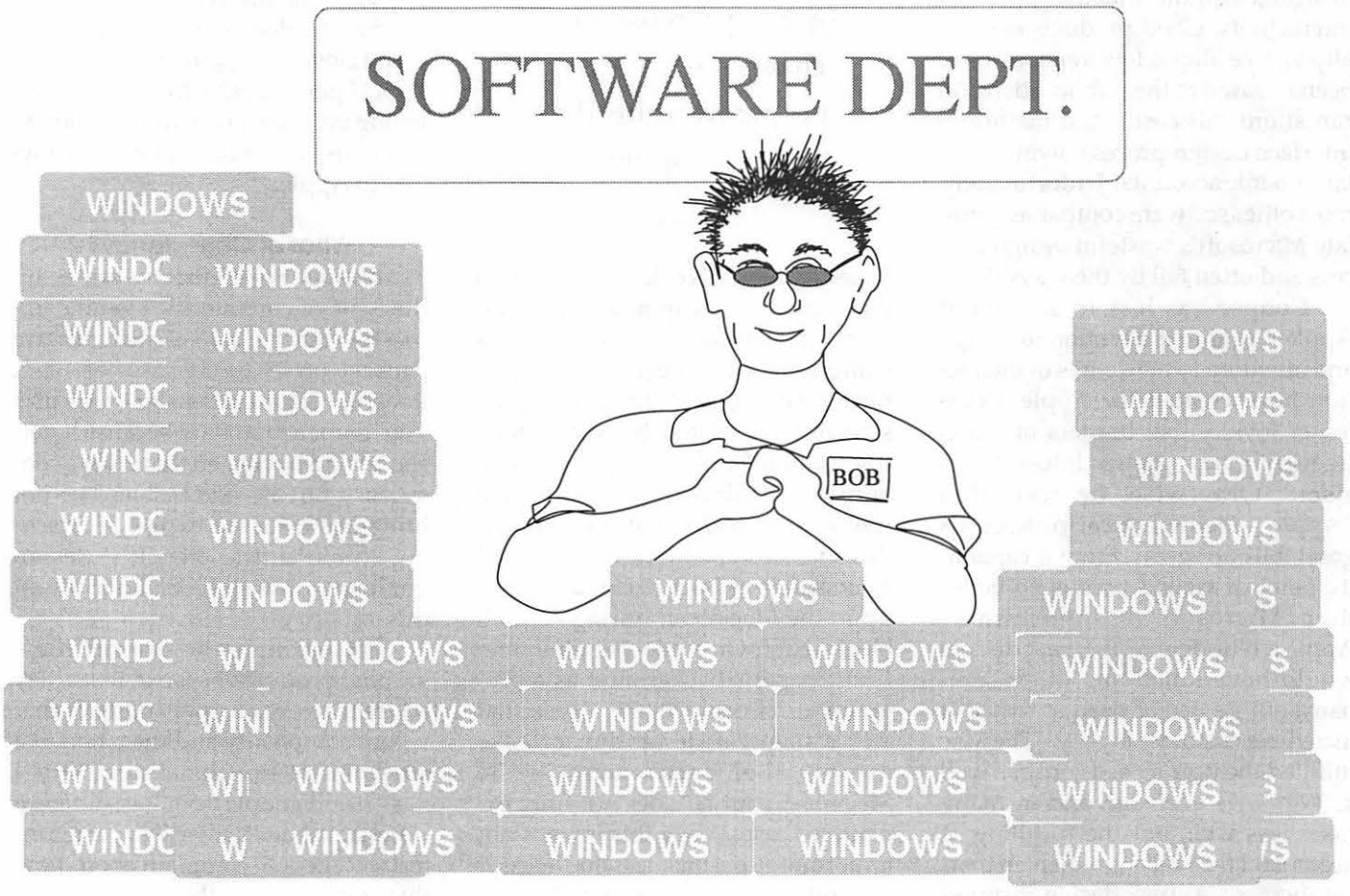

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No, the price is still the same....but now you get coupons, shareware and an autographed picture of Bill and Melinda on their new yacht!

Bailing wire and TAPE— What's a package?

(One of Mac OS 9's hidden surprises.)

by Dale Smith© 1999

MAC OS 9 brought a lot of interesting new features to Mac OS. Some of them are rather esoteric ... and even fun to play around with. One such feature I found new in Mac OS 9 is the "package."

What's a "package"?

A package in Mac OS 9 is a special kind of folder. Although it is a folder, it appears in Mac OS 9 as if it were a single file. A package can contain a hierarchy of subfolders and files all of which belong together. This can be an application with all its support files or a help system with its set of linked documentation files.

What's if for?

The feature was introduced for software developers to offer another easy way to distribute software. A user can install the software by just dragging one "file," the package, to the place the user wants it. The developer can be sure that no needed component will be overlooked by the user.

Because the package folder has a special "package bit" set, the folder in Mac OS 9 no longer displays its folder icon. Rather it shows the icon of the file identified as the main file within the package. This might be an application, a main help file, an installer application, or whatever is in the package.

You can just double click on the package icon, to launch the application or installer, or open the main file in the package.

How can one play with it?

When I read about packages, I knew I wanted to play with them to see what I might be able to do with one. I was mainly interested in how I might run some of my favorite applications from a package.

But first I needed to know how to make a package. At that time there was no utility available to assist in making a package, though some developer tools probably did exist. Also, none of the general file utilities (like FileBuddy or ResEdit, etc.) that permitted manipulation of certain information bits associated with a file or a folder would let me access the "package bit" of a folder, much less change it. For a few days I was stuck. Then some utilities began to make their appearances. There were four different utilities that I became aware of. One was an AppleScript that toggled the package bit for the folder. Another was the Tape drag-n-drop utility and its BoxCutter Contextual Menu Module (CMM) for restoring a package to a standard folder. There is also the Instant Package CMM which was also a simple toggler for the package bit. Finally there was an update to FileTyper which also permitted the necessary manipulation.

I came to like Tape from Public Access Software. Tape does several nice things for you (that some of the other available utilities do not): 1) verifies that the folder structure will make a valid package, and 2) does the whole job of making the package. All of the available utilities will turn a ready to go folder into a package by setting the folder's package bit. But Tape does the whole job: verifies the folder, asks you to select the main file for the package, creates the alias for the main file in the top level folder, and then sets the folder's package bit. I would like Tape even better if it

Fig. 1 - Tape, Main Window

didn't need a separate contextual menu module called BoxCutter to clear the package bit from a folder.

Tape is a simple drag-n-drop utility which makes it particularly easy to use. Just take the folder that you want to make into a package and drag and drop it onto the application icon and Tape's main window opens (Fig. 1).

The main window has two checkboxes: a) Create a new package using this folder, and b) Verify selected folder. I recommend checking both checkboxes, since it takes very little time to verify a package and it is better to know that you'll be getting a valid package.

What makes a valid package? Well you start with a folder (we'll call it the top level folder) containing a number of files and/or folders.

The content of the top folder has some constraints. There must be a single main file that is the point of origin for whatever action is expected to occur when the package is double clicked. This main file will be represented by an alias at the top level folder of the package. This is the only alias that may exist at the top level of the package. When Tape verifies a folder it checks for possible multiple aliases at the top level and it will warn you if any alias already exists. So if you do have any aliases in the top folder, you either have to remove them or create a new folder to be the top folder which contains the previous folder.

When you click the OKAY button in the Tape main window, it will bring up a dialog telling you whether or not it is safe to use Tape to make a package from the selected folder. And when you click the OKAY button in that dialog, Tape presents a file selection dialog to have you select the main file for the package. Tape makes an alias of it in the top level folder, sets to folder's package bit, and the folder icon is replaced by the icon for the main file you selected.

One thing I have done in playing with the package idea is to convert one of my frequently used applications into a package. I use ProTERM Mac for my communications program. The application resides in a main folder with a number of subfolders. I converted the ProTERM folder into a package. The application runs just the same when I double click the package (ProTERM application) icon as when I double click the application. This makes perfect sense, because double-clicking on the package icon is treated in Mac OS 9 like a double click on the ProTERM alias in the top level folder.

> "The feature was introduced for software developers to offer another easy way to distribute software. A user can install the software by just dragging one "file," the package, to the place the user wants it. The developer can be sure that no needed component will be overlooked by the user."

Also, ProTERM is one application which stores all of its preferences within its own folder hierarchy rather than in the System Folder. So everything ProTERM needs to run is contained in the package.

When I am in ProTERM, the program, even under Mac OS 9, sees the package as a folder hierarchy and thus has no problem accessing any files within or outside the package. If I have occasion to create a new file with the application, I can save it inside or outside the package as seems appropriate. I have even been able to update the application inside the package using Stuffit without removing the package setting. So many applications (I don't know how many) can "see" inside a package. But Finder in Mac OS 9 does not see inside packages.

Well, you've seen what I've been doing with the package idea so far. Now if it strikes your fancy, you too can play with packages using utilities like Tape, Instant Package CMM, or others that have come out. Just make up a folder the "does" something you want to do, and then "tape" it into a package to see if it still works. Just remember all the action has to come from a single point of origin ... an application or some other main file. ■

If this interested you and you'd like to discuss packages or tell of your experiences experimenting, we could discuss the subject further on the TCS, Conference 3, on the Inside Macintosh Board or maybe the B.I.T.H.E.A.D. Board.

For further information on packages in Mac OS 9 see Apple Technote 1188:

<http://developer.apple.com/technotes/tn/tn1188.html>

The Tape program is published as shareware ($10) by:

Public Access Software
432 S. Robson Street
Mesa, AZ 85210-2410
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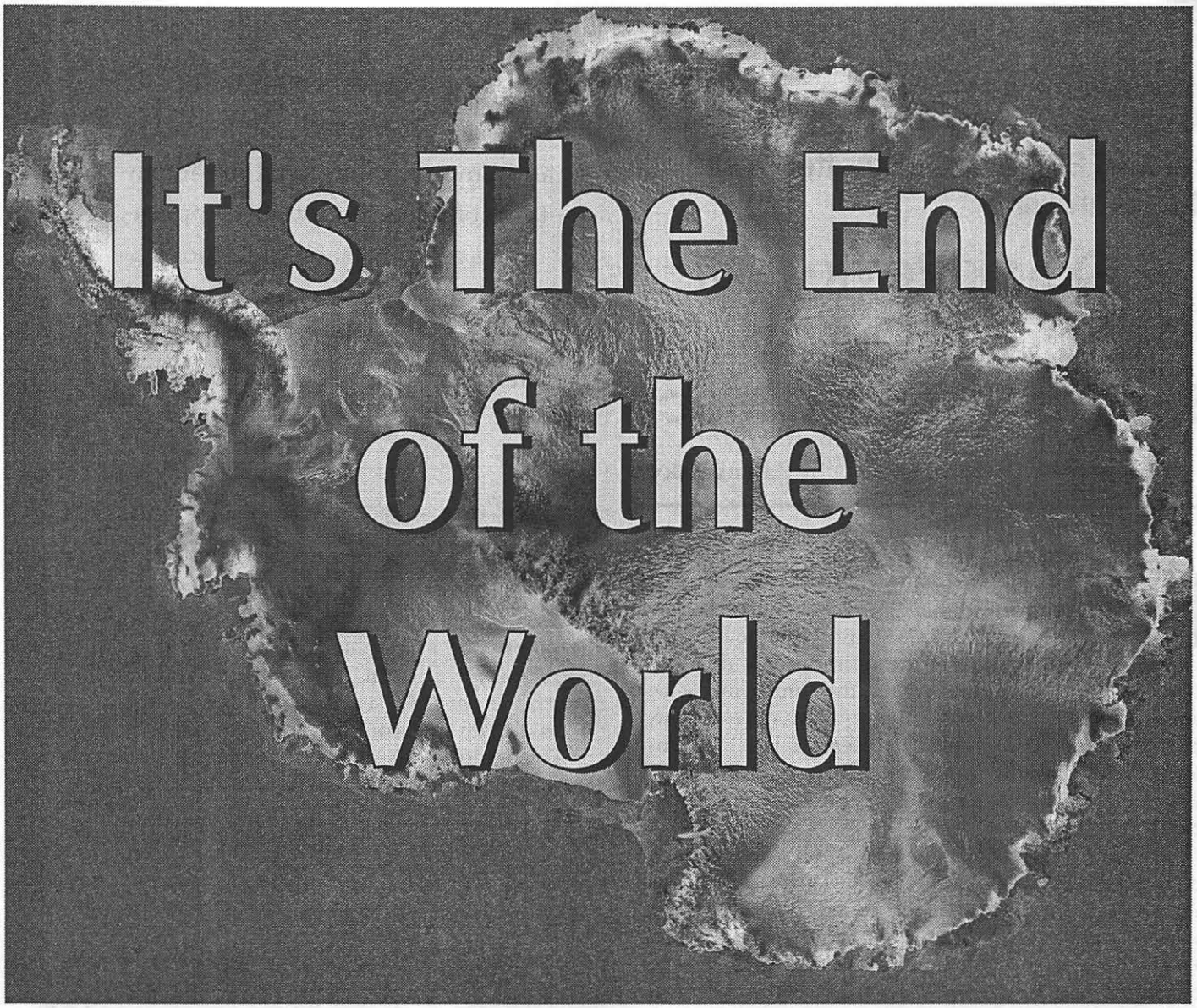
Web site:
<http://www.pasoftware.com>

About the author: Dale Smith has been a member of the Pi since 1983. He is active on the TCS crew and has written occasional articles for the Journal. He does beta testing of various programs, some mentionable and others unmentionables :) He also tries to help members work through communication and OS problems via the Hotline or calls taken at times in the Pi Office.



Antarctica as seen from space by the Canadian RADARSAT radar-monitoring satellite

But we've got to hold elections, anyway.

Nominations for the Washington Apple Pi 2000-2001 Board of Directors are due by the close of the General Meeting, February 26, 2000. Nominate yourself, plus lots of other members for: **President • Vice President Programs • Vice President Publicity • Vice President Volunteer Services • Vice President Membership • Secretary • Treasurer • Director at Large (eight positions)**

Be part of the team that leads the world's largest Apple user group into the next thousand years.

Or at least the next twelve months.,

The Best E-mailer Gets Better—and More Annoying

A Quick Review of Microsoft Outlook Express 5.0 for the Mac

by Al Lubarsky

IF YOU WERE fortunate enough to either read or miss the March/April 1999 *Washington Apple Pi Journal* article on the virtues of Microsoft Internet 4.5, this is your next chance to get the opinion of a devoted Microsoft applications fan. Again, the timing might be about correct for April publication or perhaps even earlier. (The *Journal* editors tend to reserve favorable comments about Mr. Gates' products for your April 1st enjoyment, so if this arrives early, just feel free to save the article.).

My last try at convincing the WAP anti-Empire crowd about the advantages of Microsoft Internet Applications relied on some well chosen (and edited) quotes from famous Mac gurus as to the strong points offered by their free e-mail package, Outlook Express 4.5. This time, we'll go one better on the credibility scale. The Nov 4, 1999 edition of Apple eNews showed up in my Microsoft Outlook Express 4.5 inbox with the following quote:

My last try at convincing the WAP anti-Empire crowd about the advantages of Microsoft Internet Applications relied on some well chosen (and edited) quotes from famous Mac gurus as to the strong points offered by their free e-mail package, Outlook Express 4.5.

6. Try Outlook Express and Win a New iMac

It's easy to install. Easy to set-up. Easy to use. And it's free.

It's Outlook Express 5, the newest version of Microsoft's e-mail application for Macintosh, and it offers a significant number of new features to an already spectacular mail client—features that make addressing mail, sending and receiving enclosures, keeping track of responses, managing junk mail, supporting multiple users under Mac OS 9, and many more e-mailing tasks a whole lot easier.

Best of all, just for downloading the software, you have the opportunity to win a new iMac. That's right, Microsoft is so pleased to be bringing you Outlook Express 5 that it's giving away five new iMac DV computers, one in each color.

For details, and to learn all about Outlook Express 5, visit:

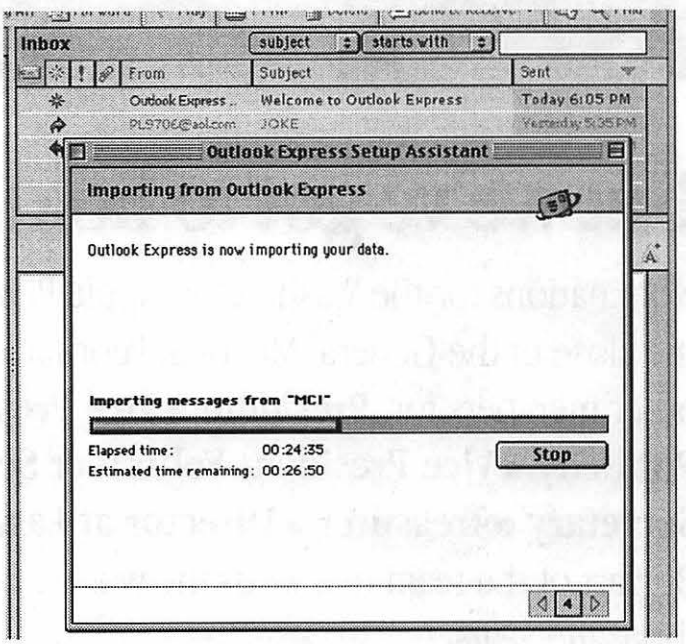


Figure 1. importing

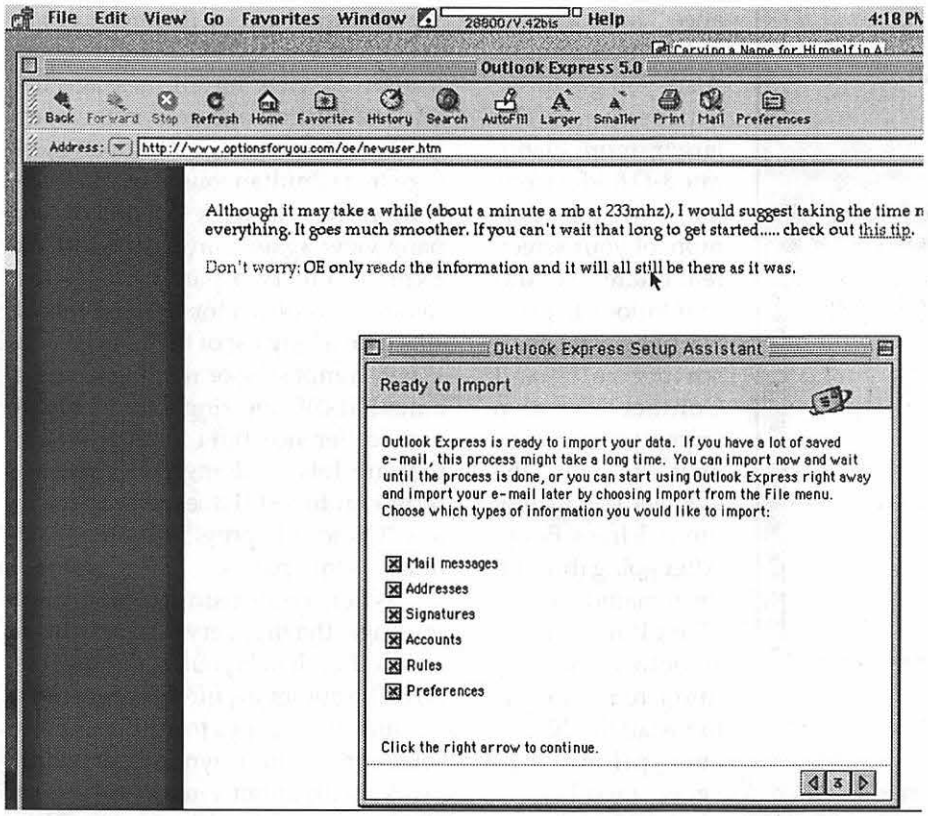


Figure 2. Setup assistant

http://www.microsoft.com/mac/OE/oe5contest.htm

You can't get a better endorsement than that from Apple, except perhaps in regard to their logic on the matter of user groups distributing operating system updates — but I digress. After reading some mixed reviews about Outlook Express 5.0 for the PC and hearing that it wouldn't be available for some time on the Mac side, I had completely put the matter of upgrading out of mind. No ads or e-mail from Microsoft, nothing to prepare me for the momentous occasion except the trusty Apple eNews.

Installation

After reading that blurb, it was a **must have**! So on the evening of Nov 4th, I dutifully logged onto the Microsoft web page noted above and started down their detailed procedure list. The Downloading Instructions have changed considerably. There is now the choice of Binhex or MacBinary, but with no indication of the file size for either. One click on either and the download begins. After picking MacBinary and noting the 9.1MB file transfer via TCS Explorer with my 33.6 modem —that never achieves more than 28.8 connection speed— second thoughts came up. Like how long will my phone line be tied up and since it may be the busy part of TCS Explorers' day, how many others will such a transfer also stall? After getting about 400 KB in 4 minutes, discretion took over and armed with new-found knowledge of the file size, the download was postponed.

On November 5th, a new day and another chance to upgrade. Check the Explorer user list and determine that at about 9:30 AM, the service is pretty empty (underutilized?). Log back on the Microsoft site and start. **Wow**! The first 400 KBs download in about 10 seconds— the site actually recognizes that I already have part of the file. A good beginning to a slow finish. An hour and 20 minutes later, the file has been transferred. A quick look at my Power Mac 6100 clock shows that I'm late for lunch, which can't be. Well, most of the clocks in our home are on Standard Time in November, including the one on the Power Book that runs OS 8.6. But not mine — it still uses OS 8.1 and for some reason I haven't gotten around to opening the Control Panel this week. Yes, it's only 11:00AM. Still time to get the rest of the act; the 128-bit encryption upgrade. Again, after filling out the required certification, the download begins. But this one is a real "need to know" masterpiece. Even after the file transfer begins, there is no indication as to the file size or the expected duration. Wow, really secure. Since the only promise made is to not export the information, I can legally say that if you pick the one option (out of four) which upgrades only Outlook Express 5.0, it is a 645KB file and downloaded on my dial-up modem in about five minutes of anxious waiting— never any indication during that interval as to when it might complete. Bad news for anyone anxious to get to lunch. My favorite story on encryption goes back many years to a place that was then called the Friendship Annex. A classmate remarked to the somewhat overwhelmed cryptology instructor that a one-bit code should suffice. Just change all the zeros to ones, etc. etc. Perhaps the 128-bit types work a little better.

After a long lunch and errand break, back to installing Outlook Express 5.0. The now usual Microsoft method. Expand with Stuffit and then drag the Installer folder to the Hard Drive. In my case that means determining which of the three volumes, on two physical drives, contained the Outlook Express 4.5 version. Easily done, but there isn't

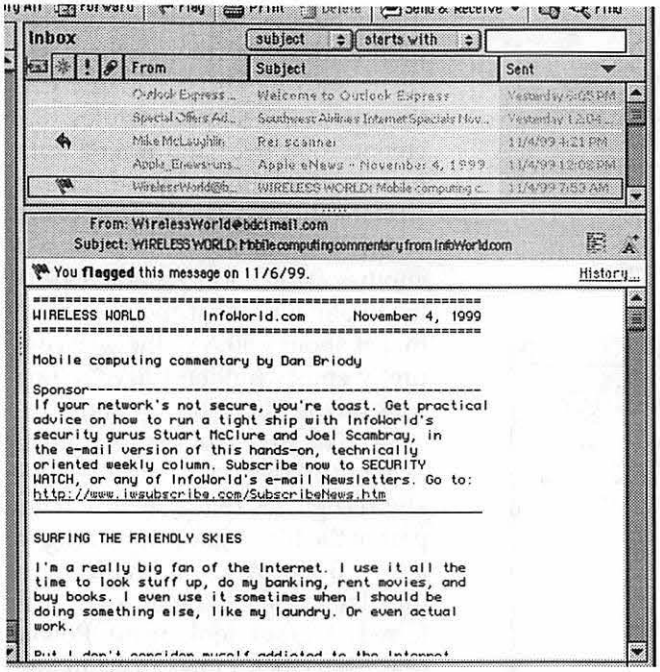


Figure 3. Two pane view

any easy way to put it into the existing Microsoft Internet folder, so it goes on the Hard Drive. The file transfer window estimates four minutes for the transfer; my speedy 66 MHz machine completes it in just over a minute and the files are copied. Clicking on the Outlook Express 5.0 icon brings up the Microsoft first run screen with a very few questions to answer. After stating that you are upgrading from either Eudora, Claris e-mailer, Netscape Communicator or previous versions of Outlook Express, the choices are to go right to Outlook Express 5.0, to run it as trial program or to move your message folders to Outlook Express 5.0. If you have been holding 20 or so folders with several hundred saved e-mails, etc. and have a 66 MHz 601 machine, the first indication is that the transfer will take about 34 hours. Eventually, the time estimate shows about 45 minutes, which turns out to be about the final number. The only thoughtful part of the transfer is that as the Folders are duplicated, the new ones do pop up one at a time, so there is some assurance that progress is indeed being made. Also, you get to see a preview of the larger, more elaborate 3-D folder icons that will soon grace more of your screen real estate than did the Outlook Express 4.5 ones. The mail sorting rules and Contact List also import without incident, except that the Contact List is now the Address Book. After going through the remainder of the "First Run" routine smoothly, the only thing remaining is to install the 128-bit encryption upgrade, which also goes smoothly but without giving any warning, causes my computer to restart, automatically at its conclusion. The next time I try to log onto one of my more secure sites, it will become obvious whether or not that portion of the installation actually took place. As an aside, while NationsBank here in the Washington area is now Bank of America, "they still don't take Outlook Express for Mac"; only 128-bit versions of Netscape will allow access to accounts from Macs - so there is no reason to try testing the encryption there. Total time used for installation, about three hours for someone above, at least slightly, the novice level.

Composing E-Mail With Outlook Express 5.0

First, the changed appearance is noticeable. According to Microsoft, Outlook Express 5.0 has a more Microsoft Office-like appearance in the way menus are handled. Sub menus are tabbed on the equivalent of paper file folders, as is the case in Word. Also, the great "Three Pane View", introduced with such fanfare in Outlook Express4.5, is largely gone. It allowed viewing all message file folders, a listing of e-mail in the open folder and a preview of the open message text simultaneously. In most operations now its back to a one or two pane view again, similar to Outlook Express 4.0. Two panes places the folder icons down the left and lots of space for a long list of folder contents. When composing or reading a single e-mail, it fills the single pane. Not a great difference, but it does point out that are lots of changes. Notice the term Window still does not appear in any "Outlook Express 5.0 for the Mac" blurbs. Only panes.

When composing a new mail message, the first very distinct difference, other than layout, is the address box. The automatic fill-in feature pops up quickly and tries to outguess your selection of the intended recipient. Works with either e-mail address or names, as long as they are stored in your address book. The blurb from Microsoft is:

"Address Auto Complete - Type an address in a new message, and Microsoft Outlook Express shows names and addresses of contacts in your Address Book that match, whether you type a first name, last name, nickname, or e-mail address."

The view also handles e-mail from more than one account, so there is also a selection box in the "From" field. After the Subject line, the attachment box appears, having moved from the bottom of the form in Outlook Express 4.5 to the top. It is improved in that it is now possible to select the file and choose its transmission format from this box, without going back to the Preference menu, which was previously the case. Apple Double is the default selection with the others previously available in Outlook Express4.5 also remaining — BinHex, Base 64 MIME and UUENCODE. Compression by Stuffit can also be selected from the same

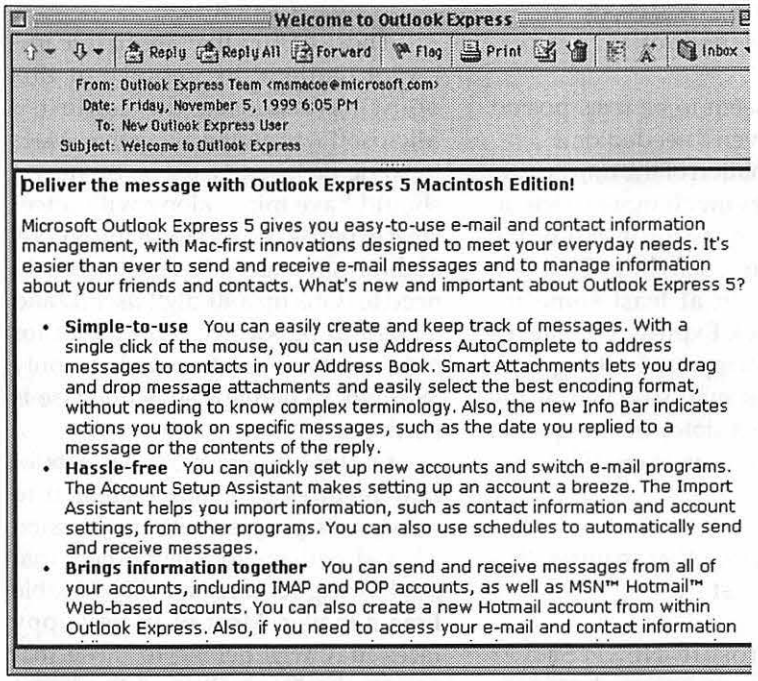


Figure 4. Welcome to

pop up, if desired.

Within the main message body, all of the Microsoft Word features remain, if Word is installed. Several new features that better integrate Outlook Express 5.0 with Word are also mentioned, including a mail merge, but to date I haven't had occasion to need this. (Maybe I really do need it but Mr. Gates just hasn't told me why as of yet?). Lots of features on changing colors of background, using HTML, and formatting. There is also no limit on the number of signatures that can be stored and perhaps the coolest idea yet is to store your signatures in the "Random" list and have Outlook Express 5.0 pick one randomly each time. I won't engage any of the pure mathematicians among our readers as to how random it truly is. **Wow**!

Sending the message is still about the same. Click on send now, send later or save as draft, etc. Also, since Outlook Express 5.0 can handle more than one e-mail account, a choice of how to send, if you wish. But here is where the big difference from Outlook Express 4.5 shows up. Whether it is called an improved user interface or just "dumbing down" the e-mail process, the handy "Progress" block is No More! (The term Progress is still around in Outlook Express 5.0, but it has been redefined for another purpose.) Formerly, a small Progress block showed up in the left corner of the screen whenever messages were being sent or received. It provided such useful information as the size of the file being sent, the number of messages in the send and receive queue and a barber-pole graphic that gave some reassurance that action was taking place. Gone! While this isn't a disaster on the Send side since it is relatively easy to keep track of what you send, when receiving, it just about convinces me- on bad days -to go back to Outlook Express 4.5. Or to give Qualcomm some business. More about it later.

After sending your letter, you might also want to set some rules on filing or disposing of it, etc. The Rules interface is one of the areas that have benefited from the Microsoft Office look, mentioned earlier. Tabbed folders, separate windows for POP and IMAP rules, etc., and all in all, perhaps more flexibility in applying the rules than previously. Also, a more sophisticated Advance Search mode to help find that e-mail you would like

"But here is where the big difference from Outlook Express 4.5 shows up. Whether it is called an improved user interface or just "dumbing down" the e-mail process, the handy 'Progress' block is No More!'

to recall. That done, perhaps you would like to close Outlook Express? **No way**! No close button in the upper left corner. You can either Quit from the pull down menu or compress on the upper right. Not quite a Standard Mac feel, but I suppose that having the compressed Outlook Express Bar across the screen is no worse than any other banner ad. And you can always Quit, fortunately. If you do choose to quit Outlook Express 5.0, the dialog will ask if you wish the deleted messages to be trashed. Previously, this dialog took place only when Shutting Down the computer.

Getting Mail

As was mentioned earlier, there are some major changes from Outlook Express 4.5 in the way mail is received. First, the Pull down menu no longer lists "Receive Only". The choices are to run a schedule (new to 5.0), or to "Send and Receive" or "Send Only". The keyboard shortcut of - CMD-Shift -M that happily brought my mail is also gone. Now it's - CMD- M and it sends and receives. Small point. The scripting addition that dials, receives mail and hangs up that previously appeared on the unofficial Mac mail site for Out-

look Express 4.5 has not been included as a feature in Outlook Express5.0. Fortunately, the old script still works (most of the time) and can be dragged to its new home.

However, as was mentioned briefly under Sending mail, the Progress box is gone. Now, as messages are received, they pop up into either the Inbox, or to whatever folder you have selected via a Rule. Unfortunately, there is no indication as to the total number of messages or their size. Given the uncertainty about what is to be downloaded, there is also no means to easily determine when the transmission will be completed— another sure way to miss lunch if some one has sent a roll of snapshots as an attachment while you are anxiously awaiting a short letter concerning today's menu. A big **boo** on this one.

This change probably leaves less clutter around for those that have full-time connections, especially when using IMAP mail systems or those that leave portions of POP messages stored on the server. Either way, a real loss for people that download e-mail over a dial-up connection. However, for those that are more adventuresome, one of the unofficial Outlook Express mail sites does have some Apple Script posted that might bring the Progress box back without causing lots of other harm. I'll wait to get a more informed opinion before trying that one. The same sites also have had quite a few bug reports, including one noted by several people that notes a corrupted "From" address box.

From the site:

```
"One of the MacOE Team
members has written an
AppleScript that will
temporarily correct the
problem in MacOE 5 that
causes date and time
information to be appended
to the "From" address of
the message sender"
```

Again, there seem to be fixes posted but so far I haven't needed one.

The elimination of the third viewing pane leaves much more space on the screen for listing the in-box or file contents without scrolling. That is a help, because in at least some instances, Outlook Express 5.0 believes that "Today" happened a long time ago and places mail so dated at the bottom (earliest date) of the queue. Not every time, or in every file, however.

There are several other features that may be of interest.

- The Microsoft News Server shows up as an option along with the mailboxes.

- There exists a Junk Mail Filter that can be set to screen mail; while there aren't a lot of details on its operation other than that it can be adjusted by degree of desired sensitivity, my quick test shows that it best rejects mail that have lots of capitalization and !!!!. The junk mailers may also figure this out eventually. Any address in the Address Book is excluded from filtering, as are any domain names that are user-selected when setting up the filter

- A legend appears in yellow across the top of each previously opened message, giving its status. "You **SENT** that message on 4/15/1999" *(you fool)*. Nothing like getting the nursery school treatment from your e-mailer, even if it can be helpful at times.

- A schedule feature that allows e-mail to be sent or received at specified times.

Conclusion

Those of you that are first learning of Outlook Express 5.0 at this point have missed the contest— Microsoft was giving away five iMacs to some lucky early users. By now, I should have mine (along with a tee-shirt expertly heaved from the NOVA auditorium stage?). To register you do need to think up a 40-digit user ID and a 20-digit password. How's that for overkill? Mine might have been only 39 digits so perhaps someone else is getting my iMac.

Outlook Express 5.0 has lots of new features that may endear it to some of the people now using version 4.5 and perhaps to a few others that are looking for a reasonably capable **Free** e-mailer. Most of those happy faces may well belong to those that are on the "high-end" of the home market — those that have full time connectivity to their mail server, work in a predominately Microsoft Office environment, or have multiple e-mail accounts that need to be handled. Others that are satisfied by Outlook Express4.5 may want to think hard before expending this much time and effort to gain the new features while also losing some important items. Obviously, my previous conclusion that Microsoft would be out of this business because of the legal ramifications before shipping a new Outlook Express wasn't exactly correct. Suppose I'll need to try 6.0 next year? Or maybe it will be the product of a new company called "Microsoft Applications for the Mac" by then? ■

Al Lubarsky has been a WAP member since 1995. His bio appeared with his last Microsoft Internet Applications review and didn't say much then, either.

Everything you ever wanted to know about Screen Shots

© Mary Keene 1999

Q: How can I send you a copy of what I see on my computer?

A: If you want to take a "snapshot" of your desktop, hold down "command (apple)+shift+3". This will create a picture showing everything on your screen at the time. (Fig 1) If you do everything right and your sound is turned on, you will hear a loud "snap" sound to indicate the picture has been taken (same sound a camera makes when you click the shutter button). The picture will be found in the HD folder listed as "Picture 1". and can be opened in SimpleText by double clicking on it. (Fig 2)

Q: What if I only want to show part of my screen?

A: If you want to take a picture of a portion of the screen, i.e., a dialog box, press Command+shift+4. The cursor will change to a "cross hair" (+) which you can drag to create a box that encloses the section you want a snapshot of. (Fig.3) When you release the mouse button you will hear a "snap". The picture will be found in the HD folder and can be opened with SimpleText

Q: Every so often, when using the "selective area" command, I get a cursor that looks like an "eight ball." What did I do wrong?

A: Nothing. Most of the time, this cursor will work just like the cross hair—drag around desired area and release the mouse button. Sometimes you may have to move the cursor a hair outside of the described box before you will hear the snap. (Fig. 4)

Q: Recently, I ran into the problem of the eight ball cursor that

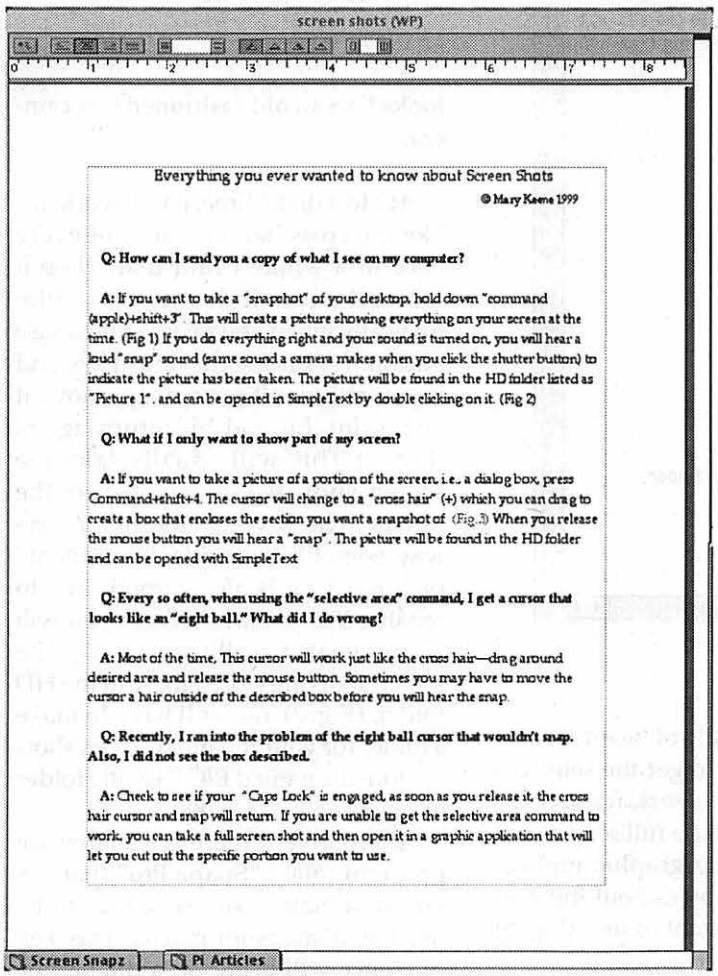


Fig. 1 Screen Shot of whole window

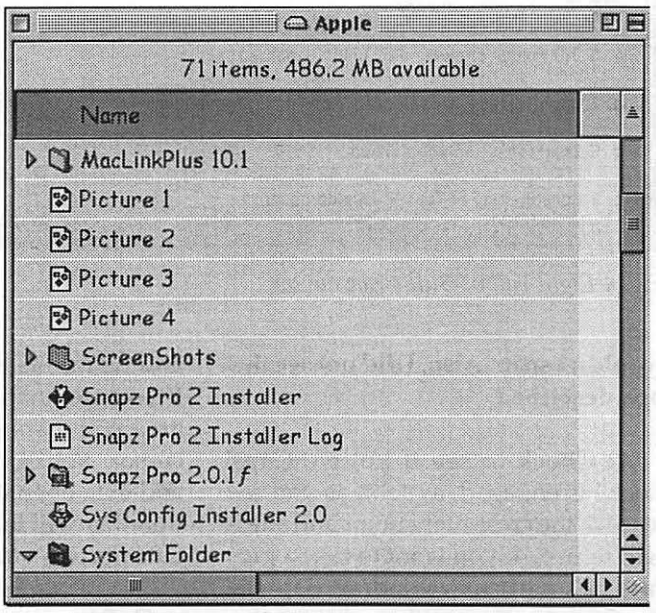


Fig. 2 HD Folder opened to show Snap shot

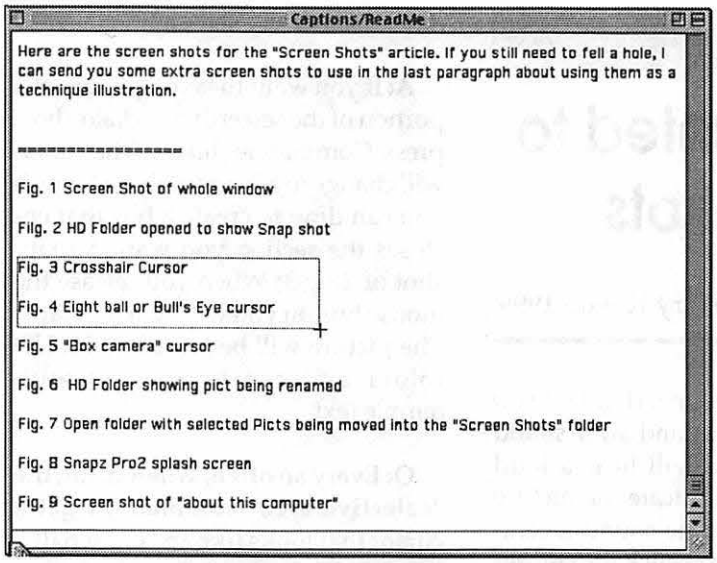


Fig. 3 Crosshair Cursor

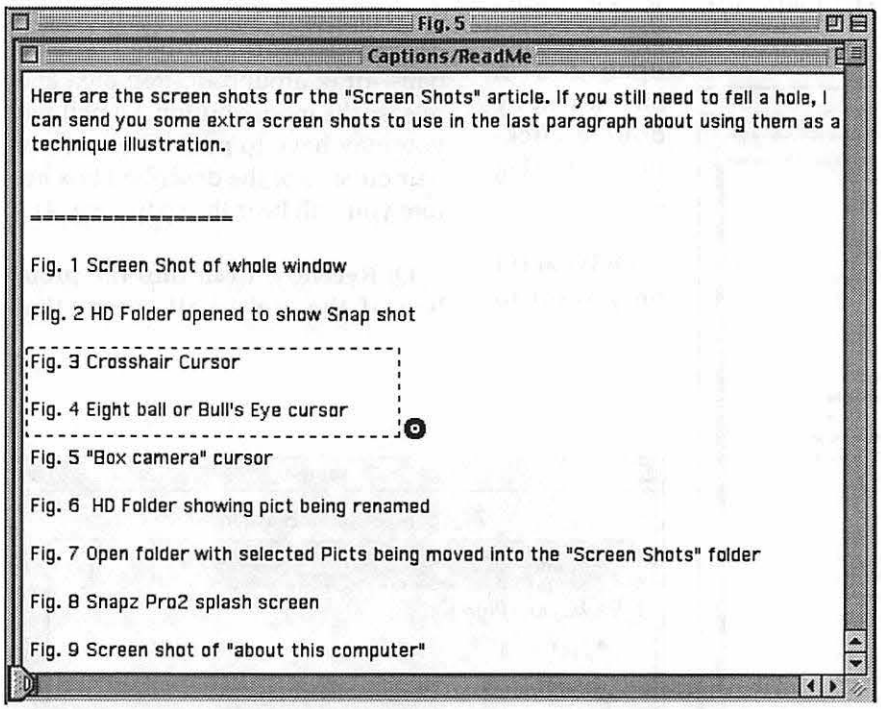


Fig. 4 Eight ball or Bull's Eye cursor

wouldn't snap. Also, I did not see the box described.

A: Check to see if your "Caps Lock" is engaged, as soon as you release it, the cross hair cursor and snap will return. If you want to take a picture of a particular window, depress the Caps Lock and when you see the "8 ball/bull's eye" position it somewhere in the window you want to save. Click the mouse button and you will hear the tell-tale sound of a snapshot. This will show only the selected window and you don't have to bother drawing an enclosure box around the material you want to save. If you are unable to get the selective area command to work (cross hair cursor), you can take a full screen shot and then open it in a graphic application that will let you cut out the specific portion you want to use. (Fig. 5)

Q: Sometimes, I get a cursor that looks like an old fashioned box camera.

"If you want to take a "snapshot" of your desktop, hold down "command (apple)+shift+3". This will create a picture showing everything on your screen at the time. (Fig. 1) If you do everything right and your sound is turned on, you will hear a loud 'snap' sound to indicate the picture has been taken..."

A: Most of the time, it will work just like the cross hair cursor. But every once in a while, I find that while it draws the box, it doesn't click automatically when you release the mouse button. Try hitting the return key and if you still don't get a snap, move it just a tiny bit and hit return again. (Fig. 6) This will usually take the screen shot. If you don't hear the "snap", check your HD folder anyway. Sometimes it will take a "silent" picture. That is also a good time to rename the "Picture" file so you will know what it really is. (Fig. 7) The screen shots are stored loose in the HD folder. (Fig. 2) You will have to make a folder for your renamed screen shots or store the named PICTS in the folder of your choice. (Fig. 8)

Alternatively, there is a shareware program called "Snapz Pro" that lets you designate a key sequence to be used as a snapshot macro. This key sequence will bring up a dialog box that lets you choose what you want

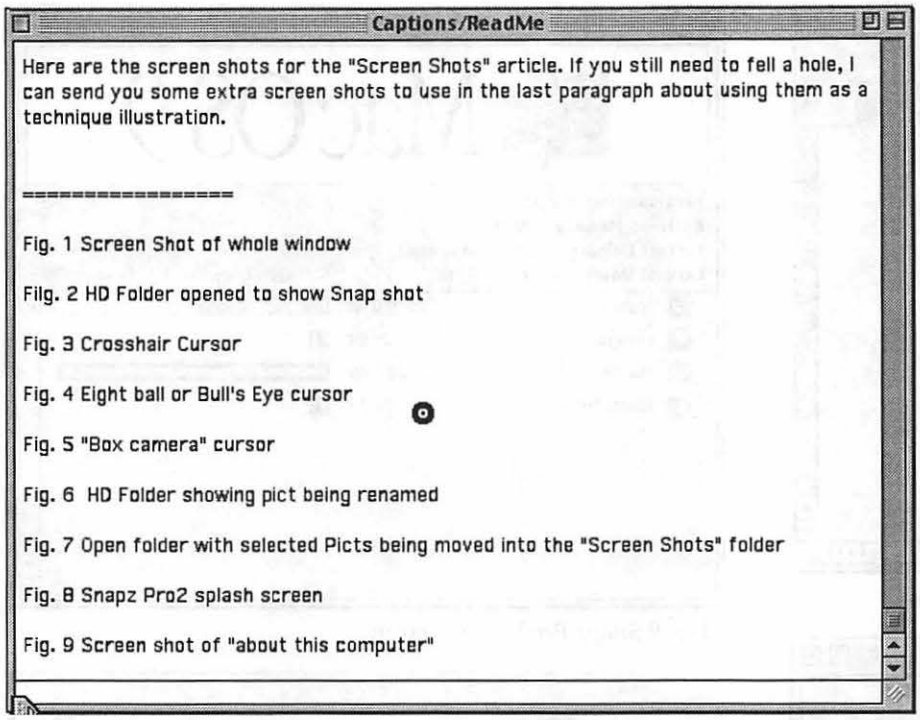


Fig. 5 Eight ball or Bull's Eye cursor did not draw the box but did take the picture

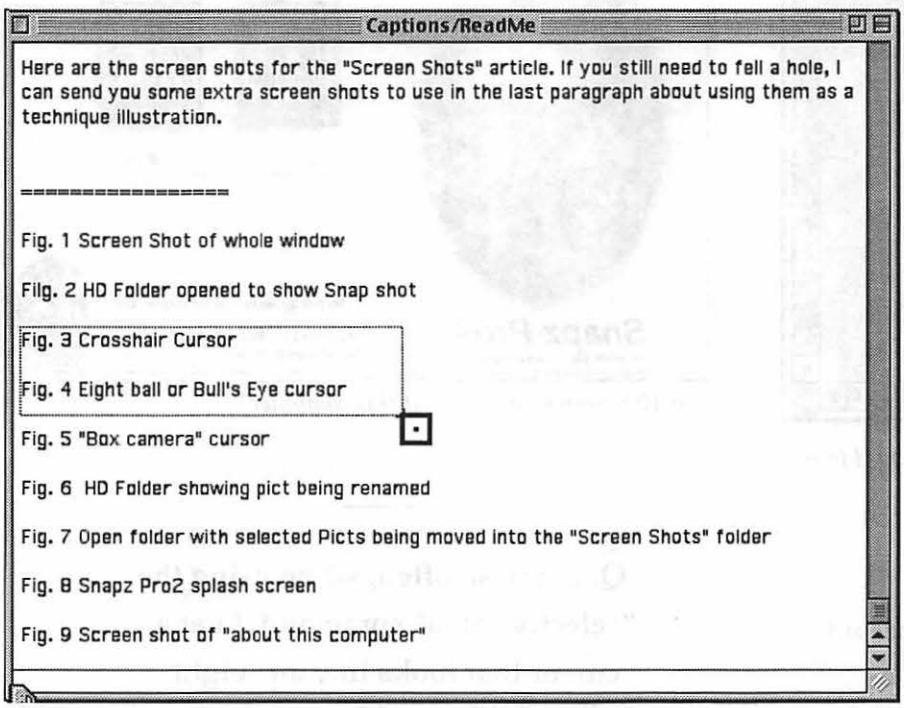


Fig. 6 "Box camera" cursor

in the screen shot. This is a good time to assign one of the function keys so you don't have to hold known a bunch of keys at one time. Because that screen is an active control panel also, I wasn't able to get a screen shot of it. Every time I tried it just changed the key assignment and beeped at me. (Fig. 9)

"If you want to tell somebody how you created something, a screen shot or series of shots is a great way to illustrate how you did it."

Screen shots are a great way to let others see what you are looking at. For instance, if you are having a technical problem and want to ask for help but you don't know how to describe what the problem is, take a series of screen shots that illustrate what you want to convey. Send the screen shots in an email to the tech people and ask them to contact you when they get the email so you can tell them what problem you are having. For instance Fig. 10 shows which OS is in use, how much RAM is available and how much is in use, what applications are open, how much RAM they are using and how much is available, how much Virtual Memory is in use and how fragmented the "system" heap is or isn't. From this information, a tech person can make a lot of diagnoses to determine what the actual problem may be. Think of it as a "blood test" for your computer to see if it is suffering from "useritis" or if it has a for real ailment.

If you want to tell somebody how you created something, a screen shot or series of shots is a great way to illustrate how you did it. Remember, a picture is worth a thousand words.

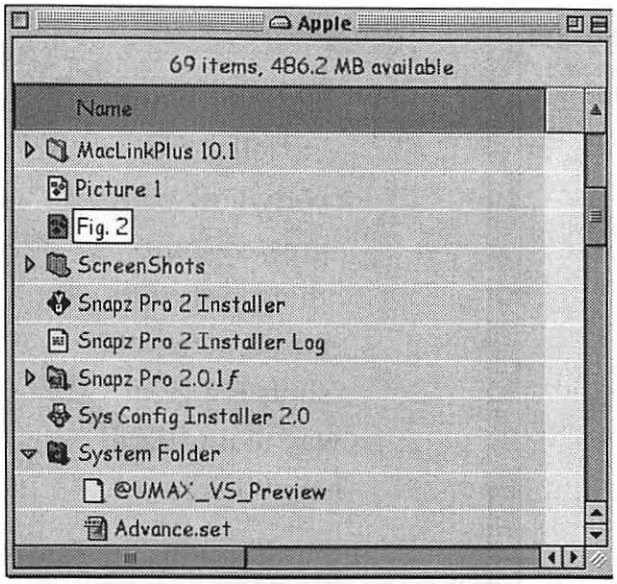


Fig. 7 HD Folder showing pict being renamed

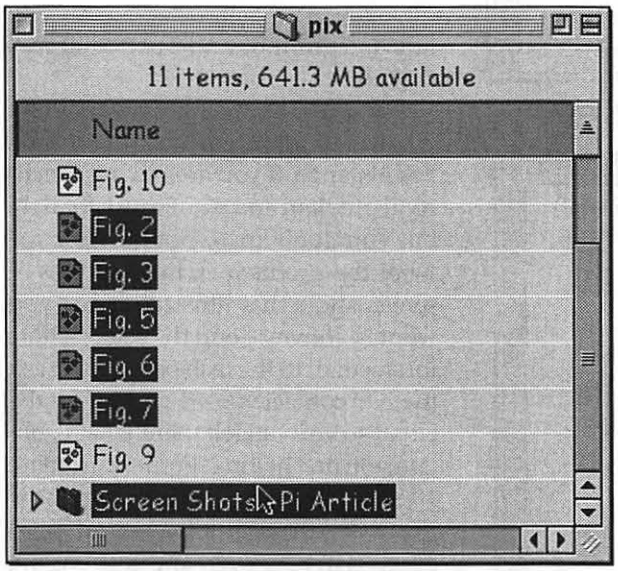


Fig.8 Open folder with selected Picts being moved into the "Screen Shots" folder

Written on
PMac 6100/60, 72 MB RAM, 256k L2 cache card
4.3 GB internal HD 2.1 GB HD external HD
Mac OS 8.61 HFS+ and 9.0 HFS+

Mary is a freelance graphic arts/craft designer and teacher in the Washington Metro area and an active member of the Washington Apple Pi. Questions, suggestions, requests, tips, comments and feedback can be emailed to: e.mkeene@tcs.wap.org

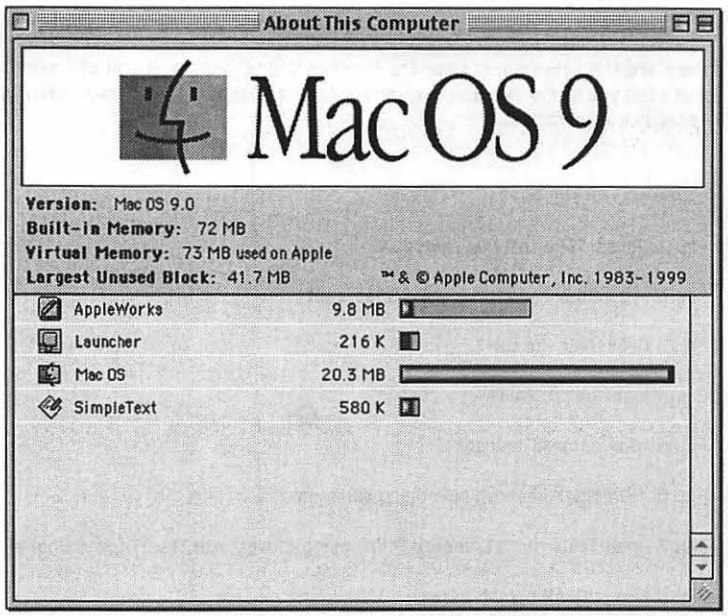


Fig. 9 Snapz Pro2 splash screen

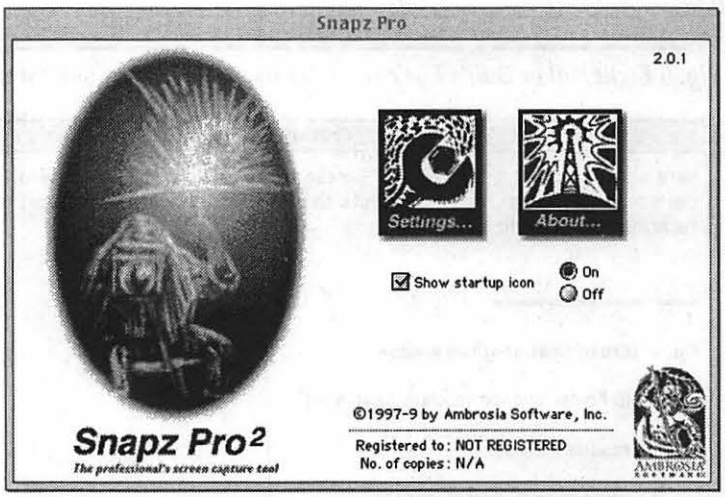


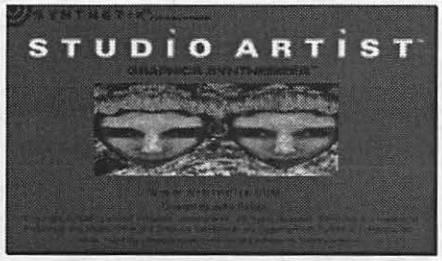
Fig.10 Screen shot of "about this computer"

Q: Every so often, when using the "selective area" command, I get a cursor that looks like an "eight ball." What did I do wrong?

Studio Artist and Video Gogh

Turning Photos and Movies into Paintings

By Dennis R. Dimick



Greetings: Synthetik Studio Artist shows off this "splash screen." John Dalton, who wrote the audio editing program DECK has applied principles of digital audio synthesizers to this program, calling Studio Artist the world's first graphics synthesizer.

GRAPHICS programs that create the effect of "painting" from photographs have always intrigued me. Perhaps this interest stems from my abysmal skills with brush and canvas, and these computer painting tools help me realize a vision I could never accomplish with my own hands.

Long-time tools in this category include programs such as Fractal Design (now MetaCreations) Painter, and before that, Sketcher. An Adobe Photoshop plug-in called "Paint Alchemy" from XAOS Tools still is available. These tools can convert photographs into "paintings" of a sort, but none can paint frame-by-frame on QuickTime movies to create motion studies with a brushed look.

Late 1999 saw two powerful new entries arrive, both from small San Francisco-based companies. They are "Studio Artist" from Synthetik Software and "Video Gogh" from Re Vision Effects. The programs vary dramatically in their setup and ease of use, but both create interesting and varied visual effects using still images and QuickTime movies. Studio Artist is the more expensive and complex offering.

Unlike programs such as Painter, or Adobe Photoshop, Video Gogh and Studio Artist don't begin with a blank canvas. They require an existing source image or movie for conversion into painted art using varied brushstroke styles and effects. Both programs need a Macintosh with fast G3 processor if you hope to get any work done.

"Written by a musician, Studio Artist is derived from the same idea as digital audio synthesizers. Just as audio synthesizers allow musicians to create complex sounds and arrangements, Studio Artist's "graphics synthesizer" is meant to allow users extensive control over many aspects of paint's visual appearance and behavior."

Studio Artist's Graphics Synthesizer

Billed as the world's first "graphics synthesizer," Synthetik's Studio Artist was released last summer at MacWorld Expo in New York. It received rave reviews and was awarded a "Best of Show" award. The plaudits are deserved.

Studio Artist is deep and complex, and the artwork I've seen it create is quite appealing. Studio Artist's claimed skills include "unlimited out-of-this-world paints" using "auto-painting, auto-rotoscoping, image processing, morphing, interactive warping, and animation." All the hype aside, "easy to use" is not a description I would give to Studio Artist.

Written by a musician, Studio Artist is derived from the same idea as digital audio synthesizers. Just as audio synthesizers allow musicians to create complex sounds and arrangements, Studio Artist's "graphics synthesizer" is meant to allow users extensive control over many aspects of paint's visual appearance and behavior.

What makes Studio Artist so special? Other "picture to paint" programs like Painter or Paint Alchemy create single layers of brushstrokes based on preset sampling patterns of underlying colors. What makes Studio Artist different is its ability to identify edges and contours in the original images. The resulting brushstrokes conform to colors, features, and shapes of the original image, and this creates brushed renditions with greater subtlety and fidelity to the source.

Studio Artist comes with 600 preset brush techniques or "patches," as the author calls them. The intent is to combine patches in layered "brushing" combinations to produce complex paint styles. The resulting images are not just pixel-based like a

Hundreds of Options: Studio Artist's screen interface shows off what happens before and after painting. The source image was from a Sony digital camera, and the brushing selection was one of more than 600 available options. Studio Artist's real strength is in painting of QuickTime movies. The unmodified source image always shows at top left.

Photoshop image, but can have at their core a vector-based architecture that allows resizing. You can, for example, use a 4x5 inch photo to create a 16x20 inch painting with Studio Artist and the resulting art will be free of pixels.

Studio Artist comes from a tiny company, and what Synthetik Software lacks in size is more than made up for in creativity. Software engineer and graphics guru John Dalton has won several Mac-industry "Eddy" awards for his powerful multi-track audio-editing program called DECK. (Macromedia bought DECK from Dalton's previous firm, OSC Software a few years ago. DECK II now resides at BIAS, Inc.)

Despite its heritage, Studio Artist's user interface is hard to master. A repeated reading and referral to the manual is required, and still you'll scratch your head trying to figure out how to use program options. It took me about an hour to figure out how to create a painted QuickTime movie, but what finally resulted was awesome. Beware, the manual comes only as an Adobe Acrobat PDF file, so you'll need to print it.

At a price of $295, Studio Artist is meant for someone serious about creating digital artwork. You can unlock some of the program's power by playing around. But only by devoting time, study, and patience to its odd interface will you begin to realize some of Studio Artist's strengths. (If you have ever tried to use DECK II you will know what I mean.)

One can only hope that future versions are more accessible. Obscure menu commands and less than intuitive methods of setting up paint sequences mar the attractiveness of this unique and powerful program. Regardless, Studio Artist 1.0 is an impressive debut.

Video Gogh's Simple Strokes

Available only via electronic purchase and download from the Re Vision Effects website (www.revisionfx.com) Video Gogh takes a "suite" approach to its image processing tools. You can buy a standalone program for $20, a QuickTime effects plug-in for an additional $10, or you can pay $70 more and get a plug-in for Adobe After Effects 4.0.

Besides being inexpensive and easy to use, Video Gogh's premise is simplicity. Once you open an image or movie for processing, choose

Video Gogh's Effects: This before and after comparison shows the brushing effects of ReVision Effects' $20 Video Gogh program. You can apply oil, watercolor, or chalk effects to existing images and QuickTime movies using brushes of varying sizes. Video Gogh also comes as a QuickTime Effects plug-in for programs like Apple Movie Player and Adobe Premiere, and as a plug-in for Adobe After Effects, a video compositing program.

Gogh Online: As indicator of the rising role of web-based commerce, ReVision Effects' Video Gogh can be purchased only at the company's web site. The basic program, spash screen shown here, sells for $20, and two plug-ins for QuickTime and Adobe After Effects sell for more.

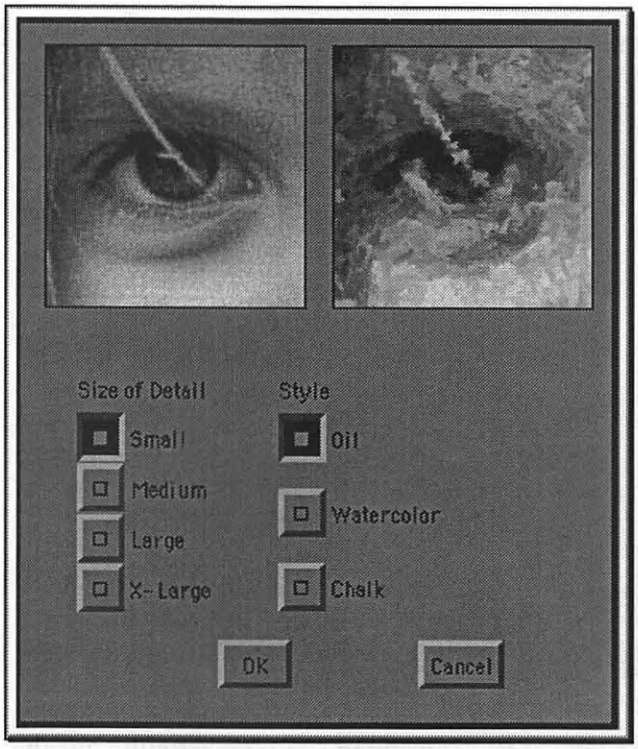
among three media types: oil, chalk, or watercolor. Then you choose between small, medium, or large brush strokes. That's it.

With simplicity comes limitation in Video Gogh's flexibility, but the variant QuickTime and After Effects plug-ins both offer increasing ability to customize aspects of the "look" when painting.

Video Gogh's QuickTime plug-in works with programs such as Adobe Premiere 5.1a and Terran Interactive's Media Cleaner Pro. Video Gogh's After Effects plug-in also works within Apple's Final Cut Pro and offers advantages of customizable masking and layering, and variable brush size, distance, and opacity. The After Effects plug-in also lets you vary these aspects over time in video sequences and animations.

Like Studio Artist, Video Gogh uses an "intelligent" image sampling and animation technique to create its brushed images. Video Gogh's prowess comes from a technology called "Motion Paint," which received an Academy Award "Oscar" in 1999 for Best Visual Effects used in the movie "What Dreams May Come."

How well does it work? If you're looking to turn pictures into brushed paintings, you couldn't ask for a simpler solution at a better price. The lack of choices limits the program's op-



Simple Gogh: Video Gogh's setup box is about as easy as it gets. Choose whether you want oil, watercolor or chalk. Then select a brush size from small to large. Like Studio Artist from Synthetik, Video Gogh's strength comes in automatic painting frame-by-frame on QuickTime movies.

tions, but what do you expect for $20? The Video Gogh program doesn't handle movies with still images well, as each picture bleeds into the next to create a mass of layered images. You can get around this by using the QuickTime Effects plug-in and a program that allows forced key frames at each picture change, such as Terran's Media Cleaner.

Despite the Video Gogh program's economical price, you will need lots of RAM installed. For example, I kept getting crashes or out of memory errors when trying to open and process 18 MB Photoshop TIFF files even when Video Gogh had 100 MB of RAM given to it.

Video Gogh's ultimate custom paint look comes when using the plug-in for Adobe After Effects. Since this plug-in depends on the host program's versatile ability to set key frames, create masks and layers, and to combine multiple filter effects, a vast range of visual effects can result.

Like Studio Artist, Video Gogh's real strength comes when converting QuickTime video sequences into painted movies. Both programs require patience while waiting for paintings to complete. For best results, plan on the fastest G3 or G4 processor you can get, and plenty of free RAM and disk space. Specifically I'm talking hundreds of megabytes of RAM and multiple gigabytes of disk space. You will need it.

Painting's a Pleasure

Video Gogh's After Effects plug-in and Synthetik's Studio Artist both can produce still and video art of subtlety and complexity. If you don't own After Effects ($680) the less expensive choice obviously is Studio Artist, but you will pay for Studio Artist's steep learning curve. Even so, Studio Artist gives you a nearly infinite selection of brushing and drawing options to create painted-looking graphics from photographs and QuickTime movies.

If you're interested in trying this type of painted imaging, start with the inexpensive and impressive $20 Video Gogh application or QuickTime effects plug-in. Controls are simple, easy to set up and use, and the results are eye-opening. ■

"Besides being inexpensive and easy to use, Video Gogh's premise is simplicity. Once you open an image or movie for processing, choose among three media types: oil, chalk, or watercolor. Then you choose between small, medium, or large brush strokes. That's it.

Pi member Dennis Dimick last wrote for The Journal on the new web-capture plug-ins for Adobe Acrobat. He can be reached via email at ddimick@aol.com.

Studio Artist
$295
Information at
www.synthetik.com
Synthetik Software, Inc.
30 Sheridan Street
San Francisco, CA 94103
Phone 415-864-6582 (ext. 72)
Email: candice@synthetik.com

Video Gogh
Application $20; QuickTime Plug-In $30, After Effects Plug-In $90. Discounts apply if you buy more than one.
Available only online at
www.revisionfx.com
ReVison Effects, Inc.
San Francisco, CA
Email: info@revisionfx.com

Telecommunications Help Sheet

A quick reference sheet for use while on the TCS

TCS Phone Numbers:
—**301-984-4066**
(for 300, 1200, 2400 bps)
—**301-984-4070**
(for 9600, 14400, 28800 bps)

Main Menu
<B> ..... Bulletin Boards
<C> ..... Change Conferences
<E> ..... E-Mail
<F> ..... File Transfer
<L> ..... General Library
<M> .... Membership Search
<N> ..... Now On System
<O> ..... Off the System
<P> ..... Public Library
<T> ..... Time and Date
<U> ..... User Preferences
<W> .... Read Welcome Bulletin
<X> ..... eXamine Weather Forecast

File Transfer Menu
<A> ..... Adjust Pointers
<G> ..... Global Read New Descs
<L> ..... List All Available Areas
<N> ..... New File Descriptions
<O> ..... Off the System
<Q> ..... Quit to Main Menu
<R> ..... Read All New Descs
<Z> ..... Zelect File Areas

File Area Menu
<A> ..... Alphabetical List
<B> ..... Batch Functions
<C> ..... Change File Area
<D> ..... Download a File
<F> ..... Find File Descriptions
<H> ..... Help With File Transfer
<I> ..... Info on File Contents
<L> ..... List All Files
<M> .... Mark Files for Downloading
<O> ..... Off the System
<Q> ..... Quit to Main Menu
<R> ..... Read File Descriptions
<T> ..... TitleScan Descriptions
<U> ..... Upload a File or Files
<W> .... Welcome Bulletin

Editor Menu
<A> ..... Add to File
<C> ..... Clear File in Memory
<D> ..... Delete a line from File (#)
<E> ..... Edit a Line (#)
<F> ..... Find a String
<G> ..... Global Search & Replace
<I> ..... Insert Lines into File (#)
<L> ..... List the File (#)
<M> .... Toggle Reply Mode
<N> ..... Line Numbering Mode On/Off
<P> ..... Purge Temporary File
<Q> ..... Quit - Clear File & Exit
<R> ..... Read back from Temporary File
<S> ..... Save File and Exit Editor
<T> ..... Write File to Temporary File
<U> ..... Upload Mode Toggle (No Reply Mode)
<V> ..... View Temporary File
<X> ..... Exchange a String within line (#)
<"> ..... Modify Reply Mode Characters

Change Conference Menu
<1-8> ... Choose Conference Number
<L> ..... List Conferences Available
<Q> ..... Quit to Main Menu
<1> ..... General Conference
<2> ..... Apple II Conference
<3> ..... Macintosh Conference
<4> ..... Classified Conference
<5> ..... Global General Conference
<6> ..... Global Apple II Conference
<7> ..... Global Macintosh Conference
<8> ..... Global Miscellany Conference

Conference Menu
<A> ..... Adjust Pointers
<C> ..... Change Conference
<G> ..... Global Read All New Msgs
<L> ..... List All Available Boards
<O> ..... Off the System
<Q> ..... Quit to Main Menu
<R> ..... Read All New Msgs
<W> .... Welcome Bulletin
<X> ..... Xfer All New Msgs
<Z> ..... Zelect Boards of Interest

Bulletin Board Menu
<A> ..... Alter/Edit an Existing Message
<B> ..... Blind Reply to a Msg by Number
<C> ..... Change Boards
<D> ..... Delete Msg From or To You
<E> ..... Enter a Message
<F> ..... Find Message by Keyword
<L> ..... Library for this Board
<O> ..... Off the System
<Q> ..... Quit to Main Menu
<R> ..... Read a Msg or Msgs
<S> ..... Scan Message Headers
<T> ..... TitleScan Msg Headers
<W> .... Welcome Bulletin for Board
<X> ..... Xfer (Download) a Msg or Msgs

User Preferences
<A> ..... Alter Password
<E> ..... Emulation Mode
<F> ..... File Transfer Protocol
<P> ..... Prompt Character
<Q> ..... Quit to Main Menu
<R> ..... Reply Mode Prefix
<V> ..... Video Length
<X> ..... Expert/Novice Prompts
<Y> ..... Your Current Status

Electronic Mail Menu
<B> ..... Blind Reply to a Letter
<D> ..... Delete Letters
<E> ..... Enter a Letter
<F> ..... Find Letters
<H> ..... Help/Brief Tutorial
<I> ..... Info on Letters
<K> ..... Keep Letters
<L> ..... List Letters
<O> ..... Off the System
<Q> ..... Quit to Main Menu
<R> ..... Read Letters
<S> ..... Scan Headers of Letters
<T> ..... TitleScan Letters
<X> ..... Xfer (Download) Letters

Please see page 50 for the TCS Help Hotline phone numbers.

Another Cable Modem Story

by Bob Whitesel

In the beginning

MY INTEREST in cable modems was piqued when I read Don Essick's data-packed article on high speed access in the May-June issue of the WAP Journal. My wife had given up using the internet because it took so long for the bloated web pages to load with our 28.8 kbps modem. I couldn't see how doubling that speed with a 56.6 kbps system would help, especially since I hear that those devices rarely exceed 50 kbps. So, a late August flyer from my Fairfax County cable company announcing the availability of the Roadrunner service in my neighborhood really got me thinking.

Let's check this out

I checked out their preregistration site and went back to read Don's article again. I posted a note on the Explorer board asking if some Pi member had experience with Roadrunner. Mary Keene responded to my post with information that Eric Norby had the service. After a few exchanges with Eric, I was ready to sign up. Since I have a PowerMac 7100/66, I wondered about the "Network Interface Card" – the connection the cable company promised to provide to link to Roadrunner's RJ-45 connector. The Roadrunner literature indicated they would install whatever was needed to connect with their modem. I'm not sure that's true, and don't recommend letting them do that step at all. Since my 7100 already has an ethernet connection, all I needed was an AAUI transceiver, available for about $25 mail order. That piece arrived the day before the cable installer showed up. It fits into the old style ethernet connector on my Mac and has a RJ-45 connector on the other end.

> "I am very pleased with the result. I haven't yet run their test files to measure download speed....it is now worth our time to log onto the net. Since I pay my bills with CheckFree, that operation is now not only quicker, but also independent of the telephone lines."

OK, let's try it

A call to Roadrunner shortly after Labor Day led to an installation appointment on Friday afternoon, September 17th. Wow! Only a ten day lag between sign-up and service. I wondered if my attic would be cool enough for cable pulling by then. Friday, the 17th, turned out to be the day after the day that Hurricane Dennis blew by. When I called on that Friday morning to confirm the installation appointment, I was surprised to hear that the cable modem installers are independent contractors and were not affected by the cable company's storm damage service problems. It all went very smoothly, amazingly so. The installer arrived before the appointed time of 1 pm and was finished about 90 minutes later. We went surfing that evening!

Installation Lessons

Several points about my home installation are worth mentioning. First, the modem needs to downstream of nothing else in your house. Consequently, the installer inserted a "tee" at the cable connection block on the outside of the house and ran new cable up the side of the house, through a new hole in the siding (which I must remember to caulk), across the attic and down a new hole in the ceiling of the closet next to my workstation. Then, he drilled a large hole through the closet wall to run the double coax cablethrough to the back of the computer. If I had it to do over again, I would have cut my own hole in the wall between the closet and the "computer room" and installed a coax jack in a duplex box for him to connect the end of the cable. What's there now is functional, but neither neat nor attractive.

Second, I would open TCP/IP, make a duplicate of one of my configurations, rename it "RoadRunner" and make changes to enable connection via ethernet and configuration by using DHCP server. All other boxes should be cleared before saving it.

More software

After the cable and modem installation were completed, the installer helped me with the software. As others have indicated, these folks are not Mac-savvy; my presence was a must. Since I had installed Internet Explorer 4.5 and Outlook Express 4.5 several months earlier, we bypassed the step of downloading that "specially-configured Roadrunner preferred versions of these two programs" from some web site. We did install the "Roadrunner software" from the CD

provided by the cable company. Next, he showed me how to log on, gave me a startup password and pointed out a page at the company's web-site that I needed to fill-in for future technical reference. (The idea here is to have system configuration information on file for review by technical support people in the event of problems.) The cable company sets up an e-mail account for the master user. That person can set up as many as five subsidiary accounts for other members of the household. It's clear to me how I can do that using Outlook Express. My next challenge is either to configure an interface for Claris E-mailer 1.1v3 or convert my wife to an OE user.

Experience to date

Internet access using either Internet Explorer or Netscape Navigator is easy. I can even make Navigator the default browser if I wish. I have so far found no use for the "Roadrunner software" other than the logon function to gain access to the e-mail account setup. Routine access to e-mail occurs by bringing up the e-mail client.

I am very pleased with the result. I haven't yet run their test files to measure download speed. Suffice it to say it is now worth our time to log onto the net. Since I pay my bills with CheckFree, that operation is now not only quicker, but also independent of the telephone lines. The only difficulty has been accessing my wife's e-mail server from Roadrunner. For example, I have setup accounts under my name for both the TCS and Roadrunner in Outlook Express. Using the <Receive All> command under the Tools Menu, I can download messages from both servers with one mouseclick. When I try to do the same for my wife's accounts under her name, her "other " server won't cooperate. Roadrunner's technical support was clue-less. The technician only said that there might be some incompatibility between the two servers.

What about costs?

It goes pretty much as Don Essick reported. I paid $80 (not $100) for the installation. I suspect the reduction occurred because I provided the AAUI transceiver. Since we are already full service cable subscribers, our monthly charge will be about $50 per month. If we abandon our other e-mail subscription, the effective price premium drops to $40 per month.

Conclusion

It's now the end of November as I'm proofreading and preparing to submit this article. We've had the service for about six weeks. I spend roughly 20 minutes per night on the internet and am happy to make the extra cash outlay each month for the service. I expect to find more resources in the future. The psychological barrier I developed from getting "dropped by the telephone connection" is disappearing. I'm very grateful to Mary Keene for steering me to Eric and urging me to write this article and to Eric Norby for his assistance and encouragement. ■

How the iBook Revolutionized My Life

By Blake Lange

MY LIFE TURNED upsid e down the moment my wife Martha said the word, "I want one of those." Like an addict who wants nothing more than hooking everyone on the his drug of choice, those were the magic words. Her utterance entranced me to go directly to my supplier to fix her up with one. Thus began the odyssey.

As it turned out the iBook was not available for about six weeks. In the meantime I thought through what I would have to do to integrate the new kid on the block into my home AppleTalk network. This network includes three Macs from LC to IIvx to TAM, a LaserWriter IINTX, an AppleTalk ImageWriter II, and an HP DeskWriter, along with SCSI Bernoulli drives, CD writer, and scanner. AppleTalk has been getting rather long in the tooth and in practice has been much to slow to function well; except for the copying of the smallest files it was just useful for printing. It was time for my network to be updated and the iBook was just the catalyst needed.

First I was able to find a couple of ethernet cards on the used market. Then I grabbed the LocalTalk Bridge from the tremendously useful Apple Pi Fillings CD-ROM put out by the WAP. This handy little piece of software ties together Ethernet and AppleTalk networks. It is free from Apple with the caveat that it is unsupported—which means if you have problems no one at Apple will talk to you about it. Another piece of software called LocalBridge came with one of the Ethernet boards but the documentation said it only supported recognition of one designated printer on the LocalTalk network, not every device, so I used the Apple software, instead. One of the Ethernet cards had an old-style connector but I was able to pick up a used Apple adapter so the entire network would use standard network cables. For less that a hundred buck I picked up an Asanté FriendlyNet 8-port Ethernet Hub. Unfortunately, this piece of equipment, like so many others, came with a brick shaped power adapter plug. This made it necessary to buy a new surge protector specially designed for such "bricks." Apple showed their smarts by rethinking what a power adapter

should look like and where it should be on the wire. The iBook power adapter sits on the desk and double as a place to wind up excess wire. Brilliant!

With the ethernet network set up and integrated with the LocalTalk network it was time to install the Airport. The Airport base station has only three ports: power, telephone, and ethernet. These were easy to plug in. Here, Apple provided the customary brick power adapter. Good thing I bought the special power adapter. One thing I keep telling myself is that each time I get a new power adapter brick is I should mark on it what equipment it is for. Being the lazy soul I am I have never gotten around to it. I will just have to live with the fear that some day I will become hopelessly confused as to what goes with what. But I digress. Once I had all of the cables on hand plugging in the base station only took a few minutes.

Installing the card in the iBook was not hard either. There are very clear instructions. The only complexity is that the card comes with an adapter for the iMac and the G3 which is not needed for the iBook. But it is simple to remove. Putting it into the iBook is simple once one has read the instructions. The keyboard flips up from the back giving easy access. Installing the card took about ten minutes.

Now the fun part started. Both the base station and the card came with software, one for programming the base station and the other for using the card. Programming the base station consists of two steps. The first step is to set up the computer to access the internet. When that is working well using the built in modem one proceeds to step two. Step two is to copy the settings to the base station.

It sounded easy but there is a problem with this methodology. It is so simple one cannot even see what has happened. One follows the steps and if it does not work then there is no way to see what has happened and one has to start over. That would be easy except that in order to use the Airport one has to change the internet settings on the computer. So if it doesn't work and one has to start over one has to "restore" the original settings that would connect the computer to the internet using a modem. If one did not have the foresight to record these settings before beginning the process, one would have to research resetting up ones computer which may involve some frustration.

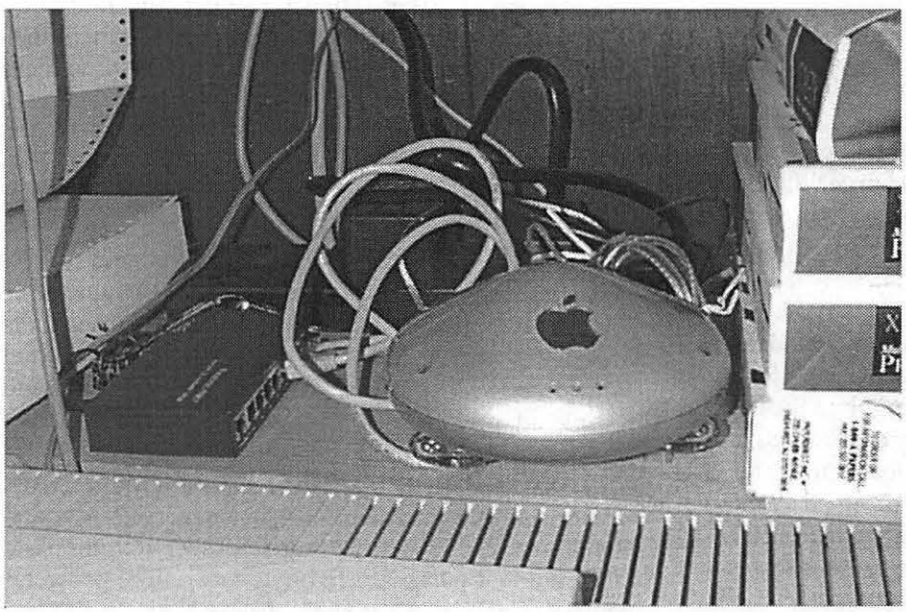
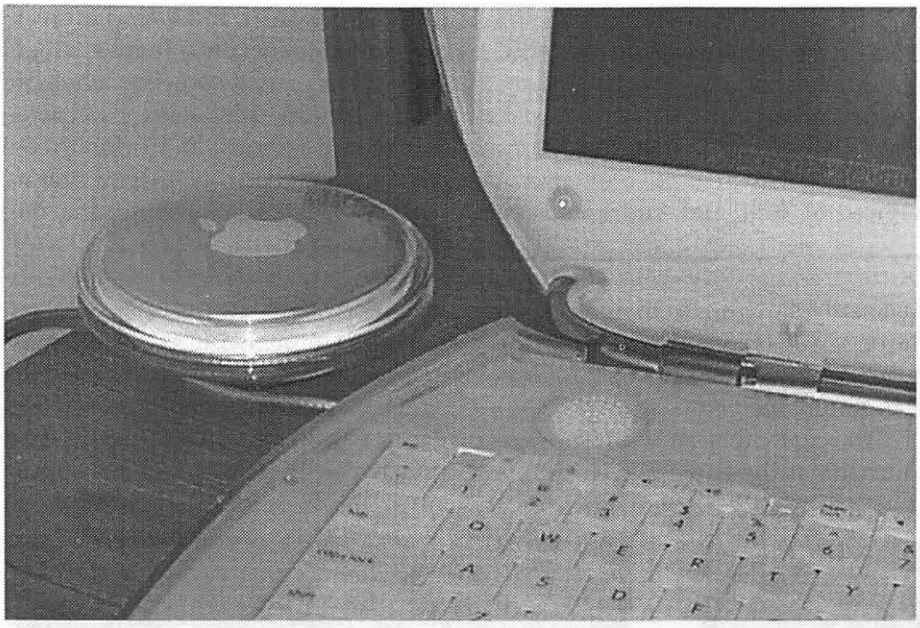
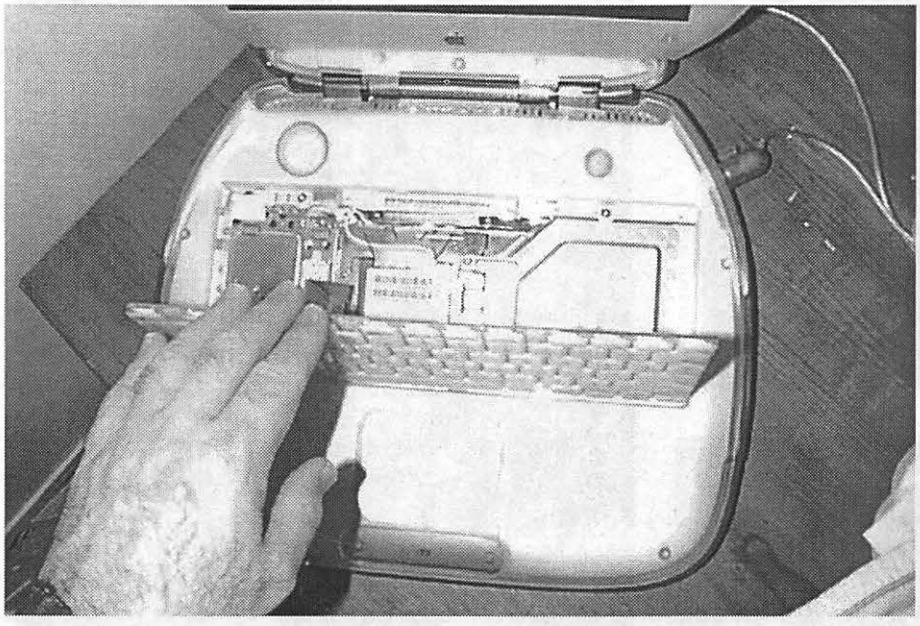


Figure 1. The airport

"Then I grabbed the LocalTalk Bridge from the tremendously useful Apple Pi Fillings CD-ROM.... This handy little piece of software ties together Ethernet and AppleTalk networks. It is free from Apple with the caveat that it is unsupported—which means if you have problems no one at Apple will talk to you about it."

This is how it happened for me. One Saturday afternoon I went through the above steps. I tried to connect and the connection failed. Then I found that there was no way, or at least no obvious way, to see the settings and tweak them using the utility that came with base station. The I realized that to repeat the process I needed to restore my original settings on the iBook. Fortunately for me I had another computer set up to the Internet so I just took the iBook to that machine and copied the settings. Then I went through the process again and again it failed. At this point I got the bright idea to see if I could connect to the Internet at all. So I tried with my other computer and again it failed. It turned out my Internet service was down. I felt pretty dumb that I didn't very that first before I went through the process twice. I had to shelve the whole project for the day.





Sunday I verified I could connect to the Internet, then tried to connect using the iBook and it worked like a charm. The next thing I did was change the settings on my other computer which I use to access the Internet to use the AirPort rather than dial in directly. It also worked well. Then I tried using them both at the same time and was able to do that, too! It actually works better than before because the AirPort is doing all the work. As soon as I initiate an Internet connection I can go about my business. There is no delay while the computer is going through its connection thing. The only minor glitch in the process is that the application initiating the connection often times out before the connection is complete. No big thing; the second try always goes through.

So Internet access is slightly improved. But the network if greatly improved. Copying files using ethernet is very fast compared to using LocalTalk. And copying files between a computer connected to the network by the ethernet and the iBook connected using the AirPort is just as fast. Before I had to have every computer on the network set up with removable media drives for archiving documents. Now using file sharing I can back up files from any computer to drives anywhere on the network. It all works with very little problem.

"So Internet access is slightly improved. But the network if greatly improved. Copying files using ethernet is very fast compared to using LocalTalk."

So far, the iBook seems to be getting lukewarm reviews. MacWorld said that with the standard amount of RAM it had problems but increasing the RAM solved those problems. For this reason (and unavailability of the AirPort at the time they did the review) they gave it only 3 mice out of 5. I cannot argue with this. I would not have thought of getting one without lots of memory or without the AirPort. The Washington Post panned it because the AirPort was hard to set up — something people would not expect with a Macintosh. They said that it was something PC owners were used to. Again I cannot argue with that. But if that is such a knock on the product I wonder why they do not bring that up with every story about PC's.

The iBook is a revolutionary product with difficulties. The first who buy them are the pioneers who will have to clear the path and ford the rivers. But it holds great promise for unsurpassed freedom for those willing to face up to the challenge. ■

The Untouchable

Reviewed by Brad and Andrew Kiepe

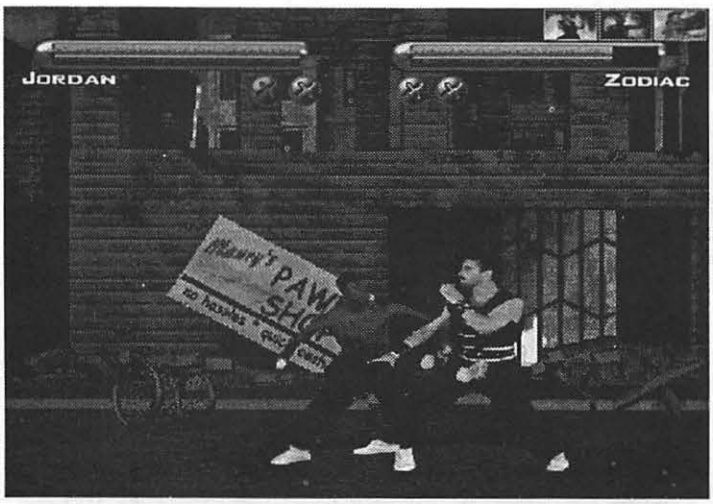
Brad's comments:

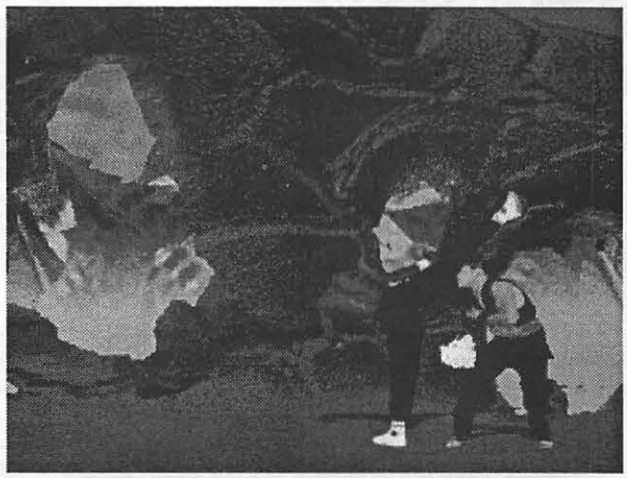
THE UNTOUCHABLE is an average fighting game. The graphics are much better then expected, however on a slower computer can cause small glitches. In the middle of a match on our older Macintosh, the computer would occasionally slow down to animate all the on screen objects. However on the more powerful iMac, this problem was eliminated.

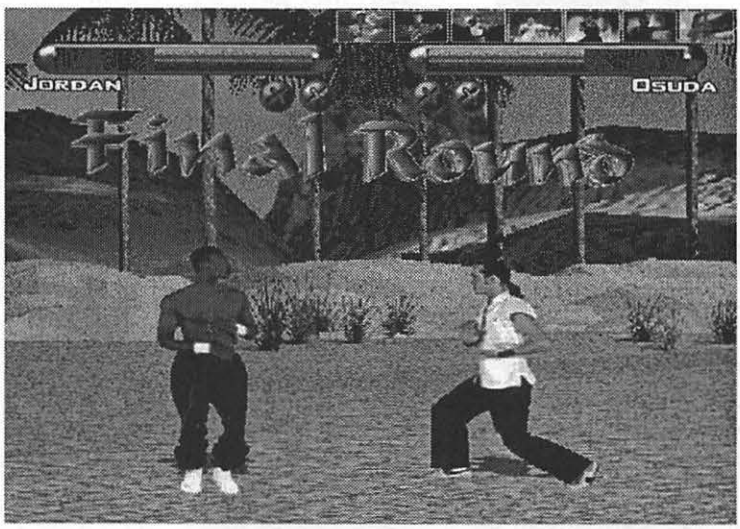
The real problem with The Untouchable is the game play. It suffers severely because anyone who can hit the same two buttons repeatedly can beat the game in under thirty minutes. Oh, and by the way, before I played this game, I was unaware that every time you hit someone a ball of flames appear. This game can become boring and tedious, and I don't recommend that you buy it. However if you are dying for a fighting game on the iMac go ahead.

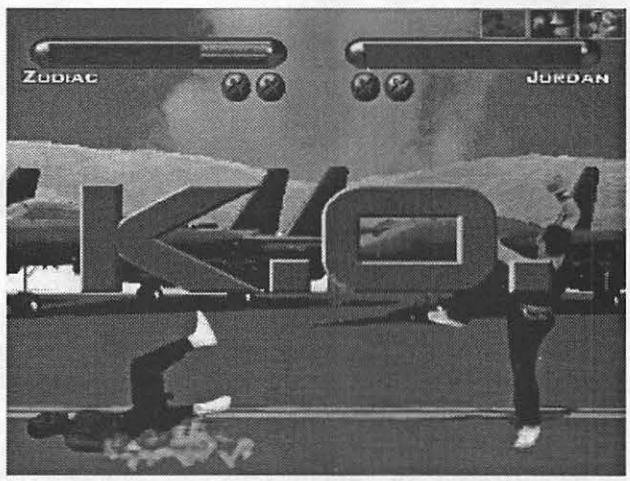
Andy's Comments:

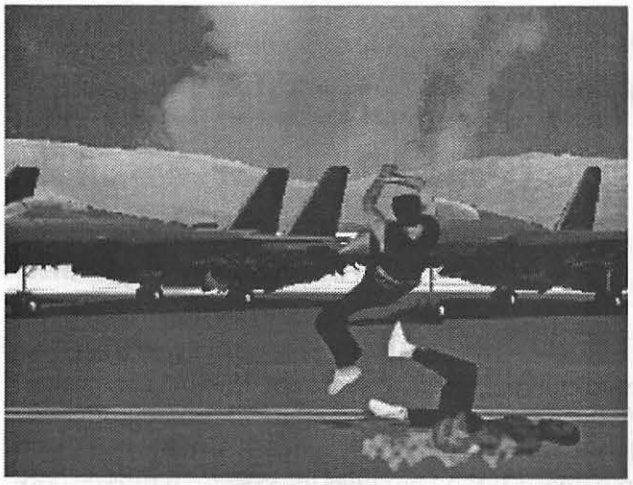
The Untouchable is an average game that has great graphics. Some suggestions that I would make to the game would be to change the fire (when you punch or kick an opponent) to blood. Another suggestion would be to try and change some of the sounds that the players make when they exhale, so they don't sound like girls. The last suggestion that I

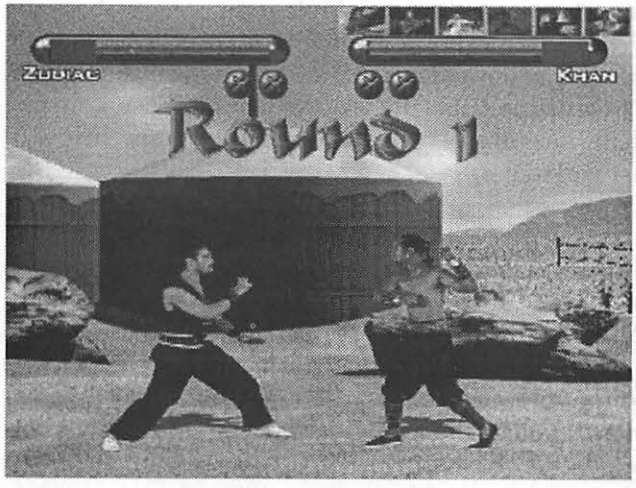


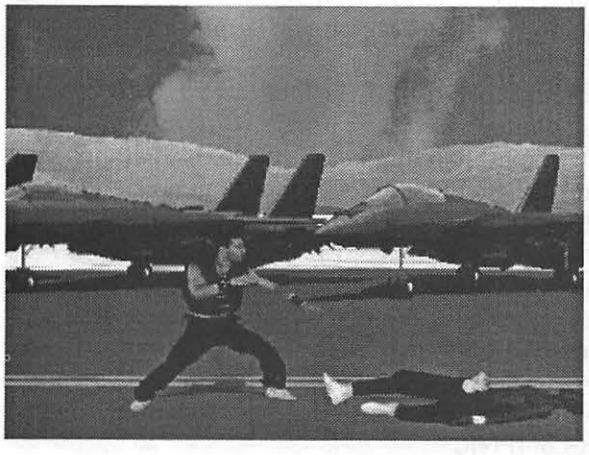












would make would be to give the players special moves, like fireballs or something better.

Some of the things that I liked about The Untouchable was the great graphics. The game works great if you have a Gamepad Pro. And the last great thing that I like about this game is the great moves that the players have.

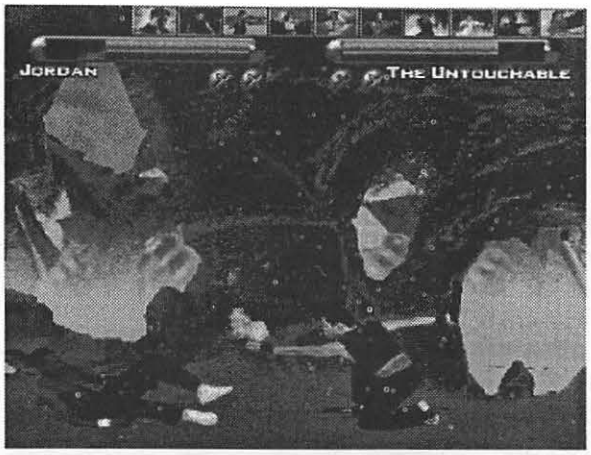
Dad's notes: This was a tag-team effort by the household's two resident gamers, Brad (age 14) and Andrew (age 11). Each boy made his remarks after playing Untouchable on two differently configured Macintosh computers. The first machine used a PowerPC 604e based CPU running at 200 MHZ and the game was controlled from the keyboard; the second was an iMac DV model based on the G3 CPU running at 400 MHZ and utilizing a Gravis Gamepad Pro controller. Both computers were equipped with 64MB of RAM. The installation method in each case utilized the "complete install" method which required copying the full CD to the hard drive thereby enabling the closest experience possible to true arcade performance. The program configurations were optimized in each case in accordance with the application instruction manual.

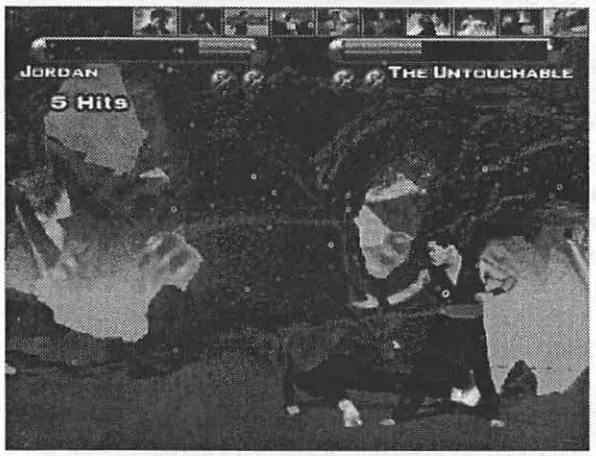
The Untouchable requires a minimum of a PowerPC based Macintosh and reportedly can be played on machines equipped with CPUs as slow as the PowerPC 601 although display features should be adjusted to maximize playability. The program is loaded off of a CD-ROM which must always be loaded to play the game. Options to minimize hard drive space requirements are available although game play will suffer as the program will frequently access the CD.

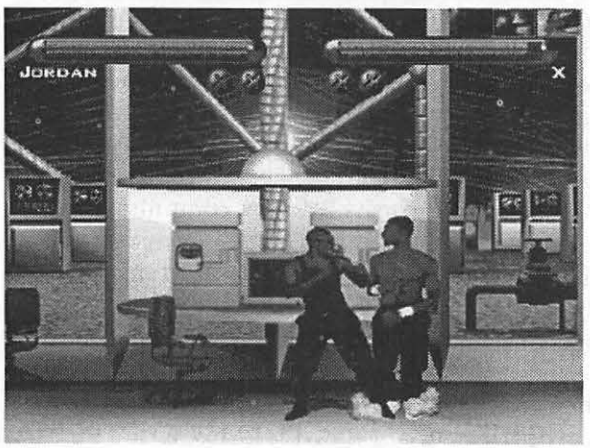
There are few games these two boys haven't conquered in short order and it is rare when they drop a new game after only a day or two, even after repeatedly beating it several times.

Each player represents one of 8 different fighters, each of which has their own special moves in addition to standard punching and kicking. The player can play against the computer (arcade mode), other players (battle mode), a practice mode, tag team matches (team fight mode) and a mode where the computer selects your character (challenge mode). The ultimate objective is to beat all opposition characters and move to playing the "Untouchable," a player reserved exclusively for the computer. Beating the "Untouchable" in arcade mode unlocks special characters that can then be used in battle mode.

There are few games these two boys haven't conquered in short order and it is rare when they drop a new game after only a day or two, even after repeatedly beating it several times. The Untouchable failed to meet the test as both boys had to be prodded to give the program a fair chance. What was most interesting to me is that they both like Mortal Kombat on Nintendo 64 but both disliked The Untouchable, which, to this adult's eyes, looked very similar. I was personally very impressed with the smooth rendering of the high







graphics in this game on the faster Macintosh, but the game looked pretty good even in lower resolutions. Neither boy felt the game was worth playing without a joystick/gamepad. To the folks at Creative Edge Software, Inc. and Power Media, Inc., sorry folks but you seem to have missed the mark with some of your target audience. Better luck next time. ■

http://www.theuntouchable.com and http://www.powermedia.com

Why you should buy IPNetRouter

by Constantin von Wentzel

IPNETROUTER (IPNR), by Sustainable Softworks, allows multiple computers to share one Internet connection for 1/2 the cost of the cheapest hardware competitor.

As the name implies, IPNR is primarily a router. It is Open Transport native (OT) and modifies the systems it runs on only minimally. The router allows multiple computers to share an Internet connection via NAT (Network Address Translation) and IP masquerading and can also act as a firewall and DHCP server. These are probably the features that most users are interested in, although IPNR has even more (see http://www.sustworks.com).

The Router

IPNR is a great value in Mac shareware networking software and is easily deployed as long as a CPU is continuously available. Even '030 based CPUs usually suffice, as IPNR doesn't consume much in terms of system resources. However, the input-output systems on older machines may become a bottleneck if you have a lot of network activity. As IPNR is a software product, it won't work if you quit the Finder, shut down the machine, etc. Many games these days maximize system performance by suspending all other tasks, disabling IPNR, so running this package on you "game console" may not be advisable.

IPNR can route between all the interfaces that OT can address. Thus, you can use it to route your internal LAN (LocalTalk, Ethernet) to a number of interfaces. Perhaps you want to share a single PPP modem connection now and want to upgrade to a cable-modem in the future. IPNR is very flexible and allows you to grow your LAN or upgrade your network connection without additional software purchases. Hardly a week goes by without another free improvement to IPNR. However, updates may alter your configuration file so check it afterwards.

Setting up the router is well documented, unlike many other features of IPNR.

The Firewall

Now that we've established the versatility of IPNR, let's have a look at the firewall capabilities. To build an effective firewall and segment the internal LAN completely from the Internet you need two separate network interfaces (Ethernet, serial, etc.). Thus, if you are planning on sharing a single PPP

connection among several computers at home, you're all set. If you want to firewall an Ethernet based LAN with a high-speed connection (ISDN, cable-modem, DSL, etc.) it's probably cheapest to fill a PCI slot with a second Ethernet 10/100 card, although NuBus, SCSI, PCMCIA, CommSlot, and USB based adapters also exist.

The firewall capabilities of the software bring you to the biggest weakness in the package. The documentation can be spotty and the firewall documentation is particularly bad. I resorted to blindly copying down the exact settings in the manual (which apparently work). IP experts must appreciate the ability to alter every setting but users like me are overwhelmed and a better user interface for the firewall would be a great benefit to this program. For example, the author shows several common configurations in his manual. A installation wizard or a series of buttons to automatically select one of them would be useful.

The DHCP server

A DHCP server is a very useful tool for those of us who do not want to manually configure TCP/IP settings on all the machines attached to the LAN. With a DHCP server running, just set their TCP/IP control panels to "use DHCP". Your LAN will then look to the DHCP server for its TCP/IP settings such as name servers, gateways, etc. This saves a lot of typing and if any TCP/IP settings change, the DHCP server allows you reduce the updates to just one machine.

Wintel machines can also automatically default to DHCP. I frequently use a work-issued Wintel laptop at home and don't have to change the network settings – just add the IP address of the DHCP server to the list of gateways.

The DHCP server can assign a static IP address for any machine on your network, although the default is a dynamic IP. The only benefit that static IP addresses have over dynamic ones is that static addresses don't ever change. This is useful if you have a machine that you want to use as a server as most client programs allow bookmarking by name or IP address. I use an FTP server on my work-issued laptop to back-up my data. It's very quick (500+ kB/sec. over a 10Base-T connection) and some clients minimize transfer times by replacing only items that have changed.

The official IPNR manual is rather silent on the subject of setting up the DHCP server: Use the built-in help instead. Setting up a static IP address is a bit of a pain since you have to manually type in the MAC (unique Ethernet serial number) address and cannot copy them over from the dynamic table.

Performance

Besides the capabilities of the host machine, performance is also a function of the interfaces available. You won't run into performance problems with PPP-based connections but Ethernet-based high-speed connections benefit from a dual-Ethernet set-up.

You can run IPNR with a single interface, such as a computer that is plugged into the same Ethernet hub as the router. However, the firewall will not be as effective if it does not stand between your internal network and the high-speed modem.

Besides security, using only one Ethernet card to route high-speed connections also has performance implications as every packet has to travel to the router, be inspected, forwarded as needed through the same Ethernet card as it came from. Those with two Ethernet interfaces can dedicate one port to the LAN, the other to the Internet connection. This allows you to transmit twice as much data as the single card set-up.

However, I doubt that IPNR will ever be the bottleneck to your surfing experience. Instead, you get to thank the slowest link out there between you and the data you want. There are few sites where I get download speeds in excess of 100 kB/sec. even though I have tested and confirmed the advertised 300kB/sec. download speed of my cable-modem. High-speed connections do a lot to reduce the World-Wide-Wait, but the limits of the Web are still felt.

Miscellaneous

IPNR also allows virtually unlimited port mapping and QuickTime streaming while most hardware based routers do not allow more than a token amount of ports to be mapped, or have trouble with QuickTime streaming. Furthermore, IPNR does not have a number of user limitations like most hardware solutions. Lastly, it does not filter content, although you could block specific IP addresses if you want to.

Updating IPNR is as easy as taking it down, replacing it with the latest build and restating the program. Updating the firmware on hardware routers is much more complicated. Unlike other products, IPNR is regularly updated for free by a motivated author. Lastly, I have seen several posts from users who say that the product support is excellent. Given the history of entries and exits from the Mac hardware market, this is welcome relief.

Summary

Overall, IPNetRouter has been a very good investment for me. At $89 for regular users and half that for educational institutions, IPNR is a bargain, given its features and performance.

Even though my cable-company (MediaOne) officially supports up to three machines on a single cable-modem, I bought IPNR for peace of mind and simplicity. Assuming you have a machine and a little set-up time available, this is the way to go. ■

washington Apple pi general meetings

February
Asante
3DFX
February 26, 2000

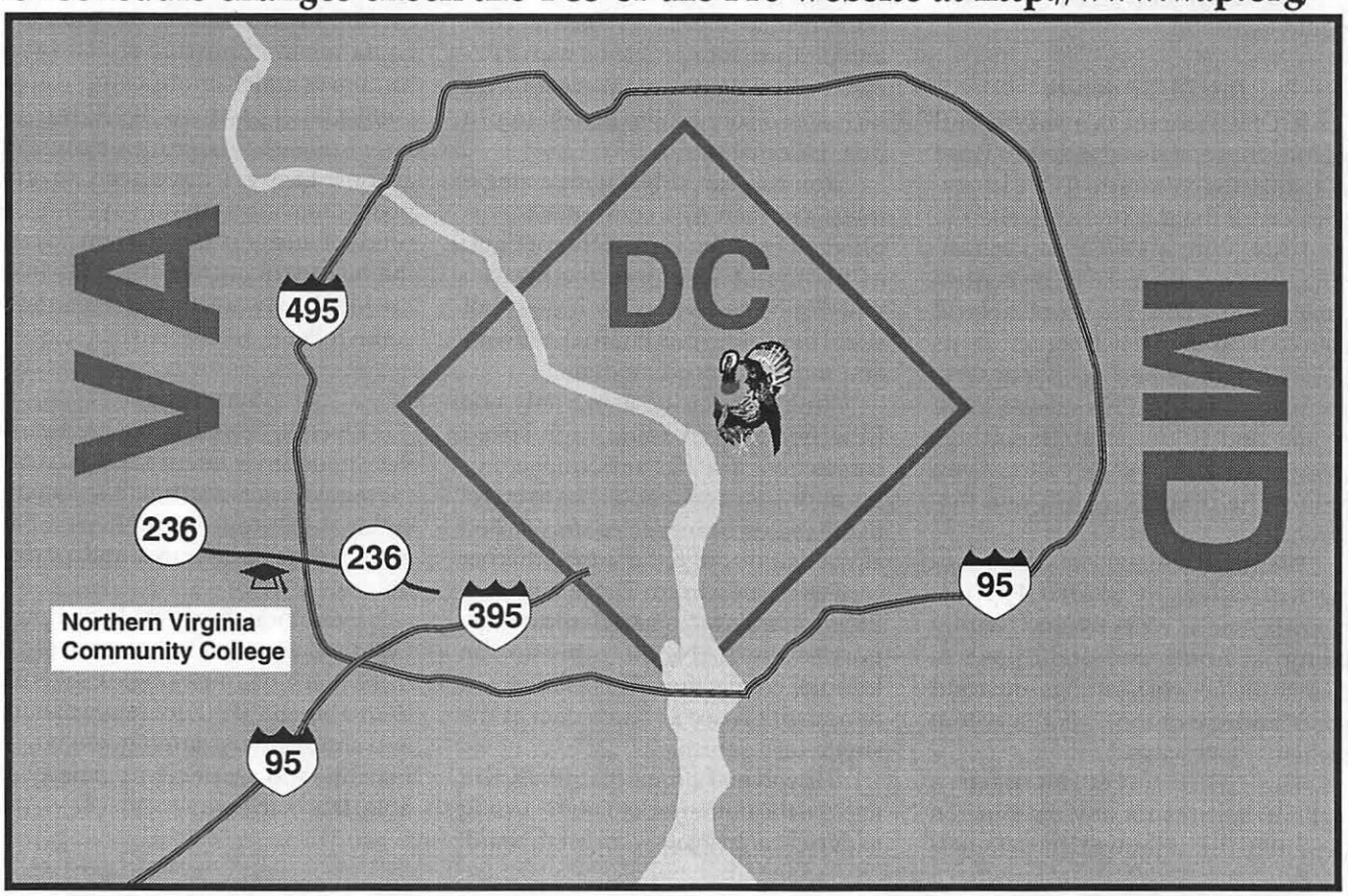
Northern Virginia Comm. College
Community & Cultural Center Aud.
8333 Little River Turnpike
Annandale, VA

Getting to NoVa:
take Exit 6 West
onto VA 236
(Little River Turnpike)

January
Corel Print Office
Gemulator
January 26, 2000

2000
Toward a new century with
Washington Apple Pi

For schedule changes check the TCS or the Pi's Website at http://www.wap.org/



Ghostwriter Spell Catcher 8.0.1's best kept secret

© Mary Keene 1999

THE BEST reason to use Spell Catcher 8.0.1 is Ghostwriter. I confess to never investigating this feature until I installed the upgrade. The manual said it would save your typing strokes so you could recover accidentally trashed files or files lost in a freeze, etc. I didn't read it carefully but it seemed to be promising a lot. After installation and configuration, I went about my business and one of the things I had to do was type reports to be posted to a web site. This can be a simple task or a complex one depending on the state of their server and internet traffic. I can usually count on having to post the text paragraphs at least one time and many times more than once. I have learned to write in a word processor and save the file just in case.

In the middle of posting my report, Netscape quit and crashed my computer. When I returned to the word processor file, I discovered that either I had not saved it or I lost it in the crash. Since I had made many changes to it, I couldn't remember what the final wording was. Then I remembered Ghostwriter. I opened the file and found a folder with the date and inside it was a folder with the name of each application I had used including one for the finder. (Fig.1) Ghostwriter had promised to keep these files with a small footprint. I had tried Aladdin's Flashback once but it used such a huge chunk of HD space, I took it out. Ghostwriter kept its promise—the files were under 60K. When I opened the report document, I found exactly what Ghostwriter promised—a text document that would open in the word processor I had selected containing every keystroke I had used in the original file.(Fig. 2) That meant it kept copies of the error strokes also. But using SpellCatcher to correct spelling errors was a snap and I was back where I needed to be in a few minutes.

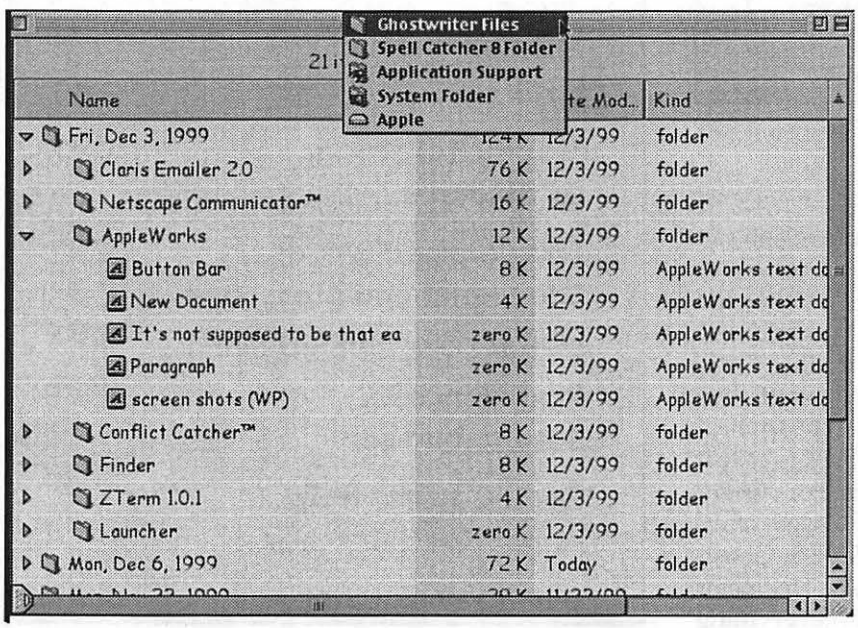


Figure 1.

I really like this feature and feel it could easily be worth the cost of Spell Catcher even if I never used it as a spell checker. For people who do a lot of text writing, it could be the most valuable tool they can find. It **works**, quietly and seamlessly in the background. I have tried other auto save applications but most of them would cause a hesitation in my typing as they saved to disk which would break my concentration. Ghostwriter never lets me see it. It truly is a ghost. In fact if the name Caspar weren't already copyrighted, I would suggest Casady and Greene rename it Caspar, the friendly Ghostwriter.

Accessing Ghostwriter is simple. Spell Catcher puts a checkmark icon in the tool bar (Fig. 3). Clicking on it brings down a menu where you select preferences (Fig 4). Clicking on preferences opens the Preference file where you can select Ghostwriter to

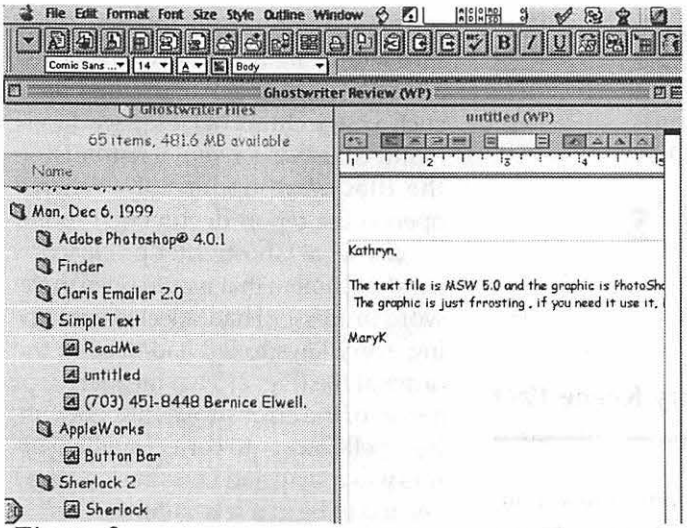


Figure 2.

Tested on
PMac 6100
4.3 GB internal & 2.1 GB HD External
Mac OS 8.1 Standard HFS, 8.6 HFS+ and 9.0 HFS+
72 MB RAM

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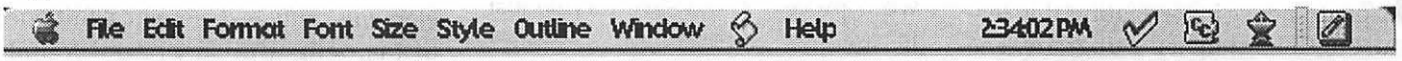

Figure 3.

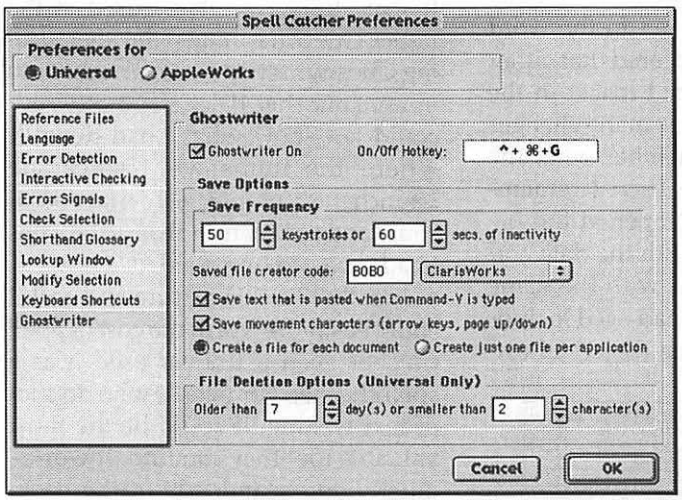

Figure 4.

get it's configuration window (Fig. 5). From here you can edit the macros, frequency of saving, word processor for default opening of ghostwriter files, when to delete the old files, etc. If for some reason, you don't want to use Ghostwriter, you can use this panel to turn it off.

Any time Casady and Greene want a cash cow, all they have to do is spin off Ghostwriter as a separate application, do a bit of judicious marketing and sit back to rake it in. Personally, I hope it stays right where it is. For current registered owners of Spell Catcher 1. X, C & G were offering an upgrade to Spell Catcher 8.0.1 for $19.95. Ghostwriter can be found in the 1. X versions also. The major differences—1. x is a control panel and in 8.0.1 everything is an application that runs in the background. ■

Mary is a freelance graphic arts/craft designer and teacher in the Washington Metro area and an active member of the Washington Apple Pi. Questions, suggestions, requests, tips, comments and feedback can be emailed to: e.mkeene@wap.org

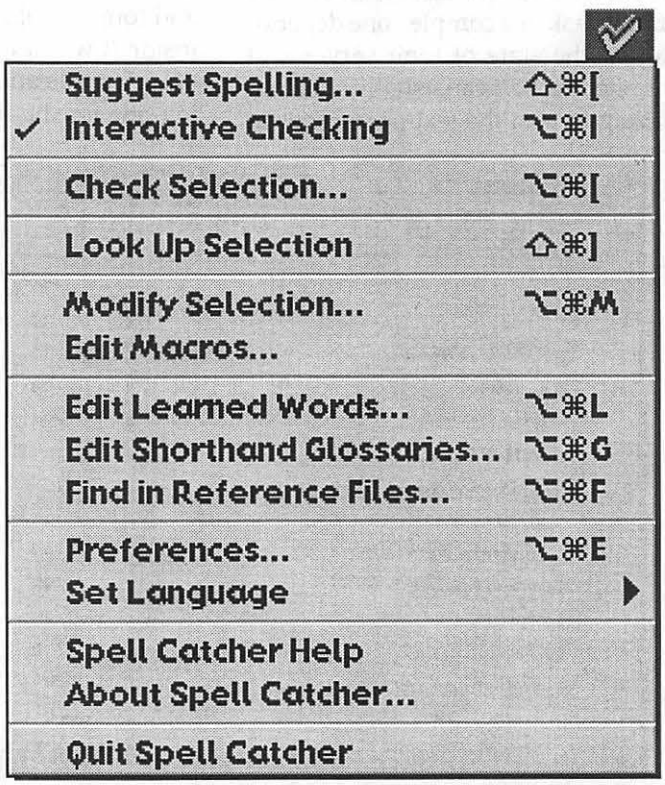

Figure 5.

How to help someone use a computer

Phil Agre
http://dlis.gseis.ucla.edu/pagre/

COMPUTER PEOPLE are generally fine human beings, but nonetheless they do a lot of inadvertent harm in the ways they "help" other people with their computer problems. Now that we're trying to get everyone on the net, I thought it might be helpful to write down everything I've been taught about helping people use computers.

First you have to tell yourself some things:

* Nobody is born knowing this stuff.
* You've forgotten what it's like to be a beginner.
* If it's not obvious to them, it's not obvious.
* A computer is a means to an end. The person you're helping probably cares mostly about the end. This is reasonable.
* Their knowledge of the computer is grounded in what they can do and see — "when I do this, it does that". They need to develop a deeper understanding, of course, but this can only happen slowly, and not through abstract theory but through the real, concrete situations they encounter in their work.
* By the time they ask you for help, they've probably tried several different things. As a result, their computer might be in a strange state. This is natural.
* The best way to learn is through apprenticeship — that is, by doing some real task together with someone who has skills that you don't have.
* Your primary goal is not to solve their problem. Your primary goal is to help them become one notch more capable of solving their problem on their own. So it's okay if they take notes.
* Most user interfaces are terrible. When people make mistakes it's usually the fault of the interface. You've forgotten how many ways you've learned to adapt to bad interfaces. You've forgotten how many things you once assumed that the interface would be able to do for you.
* Knowledge lives in communities, not individuals. A computer user who's not part of a community of computer users is going to have a harder time of it than one who is.

Having convinced yourself of these things, you are more likely to follow some important rules:

* Don't take the keyboard. Let them do all the typing, even if it's slower that way, and even if you have to point them to each and every key they need to type. That's the only way they're going to learn from the interaction.
* Find out what they're really trying to do. Is there another way to go about it?
* Attend to the symbolism of the interaction. Try to squat down so your eyes are just below the level of theirs. When they're looking at the computer, look at the computer. When they're looking at you, look back at them.
* Explain your thinking. Don't make it mysterious. If something is true, show them how they can see it's true. When you don't know, say "I don't know". When you're guessing, say "let's try ... because ...". Resist the temptation to appear all-knowing. Help them learn to think like you.
* Be aware of how abstract your language is. For example, "Get into the editor" is abstract and "press this key" is concrete.

Don't say anything unless you intend for them to understand it. Keep adjusting your language downward towards concrete units until they start to get it, then slowly adjust back up towards greater abstraction so long as they're following you. When formulating a take-home lesson ("when it does this and that, you should check such-and-such"), check once again that you're using language of the right degree of abstraction for this user right now.

* Whenever they start to blame themselves, blame the computer, no matter how many times it takes, in a calm, authoritative tone of voice. If you need to show off, show off your ability to criticize the bad interface. When they get nailed by a false assumption about the computer's behavior, tell them their assumption was reasonable. Tell *yourself* that it was reasonable.
* Formulate a take-home lesson.
* Take a long-term view. Who do users in this community get help from? If you focus on building that person's skills, the skills will diffuse outward to everyone else.
* Never do something for someone that they are capable of doing for themselves.
* Don't say "it's in the manual". (You probably knew that.) ■

This article is adapted from The Network Observer, which can be found at <http://dlis.gseis.ucla.edu/people/pagre/tno.html>, *copyright 1996 by Phil Agre. You can forward it to anyone for any noncommercial purpose. For more copyright information, please see <http://dlis.gseis.ucla.edu/people/pagre/copyright.html>.)*

Best of the TCS

compiled and edited by John Ludwigson

Little Black Cloud

Sometimes, in the midst of an otherwise sunshiny day, a cloud appears and rains on your parade. With any luck, it soon clears away and the parade re-forms and goes on as before...banners flying, band oompahing and trumpeting along, kids scrambling for candy thrown by beauty queens and politicians from their respective fancy cars with the local dealers' placards on the trunk. Not too long ago, the iMac parade encounteredsuch a cloud....

MACFANATIC **(Fan) #1**: Just as a note for those of you looking at an iMac. I had the good fortune to pick up a iMac DV at the feeding frenzy at MicroCenter last weekend and thought that I'd have a problem free computing experience (after all, I've been a Mac zealot for years). Low and behold, after hooking up my new purchase to the phone line that formerly hosted my older Mac clone with it's Global Village 56 K v.90 modem, I found that the best connect speed possible was 28 Kbps at that max data throughput (ftp file, 5.5MB) was only 24 Kbps. After much troubleshooting and several calls to Apple, they finally revealed that the iMacs and new Towers are using a modem with a Lucent chipset that is often incompatible with other V.90 STANDARD modems and that they consider 28Kbps to be within specs!

No relief is possible and if I want a new modem put in (as many in the extensive number of bad modem storys on MacFixit web site can attest to), then I have to pay for it. If you get lucky, your modem may be OK for reasonable speed transfer but it turns out that a friend with a G4 400 MHz tower has the same problem! Unfortunately, I live too far away from a telephone switching subcenter to go DSL so I guess my only option is to return the iMac and go back to my older Mac. My kids aren't too happy right now but it appears Apple has taken a step backward in customer service.

Lest I get a bunch of emails on modem specs, how to troubleshoot, etc., don't bother. The performance has been verified by Apple, checked by TechTool Pro, and tracked a hundred ways to hell and back. The Apple tech I talked to admitted he had to go through 11 ISPs before he found one that offered a good connect speed. And that's the rest of the story.

Fan 2: >No relief is possible....

Au contraire. Edit your CCL to force V.90/Kflex (depending upon what you're calling). Worked for me for [wife's] Apple G3 modem and my internal GV. Or, email me and I'll send you the edited scripts. Guaranteed not to connect below 38,000.

Fan 3: >I live too far away from a telephone switching subcenter to go DSL so I guess my only option is to return the iMac and go back to my older Mac.

[Fan 4] can tell me if I'm wrong, but an AirPort Base Station would not only act as your 56K modem (connected to the ethernet port) but would also provide service to both Macs at once (up to ten machines, ethernet or wireless).

More money, certainly, but you're not without a number of keen options.

Fan 4: You are right that an AirPort Base Station would provide services to up to ten Macs whether they are connected by ethernet or by AirPort cards. One of the first things I tried after setting up the base station was last weekend was to log on with one machine and then see if I could simultaneously log on with a second machine. It worked like a charm! I was browsing the Internet with both machines at the same time with just one phone connection to the TCS Explorer service.

Fan 5: Wow! How could Apple have screwed that up so badly?

Fan 3: >I was browsing the Internet with both machines at the same time with just one phone connection to the TCS Explorer service.

Fantastic! My one outstanding question was whether, wireless services aside, it'd act as a traditional modem router — providing a shared PPP connection for machines that were connected via ethernet. Sounds like it does. (I'd have been very surprised if it didn't, as once you've got the wireless sharing worked out it's actually more difficult to prevent ethernet clients than to support them.)

Did I hear you say you'll jot down a few words and screen shots for the Journal? (Not a review, just how [you] set up for TCS Explorer...)

Fan 6: >Did I hear you say you'll jot down a few words and screen shots for the Journal?

I'd greatly appreciate it. It seemed like it would be easy, but I'm

ready to flush the AirPort down the toilet. I had the iBook connecting to Explorer right away without trouble. The AirPort setup seems easy, but I can't get it to connect to Explorer. The iBook communicates with the AirPort with a strong signal, and sometimes I can get an active status on the AirPort control strip. But Netscape and IE don't seem to initiate a modem connection. (there is a modem in the AirPort? - the docs are very poor). Are you supposed to fiddle with TCP/IP? I tried but still can't get it to work.

Fan 7: I just received a notice from Cable Television Arlington that they will be installing fiber-optic cable in my neighborhood — Balston — and that 2-way cable-modem service will be shortly available for $45/month (includes rental of cable modem) and installation fees will be waived if you subscribe to enhanced services (audio/radio, new channels, almost video on demand). I'm staying with DSL but it seems that other options are becoming available. I am wondering if ATC's wire upgrade will also result in proper segmentation to ensure good Internet performance. Then again, I am so unimpressed by my cable company that I would not want to hand over access to the Internet to them.

Fan 3: >I'm ready to flush the AirPort down the toilet.

It's a little more trouble, but I'd prefer that you mail it to me. ;)

MUGS Menaced

"What goes up must come down." One of the most overworked cliches in the language, but one of the truest. It must somehow be related to Murphy's Law...but that's worth a Ph.D. in Philosophy so won't be pursued here. Macintosh User Groups, however, seem to be a painfully illustrative example of this truism, as a Pi expatriate learned.

The Expatriate: This is the first time I have been on the bulletin board since early September, and I send you all greetings from Berkeley CA, where Columbus Day is called "Indigenous Peoples' Day".

We sold our Arlington house in February with a September settlement date, bought a house in Berkeley in July, left Arlington September 10 for an eight day drive across the country, had our furniture unloaded on September 20, and on September 30 left on a long planned 5-week trip to Europe. Needless to say, we are not settled yet, and in the 10 days we were here in September I did not even have time to set up the computer. I did set it up shortly after I arrived from Europe 10 days ago, but I couldn't get my modem to make a connection. That didn't matter too much, as I had to spend most of my computer time paying piled up bills and doing my financial records. Just today I had time to to figure out the modem problem, and I refuse to divulge the dumb mistake I had made on grounds that that would be self-incrimination.

I plan, as soon as possible, to perpetrate an article for the Pi Journal, tentatively entitled "Moving with a Macintosh," devoted mostly, but not entirely, to the great help some of the real estate web sites in making such a move less horrendous that it otherwise would have been. But that's for another day.

Back in early August, alerted to the web site of the Berkeley Macintosh Users' Group in answer to a question I asked on the TCS, I downloaded the information about meetings, office location, the BMUG bulletin board, etc., and upon my return from Europe I planned to attend the next meeting and join; thinking I could, among other things, telnet the WAP through the bulletin board. Meetings were, according to the August web download, held every Thursday evening in the BMUG office.

On Thursday, just to make sure a meeting was on, I called the BMUG phone number, only to discover that the phone had been diconnected, and "There is no further information...." As I was passing the area anyway, I stopped by the address of the office. There was no such office, and a couple of inhabitants of the (rather large) office building had never heard of BMUG. Fortunately, within a block there is a quite good Macintosh only computer store; the people there knew little or nothing about BMUG (a bad sign), One of the people there did, very nicely, pull up the web page to see if there was any news. It was rather confusing, but essentially what it said was that BMUG is not accepting any more members, there are no meetings, and it appears that the bulletin board is being spun off as a separate entity.

In other words, it appears that BMUG is defunct. How the mighty have fallen!

One hopes that the situation is not as bad as it seems to be, and I plan to follow up with a e-mail address that was given. But at the moment, my only computer contact with the outside world is through AOL (although I am sending this direct, via long distance line, to Maryland).

Is there any way to connect with the Pi bulletin board through AOL? If so, do I have to go through Explorer? And if that's so, how do I do it? In Arlington I always connected to the bulletin board directly, and never did so while in Explorer.

Pi 1: >BMUG is [and LA MUG and NYMUG are] defunct.

Sad and true. What that means, and what to do about it, are good topics for C3B8 and C1B18, respectively.

> Is there any way to connect with the Pi bulletin board through AOL?

You said it: telnet. Hold onto your TCS Classic membership for $20/year and keep your "@wap.org" address intact. You can access the TCS via telnet and your mailbox via POP/SMTP, and anything else we can dream up for you.

For reasons you've cited, the Pi is increasingly becoming the big national users group, and working to reach out to distant regions. Bear with us.

Pi 2: >...the great help some of the real estate web sites...

I too found useful information about new home prospects when I was in that process.

There's a new announcement on BMUG's Web site:

"BMUG has been paring down its operations to focus on the online community, the Planet BBS, that is the heart and soul of the organization. It is time for that community to make a clean break from the BMUG of the past. A new organization, PlanetMUG, plans to step in to buy the Planet BBS and revitalize it with a new beginning and a new focus on online community.

"Both BMUG and PlanetMUG are committed to making the transition as smooth as possible. Nothing will change in the first few months, and PlanetMUG intends to keep the BBS at once familiar and comfortable to current users. Changes, when they come, will be mostly in the form of new services that BMUG has not been able to afford.

"Naturally the new organization will have separate membership dues, but provision will be made for unexpired time, if any, left on your paid BMUG membership.

-BMUG -PlanetMUG"

There's more at <http://www.bmug.org/about/991110announce.html>.

Time & Space

Physicists think they discovered that time and space are equivalent. Hah! Anyone who's ever sat in a commuter traffic jam could declaim on that for hours (while waiting, waiting, waiting...). Recently, some Pi-sters discussed the nuances of practical time-space considerations.

Tempus: My wife and I frequently exchange snide remarks about our respective computers. Sunday morning, she one-upped me. She said, "You know, this morning my computer changed the clock from DST to EST all by itself. Not only that, when I started up, it sent me a nice message telling me it had done it!"

And that's under Windows! I hadn't heard of a Mac OS doing that without some add-on program.

Pi 1: Mac OS 8 (or 8.1 or 8.5) and later does that for you. Check out your Date & Time control panel. You can also set your Mac (with 8.5 and newer) to update your clock over the Internet. And it does not waste you time by displaying an unnecessary dialog that it performed this function.

In contrast, my wife's NT at work will not allow her to correct the time of her machine because she is not an "administrator." It has been off by 10 minutes since she arrive Jan 2 (as are all the NT machines in her office) and she has to live with it because it IT is working on it but it is too low a priority.

Tempus: >Mac OS 8 (or 8.1 or 8.5) and later does that for you. Check out your Date & Time control panel.

Well, with OS 8.0 the panel IS there and it DOES have a DST box. I found that I never set my city for the time zone. I set it. Does that mean it will automatically change to DST in the spring?

>In contrast, my wife's NT at work will not allow her to correct the time of her machine because she is not an "administrator."

Yeach!

Pi 2: <Mac OS 8 (or 8.1 or 8.5) and later does that for you.

My 8.1 didn't do it until I went in and unchecked DST. Any idea why?

Pi 3: >Does that mean it will automatically change to DST in the spring?

You need to be running 8.5, 8.5.1, 8.6 or 9.0.

You can't really run comparisons with your spouse's machine if you are comparing her current operating system with your less than current operating system.

Tempus: >You can't really run comparisons with your spouse's machine if you are comparing her current operating system with your less than current operating system.

I think her machine is older than mine. I'm not sure of its age but it's 75 MHz!

Pi 4: >Well, with OS 8.0 the panel IS there and it DOES have a DST box. I found that I never set my city for the time zone. I set it. Does that mean it will automatically change to DST in the spring?

I think DST change became automatic with OS 8.5. In OS 8.0 it must be switched manually by checking or unchecking the DST checkbox.

One of these days we will convince you to upgrade to a more recent OS more suitable for your 8600. Or maybe not!

Tempus: >I think DST change became automatic with OS 8.5.

Thanks.

>One of these days we will convince you to upgrade to a more recent OS more suitable for your 8600. Or maybe not!

Ouch!

Pi 5: FWIW....I'm using OS 8.6 now. In the Date/Time panel you can check "Use network time server" and the gizmo will go out and reset itself according to internet time, automatically. That includes auto-setting daylight time on/off.

I used to use a utility program named Auto Clock. I liked it very much. It auto-dialed the Naval Observatory in D.C., set the time once a week and also auto set the DST changes on/off. You could leave AC running, and it would put up as many "clocks" as you might want on the desktop, each giving time for a different time zone. I had it set for local time and universal time. Guess I _could_ resurrect it....

Pi 3: >I think her machine is older than mine.

I was referring to the operating system; Mac OS 8.1 is quite a bit older than her operating system, and you were, after all, discussing operating systems, not computers.

Pi 3: >That includes auto-setting daylight time on/off.

Not quite. Mac OS 8.5/8.6 will adjust for DST even if you don't have a network connection. The network connection makes minor corrections in the time so that, on average, you are less than a second off the "one true time" as it is known by whatever time server you use. If you use the U.S. Naval Observatory, the time is accurate to billionths of a second, which is far in excess of the accuracy your Mac needs.

This may seem a somewhat obtuse subject, but consider: almost every vendor of mainframe operating system time servers had to rewrite their time routines to be Y2K compliant, as did Microsoft and Novell. I predict that, for those companies (mostly small) that made no attemt to check on Y2K compliance, their entire networks will think it is 1980, or 1972, or some other strange year in less than two months.

"BMUG has been paring down its operations to focus on the online community....It is time for that community to make a clean break from the BMUG of the past. A new organization, PlanetMUG, plans to step in to buy the Planet BBS and revitalize it with a new beginning and a new focus on online community."

Pi 5: Do you happen to know of some time server urls other than the Apple ones that come in the Date/Time CP? Would you please share them...or point to where I can find them? (I have visited the page at the Univ. of Delaware: <http://www.eecis.udel.edu/~ntp/> but it is not clear if one's personal computer can use one of the Stratum 2 level servers.

Auto Clock used to regularly find my Mac's clock off by a second plus/minus. Billionths...nanoseconds, femtoseconds..whatever. The eggs only need precision to a few seconds. ;-){{{

Pi 3: >Do you happen to know of some time server urls other than the Apple ones...

A recent Journal article covered this in detail, Washington Apple Pi Journal, July/August 1999, pp. 52-54, "Configuring Date and Time Using Mac OS 8.5." In addition to the machines mentioned in the article (which are all at NIST), there are the two time clocks at the U.S. Naval Observatory: <tick.usno.navy.mil> and <tock.usno.navy.mil> which I prefer because of what my spouse does for a living, and you can't beat the server names.

Tempus: >FWIW....I'm using OS 8.6 now. In the Date/Time panel you can check "Use network time server"

8.0. Thanks.

Pi 5: >Journal, July/August 1999, pp. 52-54, "Configuring Date and Time Using Mac OS 8.5".

Well, doggone! Got it right here. Thanks.

Tick and Tock. Reminds me of the Ice Capades! (Yes, this is a sudden-death quiz: _____. (space for answer)).

Your wife works at the Naval

Observatory? A physicist, perhaps?

Pi 1: If you are able to check and uncheck DST, then the Mac is not setup to automatically change with DST.

You must select a time zone for automatic DST to work (this happens when you pick Washington DC as your city). Open Date & Time CP and you will see the button to set time zone. Then you can click on the checkbox to automate the setting and the DST checkbox will disable itself.

Pi 1: Win95, which is older than MacOS 8, automatically does DST change on its own. BeOS might be the most sophisticated OS for taking care of this automatically (there are many exceptions to the rules and I believe that BeOS knows about them). This is one feature which Apple was very late to the table on adding.

Pi 3: >Your wife works at the Naval Observatory?

No, she's never even been to the Naval Observatory (that I know of), but she is a naval officer.

I flunked your Ice Capades quiz.

Pi 6: >Do you happen to know of some time server urls other than the Apple ones that come in the Date/Time CP?

When I'm dialed into TCS Explorer, I use <time.his.com>.

Pi 5: >I flunked your Ice Capades quiz.

"Frick and Frack"...ice clowns. They came on between the daredevils jumping through the razor-sharp twirling hoops and the lovely icedancers performing en masse a la the Rockettes. Tick and tock...a timely act!

My best salute to your wife! I suspect she must be one of the brave women pioneers on the very masculine sea of naval officership. I've just read a little book, self-published by Roy C. Smith, III, Captain, USNR (ret.): Navy Yarns of Seven Generations. Not one single female officer in it!

Pi 5: Thanks for the Heller time url. In the meantime (heh, heh....) I visited the helpful page at the U. of Delaware and selected a server at SURAnet in College Park. Seems to work. Now I'll add Heller to the list.

Pi 6: >...a server at SURAnet in College Park. Seems to work.

Cool. How many hops is it from the TCS Explorer dial-up lines? The Heller one is currently six. (It used to be less, before our bandwidth upgrade.)

Pi 5: >Cool. How many hops is it from the TCS Explorer dial-up lines? The Heller one is currently six.

It hadn't occurred to me to try to find out. (I think some of Stairways' software might be the proper tool.) College Park just seemed near enough so I could shave that last few billionths of a second (G!) off any errors. The server, as listed on the UDel site is:

"<ntp1.sura.net> (128.167.1.222) Location: SURAnet, College Park, MD Synchronization: NTP V3 secondary (stratum 2), Sun Sparc/SunOS Service Area: SURAnet region Access Policy: open access; please send a message to notify. Contact: <timekeeper@sura.net>"

I have not sent the timekeeper a message, but perhaps I should. OTOH, perhaps this is just for ISPs planning to maintain a connection full time...? I, rather my date/time CP, dial in maybe once a day...although, come to think of it, it is supposed to update the clock when the difference between it and the server's time is more than one second. That has to mean it checks whenever I'm connected to the 'net. But I have no idea how often.

Pi 6: >I think some of Stairways' software might be the proper tool.

Yup, and it now reports that <time.his.com> is a mere four hops (two of them within the Pi's TCS closet), while <ntp1.sura.net> (which didn't even resolve to an address so I used the one you supplied) was 13 hops. Significantly, the first three hops from your modem to ours, then to our router, then to Heller's equipment, are all non-negotiable. One more hop gets you to their time server, or ten gets into the national backbone and out to College Park. The round-trip times tell a similar story.

The reason I point this out is not to claim that <time.his.com> is any more accurate than <ntp1.sura.net> or even to state that it's close enough that the shorter round-trip will give you more accurate time. Your Mac clearly couldn't care less, as you'll always be +/- one second.

But rather, I thought it might be interesting to investigate the concept of "nearby" both geographically and electrically. This isn't an especially good example, but sometimes there's a big difference due to routing.

Pi 5: Fascinating. Of course I was thinking of "nearby" in geographic terms: my house to College Park. Forgot entirely about the detour through Rockville...and who knows where the telephone lines take the flying electrons! Thanks. ■

Macintosh Tutorials

General Macintosh Classes

Introduction to Macintosh

This class is meant not only for the new user, but also for anyone who wants to learn more about the basic operation of the Macintosh. This class is also recommended for Macintosh owners who are new to System 8.0 and above or those who have never really learned all the things that the Mac OS has to offer to the computer user. In addition to start up, sleep and shutdown procedures, the student will learn how a computer works and common Macintosh terminology. The Finder and its basic operation will be fully covered. This discussion will include the menu bar, Apple menu and the Application Switcher. Students will learn how to access and use the built-in help application on the Macintosh. Error messages, dialog boxes, icons, folders, and view options will be discussed. You will learn the basics of word processing and text formatting. Copying, cutting, pasting, dragging and dropping will also be covered. Basic system and mouse maintenance will be included. The fundamentals of searching for files will also be covered. You should review the programs Macintosh Basics and Mouse Basics prior to attending the class.

Prerequisite: None.
Number of Sessions: Two.
Price: Standard Members: $70.00, Associate Members: $100.00, Non-Members: $100.00
Instructor: Pat Fauquet and Jim Ritz

Evening Set 1
1/3/00 and 1/10/00 6 pm - 9 pm
Evening Set 2
2/7/00 and 2/14/00 6 pm - 9 pm
Day Set 1
1/4/00 and 1/6/00 9:30 am - 12:30 pm
Day Set 2
1/11/00 and 1/12/00 1 pm - 4 pm
Day Set 3
2/1/00 and 2/3/00 9:30 am - 12:30 pm
Day Set 4
2/15/00 and 2/17/00 1 pm - 4 pm
Day Set 5
3/7/00 and 3/9/00 9:30 am - 12:30 pm
Day Set 6
3/21/00 and 3/23/00 1 pm - 4 pm

Intermediate Macintosh

Intermediate Macintosh will follow up on the concepts taught in Introduction to Macintosh. You will learn more advanced Macintosh skills and terminology including contextual menus and advanced finder options, the custom installation of software and updating software applications. Students will learn about memory error messages and how to deal with them. Hard drive organization, archiving and backup strategies will be discussed. An introduction to managing system extensions and control panels will be covered along with virus protection, system enhancements and Macintosh "housekeeping" philosophies. Students will learn how to use Disk First Aid, how to deal with system crashes and what causes them. They will also learn to use the new Find program, Sherlock, to find files on the computer, to find text phrases in saved data and to find items on the Internet. All students are encouraged to take Introduction to the Macintosh before attending this class.

Prerequisite: Introduction to Macintosh
Number of Sessions: Two
Price: Standard Members: $70.00, Associate Members: $100.00, Non-Members: $100.00
Instructor: Pat Fauquet and Jim Ritz

Evening Set 1
1/24/00 and 1/31/00 6 pm - 9 pm
Evening Set 2
3/6/00 and 3/13/00 6 pm - 9 pm
Day Set 1
1/4/00 and 1/6/00 1 pm - 4 pm
Day Set 2
1/20/00 and 1/21/00 1 pm - 4 pm
Day Set 3
2/8/00 and 2/10/00 1 pm - 4 pm
Day Set 4
3/14/00 and 3/16/00 1 pm - 4 pm

Advanced Macintosh

Advanced Macintosh will follow up on the concepts taught in Intermediate Macintosh. In this hands-on class students will learn how to back up the essential data and settings files, then how to install, update and upgrade system software. They will learn the difference between clean and dirty system installations and when to use them. They will learn how to de-install software, manage system conflicts, and troubleshoot crashes. Software such as Norton Utilities, Tech Tool Pro, Conflict Catcher, Spring Cleaning, and Disk Warrior will be demonstrated and used to fix computer problems. Hard drive initialization, partitioning, defragmentation and optimization with be discussed and demonstrated. Students are encouraged to bring their CPU to use in class to actually troubleshoot and update their own computers. iMac owners should bring their computer, keyboard and mouse. All others should bring only their CPU and modem. If students own Zip Drives or Super Drives they should also bring them to back up important data. All students are strongly encouraged to complete both Introduction to Macintosh and Intermediate Macintosh prior to enrolling in this class.

Prerequisite: Introduction to Macintosh and Intermediate Macintosh
Number of Sessions: Two

Price: Standard Members: $70.00, Associate Members: $100.00, Non-Members: $100.00
Instructor: Pat Fauquet and Jim Ritz
Day Set 1
1/13/00 and 1/14/00 1 pm - 4 pm
Day Set 2
2/22/00 and 2/24/00 9:30 am - 12:30 pm
Day Set 3
3/28/00 9:30 am - 4 pm

IMPROVED **iVisit iMac**
Take a working tour of the software included on the iMac.

This two part, six hour class will introduce the various pieces of software included with the iMac. Students will learn how use the assistants and templates included with AppleWorks to perform tasks such as writing a letter; making a computer address book, flyer or certificate, and printing an envelope. They will learn how to send and receive a fax from their iMac and begin using Quicken to balance their checkbook. They will learn how to make a favorites list in Internet Explorer, use the address book and send a file to someone in Outlook Express. They will also learn how to edit a photo with Kai's Photo Soap, install and look up items in the World Book Encyclopedia and use the Williams-Sonoma cookbook. Students will also learn how to use Adobe PageMill 3 to make a personalized start page on their computer. Strategies to win with Nanosaur and protect children with the EdView Internet Safety kit will also be shown. **New:** This class now includes the new Kid Pix Deluxe, a children's graphics and animation program.
Prerequisite: Introduction to Macintosh
Number of Sessions: Two
Price: Standard Members: $70.00, Associate Members: $100.00, Non-Members: $100.00
Instructor: Pat Fauquet and Jim Ritz
Day Set 1
1/13/00 and 1/14/00 9:30 am - 12:30 pm
Day Set 2
2/15/00 and 2/17/00 9:30 am - 12:30 pm
Day Set 3
3/21/00 and 3/23/00 1 pm - 4 pm

Contextual Menus and Automated Tasks

Apple Computer has added two new features, Contextual Menus and Automated Tasks to the Macintosh. In this one Sessions class students will learn how to add new items to the contextual menu and where to obtain them. They will also learn how to obtain, use, and install additional Automated Tasks. Since AppleScript is at the heart of Automated Tasks, students will be introduced to the AppleScript editor and will learn how to write and edit simple scripts to automate their own computers. This class is introductory in nature and is not meant for those who are already writing more advanced AppleScripts.
Prerequisite: Introduction to Macintosh
Number of Sessions: Two
Price: Standard Members: $70.00, Associate Members: $100.00, Non-Members: $100.00
Instructor: Pat Fauquet
Call Office for Dates

NEW **Mac OS 9 — Installing and Using It**

Bring your CPU and Mac OS 9 disk to class and get help installing the newest operating system. Then learn to use the new features and improvements to the system software of your computer. Students should back up their data files, email files, address book and bookmark files before coming to class. In class CPUs will be checked for possible directory problems and those problems will be repaired, then students will be guided through the installation and customization process of updating to OS 9. Please bring your OS 9 disk, CPU and modem with its cables. Bring the USB keyboard and mouse if you have them Do not bring your desktop monitor, power cables, or ADB based keyboards and mice.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface. Completion of Intermediate Macintosh is recommend, but not mandatory.
Number of Sessions: One
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Pat Fauquet and Jim Ritz
1/21/00 9:30 am - 12:30 pm
2/1/00 1 pm - 4 pm

Internet & Telecommunications

NEW **Introduction to the Internet**

This three hour class, intended for users of all Internet browsers, will introduce you to the World Wide Web. Learn what the various buttons on the browser screen do. Learn to customize the browser window to meet your visual needs. Learn how an Internet address works and how to deal with error messages that appear. You will learn how to use Sherlock, search engines, directories and metasearch sites to find the information you seek. Learn how to capture pictures and text from the internet and how it print web pages. This class is appropriate for all users of the Internet including American Online customers. It is suggested that all participants enroll in one of the e-mail courses to complete their introduction to the Internet.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface. **Number of Sessions:** One
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00
Instructor: Pat Fauquet, Jim Ritz
1/18/00 9:30 am - 12:30 pm
2/10/00 9:30 am - 12:30 pm
3/9/00 1 pm - 4 pm

NEW **E-mail with Netscape Communicator**

This class will deal specifically the e-mail application with Netscape Communicator. Students will learn how to send, receive, reply to and forward email. They will learn how to

save mail into folders, how to use and manage the address books and how to send mail to groups of people. They will learn how to attach files to e-mail messages and how to deal with the attached files that they receive. Students will also learn where their email and address books are stored and how to back them up.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface. **Number of Sessions:** One
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00
Instructor: Pat Fauquet, Jim Ritz
1/18/00 1 pm - 4 pm
2/11/00 9:30 am - 12:30 pm
3/10/00 1 pm - 4 pm

*** *NEW** E-mail with Microsoft Outlook Express**

This class will deal specifically the e-mail application Microsoft Outlook Express. Students will learn how to send, receive, reply to and forward email. They will learn how to save mail into folders, how to use and manage the address books and how to send mail to groups of people. They will learn how to attach files to e-mail messages and how to deal with the attached files that they receive. Students will also learn where their email and address books are stored and how to back them up.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface. **Number of Sessions:** One
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00
Instructor: Pat Fauquet, Jim Ritz
1/19/00 1 pm - 4 pm
2/14/00 9:30 am - 12:30 pm
3/29/00 9:30 am - 12:30 pm

*** *NEW** E-mail with America Online**

This class will deal specifically the e-mail application with America Online. Students will learn how to send, receive, reply to and forward email. They will learn how to save mail into folders, how to use and manage the address books and how to send mail to groups of people. They will learn how to attach files to e-mail messages and how to deal with the attached files that they receive. Students will also learn where their email and address books are stored and how to back them up.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface. **Number of Sessions:** One
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00
Instructor: Pat Fauquet, Jim Ritz
1/19/00 9:30 am - 12:30 pm
2/11/00 1 pm - 4 pm
3/10/00 9:30 am - 12:30 pm

*** *NEW** Downloading , Installing and Using Files and Software From the Internet and from CD's.**

Learn how to find files and software on the Internet. Learn how download them, how to install and use them. Learn about Macintosh viruses, and how to combat them. This one Session class is intended for students who have completed Intro to the Internet and an e-mail class and who want to learn more about the various software resources that are available on the Internet. These will include software, fonts, Sherlock and contextual menu plug-ins, Applescripts, and system resources.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface. **Number of Sessions:** One
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00
Instructor: Pat Fauquet, Jim Ritz
1/20/00 9:30 am - 12:30 pm
2/14/00 1 pm - 4 pm
3/29/00 1 pm - 4 pm

Microsoft Office 98

Microsoft Word for Office 98

This class will introduce the student to the fundamentals of the Microsoft Word for Office 98 word processing software package. The course is designed for those with very limited or no previous knowledge of Word. Topics that will be covered include: reviewing the screen elements of a basic new Word document (the standard and formatting toolbars and the menu bar); setting default options such as spell checking and document editing choices, default font selection that are applied to a basic document; creating, editing, saving and deleting a simple Word document; using the on line help function; simple formatting using tabs and setting margins; creating a simple table; and reviewing predefined templates such as the letter template that are included in Word.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface.
Number of Sessions: One
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Cordell Ratner
1/6/00 7 pm - 10 pm
2/1/00 7 pm - 10 pm
3/2/00 7 pm - 10 pm

Excel for Microsoft Office 98

This class will start by covering opening, saving and retrieving an Excel workbook, and then will discuss definitions of a workbook, a worksheet, and a cell. Next we will review the objects on a typical worksheet screen including those items on the menu bar, the standard toolbar, and the status bar. The student will then be assisted in creating a simple Excel worksheet that will be used to teach the concepts of entering, editing, formatting, and deleting data (text, number, time, date, and formula) in a cell, along with learning techniques on how to navigate within the worksheet and between worksheets. Other topics for which the student cre-

ated worksheet will be used are for: inserting and manipulating rows and columns, creating basic formulas of addition, subtraction, multiplication and division in a worksheet using the function wizard, adding comments to a cell, using the fill command to enter a data series, making the screen easier to view using splitting and column header freezing techniques, adding, deleting and naming worksheets within a workbook, and creating headers and footers printing of selected cells and an entire workbook. Finally, we will create basic charts using pie and bar charts as examples, and will wrap up by discussing worksheet style techniques along with reviewing the set of workbook options in the tools menu.

Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface, **Number of Sessions:** One.

Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.

Instructor: Cordell Ratner

1/18/00 7 pm - 10 pm
2/23/00 7 pm - 10 pm
3/16/00 7 pm - 10 pm

AppleWorks (ClarisWorks)

***NEW* Moving up to AppleWorks 6**

Come learn about the changes and new features that are found in AppleWorks 6. Learn how to use the new buttons, menus and tools to produce word processed documents, databases, spreadsheets, graphics and slideshows. Learn how to access the templates and clip art installed with the program and the array of additional items that will be available on the internet. This class is intended for those who have completed Introduction to AppleWorks or who have a good understanding of the previous versions.

Prerequisite: Introduction to AppleWorks or previous experience with AppleWorks

Number of Sessions: One

Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00

Instructor: Pat Fauquet

1/26/00 1 pm - 4 pm
2/23/00 1 pm - 4 pm
3/3/00 1 pm - 4 pm

Introduction to AppleWorks (a.k.a. ClarisWorks)

This class will introduce the student to the integrated software package, AppleWorks. The course will begin with an introduction to the fundamentals of the AppleWorks environment: the window layout, the help menu, and the universal commands. Each of the six modules (Text, Draw, Paint, Spreadsheet, Database, and Communications) will be treated separately but the emphasis will be on text and draw documents. The course will conclude with an examination of some basic integrated applications.

Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface. **Number of Sessions:** One

Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.

Instructor: Pat Fauquet and Jim Ritz

1/12/00 9:30 am - 12:30 pm
2/4/00 9:30 am - 12:30 pm
3/16/00 9:30 am - 12:30 pm

AppleWorks and Newsletters

Learn how to use the newsletter assistant in AppleWorks to easily produce newsletters for a variety of audiences. In this class participants will produce a basic newsletter, then learn how to use the Mac OS stationery pad function to speed the production of future newsletters. Basics of graphic design, layout, typography, writing style and suggestions for economical reproduction will also be covered. This class is not an introduction to

Some Specifics

- **Where:** Unless otherwise stated, all tutorials sponsored by Washington Apple Pi are given at the office located at 12022 Parklawn Drive, Rockville, Maryland.
- **Fees:** $35 per class for members and $50 per class for non-members. Pre-registration and Pre-payment must be made to hold a seat.
- **Who:** All family members living within the household of a member, are members.
- **Class Size:** Class size is limited to 6 students per class.
- **Instructor Cancellation:** If a class is cancelled by the instructor, all students will be notified of the cancellation. Please check your home answering machine if you have not given a work number for notification.
- **Student Cancellation:** A cancellation must be received 72 hours before the class time. Cancellation may be made only via telephone during business hours or via email to the email address of office@wap.org. The office does not have an answering machine—only an announcement machine.

AppleWorks.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface. In addition Introduction to AppleWorks class or a good working knowledge of another word processing application is suggested before attending this class.
Number of Sessions: One
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Pat Fauquet
Attendance in an Introduction to AppleWorks class or a good working knowledge of another word processing application is suggested before attending this class.
2/4/00 1 pm - 4 pm

AppleWorks (a.k.a. ClarisWorks) Advanced

In this class we will take AppleWorks to a new level! Learn how to make easy outlines, lists, and check-off charts. Make great slide shows and presentations right in AppleWorks. Learn how to dress up charts and graphs, how to make specialized dictionaries, and how to have AppleWorks read to you! Learn the secrets of stationary files, how to make your own AppleWorks libraries store not only pictures, but also frequently used text strings. Learn how to write personalized form letters and how to do special layouts for newsletters. Many of the projects included will be using the capabilities of ClarisWorks 4.0 and AppleWorks 5.0 Students will receive templates, stationary files and handouts to take home. If you have any feature of the program that you would like covered in particular, please mention it when you sign up.
Prerequisite: Introduction to AppleWorks or a good knowledge of the basics of AppleWorks and its interface.
Number of Sessions: One
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Pat Fauquet
2/9/00 9:30 am - 12:30 pm

AppleWorks (a.k.a. ClarisWorks) for the Experienced User Workshop

This class is for those who have some experience with AppleWorks and are interested in asking questions and having specific problems discussed. The class will be a questions and answer format. You should bring along on floppy a sample of things with which you need help. The idea being that you can work on a project while the instructor is helping another with one that does not interest you.
Prerequisite: Introduction to AppleWorks or a good knowledge of the basics of AppleWorks and its interface.
Number of Sessions: One
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Pat Fauquet
Call office for dates

Networking

Networking for the Home and Small Office

Do you have two Macintoshes and one printer— or two printers and one Macintosh—or maybe even more?

Come learn the possibilities offered by the Macintosh platform to share not only printers, but also files and even modems. Learn about the built in networking software in every Macintosh and various hardware and software options available to do even more. This class will cover AppleTalk and PhoneNet connectors, AB switch boxes, serial port expanders, USB ports and hubs, ethernet, cards, and transceivers. Hubs, router and servers will also be discussed.

Learn how to install network cabling without tearing down all the walls and learn how to determine what kind of cable to buy and how to put the connectors on the cables.

In addition to talking about wires and hardware choices we will also discuss sharing files and applications between two or more computers and printers.
Prerequisite: A good working knowledge of the Mac OS and its interface.
Number of Sessions: One
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Pat Fauquet
1/10/00 9:30 am - 12:30 pm
2/2/00 9:30 am - 12:30 pm
3/1/00 9:30 am - 12:30 pm

Web Page Development

***NEW* Adobe GoLive**

Learn to use Adobe GoLive to create web pages and sites. This software package allows pixel-level control of graphics and ease in adding JavaScript actions. This class is intended for those who have completed the "Web Page Workshop" and "Preparing Graphics for the Web" or their equivalents. It is an introductory course and is not intended for advanced users of the program.
Prerequisite: Web Page Workshop and Preparing Graphics for the Web or a good knowledge of web site development
Number of Sessions: Two.
Price: Standard Members: $70.00, Associate Members: $100.00, Non-Members: $100.00
Instructor: Pat Fauquet
2/25/00 9:30 am - 4 pm
3/31/00 9:30 am - 4 pm

***NEW* Preparing Graphics for the Web**

In this all-day workshop students will learn how to make and prepare backgrounds, headlines, clip art, buttons, rules, dividers and animations for web pages. They will also learn how to construct graphic sets. These will be made using AppleWorks, GraphicConverter and Adobe PhotoDeluxe. Students will learn about the GIF, JPEG and PNG formats and when to use them. If you want to use these projects in an actual web

page, please sign up for Web Page Workshop in addition to this class. If you have a external Zip drive, please bring it to class. If you have an internal Zip drive at home, please bring an empty Zip disk to class. This is an all day workshop. Please bring a sack lunch or money to order lunch in.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface.
Number of Sessions: Two.
Price: Standard Members: $70.00, Associate Members: $100.00, Non-Members: $100.00
Instructor: Pat Fauquet
1/28/00 9:30 am - 4 pm
2/28/00 9:30 am - 4 pm

Web Page Workshop

Come design a web page! In this class students will be introduced to HTML and how it works. They will learn how to use Claris Home Page or Adobe PageMill or GoLive CyberStudio Personal Edition to make a series of linking web pages using pre-made backgrounds, graphics, animations and sounds. They will learn how to plan and organize their files for easy web page maintenance. They will learn about the principles of good web page design. Their pages will be ready to upload to the web. If you have a external Zip drive, please bring it and an empty Zip disk to class. If you have an internal Zip drive at home, please bring an empty Zip disk to class. This is an all day workshop. Please bring a sack lunch or money to order lunch in. It is suggested that a good follow-on class would be Graphics and Sound for My Web Page.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface.
Number of Sessions: Two.
Price: Standard Members: $70.00, Associate Members: $100.00, Non-Members: $100.00
Instructor: Pat Fauquet
1/27/00 9:30 am - 4 pm
2/21/00 9:30 am - 4 pm
3/30/00 9:30 am - 4 pm

Consumer Graphics & Multimedia

NEW **Introduction to Scanners**

This class will cover basic scanner operation. Students will learn how to scan photos and text. They will learn how to adjust the scanner settings to produce better scan and how to prepare a photo file to attach it to an e-mail message. They will learn how to use scanned photos in text documents and how to scan directly into applications such as Adobe PhotoDeluxe and Kai's PhotoSoap. They will learn how to use OCR software to turned scanned text into a text file.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface, Introduction to the Internet and an E-mail class.
Number of Sessions: One.
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Pat Fauquet
1/25/00 9:30 am - 12:30 pm
2/16/00 1 pm - 4 pm
3/8/00 9:30 am - 12:30 pm

NEW **Intro to Digital Cameras**

Learn how to use your digital camera to its best advantage. Learn how to download photos you've taken and how to bring them directly into applications like Adobe PhotoDeluxe and Kai's PhotoSoap. Learn about cropping and improving image quality. Learn how to decrease file size so that you can send photos via e-mail.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface, Intro to the Internet and an E-mail class.
Number of Sessions: One.
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Pat Fauquet
1/25/00 1 pm - 4 pm
2/9/00 1 pm - 4 pm
3/8/00 1 pm - 4 pm

Introduction to Graphics

Are you confused by graphic jargon? Would you like to learn how to choose and use a scanner? Do you know the difference between draw and paint programs? Are you wondering about digital cameras? Are you baffled by PICT, GIF, TIFF BMP, JPEG, and all those other graphic formats? Would you like to learn how to send a picture by e-mail? Do you know what to do with pictures people send to you? Would you like to learn how to make your own Finder backgrounds and icons? This is the class for you! We will explore all these topics in non-technical language and show you how make graphics work for you!
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface, **Number of Sessions:** One.
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Pat Fauquet
1/24/00 9:30 am - 12:30 pm
3/6/00 1 pm - 4 pm

Working with QuickTime Pro

Have you ever wished you could make a video from your computer instead of writing a report? Have you ever wanted to add titles, credits and/or a new sound track to your home videos? Have you ever wanted to cut or mix your own audio tapes? Have you wanted to make your own QuickTime movie, a QuickTime panorama or make QuickTime VR object? Do you know what equipment you need and how to hook it up to your Mac to make all those things happen? All these projects can be done with QuickTime 3 Pro which is included in Macintosh OS 8.5 In this class we will explore these projects, discuss what you need to do them, and show you where to buy the missing parts without spending a fortune. If you have a external Zip drive, please bring it and an empty Zip disk to class. If you have an internal Zip drive at home, please

bring an empty Zip disk to class. This is an all day workshop. Please bring a sack lunch or money to order lunch in.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface, Intro to the Internet and an E-mail class.
Number of Sessions: Two
Price: Standard Members: $70.00, Associate Members: $100.00, Non-Members: $100.00
Instructor: Pat Fauquet
2/7/00 9:30 am - 4 pm
3/2/00 9:30 am - 4 pm

Introduction to Adobe PhotoDeluxe

This inexpensive program is fun and easy to learn. It can be used to edit images for the web. It also can be used to enhance digital photographs or scanned images, make calendars, posters, and cards. The only major drawback to the program is its poorly written manual with lots of neat examples but few detailed instructions. In this class students will learn how to use this program to accomplish many tasks that normally require Adobe PhotoShop.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface.
Number of Sessions: One.
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Pat Fauquet
1/24/00 1 pm - 4 pm
2/16/00 9:30 am - 12:30 pm
3/6/00 1 pm - 4 pm

Introduction to MovieWorks

Many Washington Apple Pi members purchased MovieWorks at the November General Meeting. Come learn how this software works in a hands-on Sessions. We will make a "movie" that brings in several pictures, adds titles, has narration and an animation and transitions between pictures. We will then make QuickTime movies that can be played on a computer and over the Internet. The instructor will demonstrate how to digitize a movie on a computer with a video capture card and how to record from the computer to a VCR. We will discuss how to add video capture and video out capabilities to your computer. We will also discuss how to optimize your system to make the best possible movies with MovieWorks. Students are invited to bring their own pictures to be put into their MovieWorks projects. If you own a Zip drive or other large capacity storage device you may want to bring it to take your project home. If you do not own MovieWorks, information will be provided on where to obtain the software.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface.
Number of Sessions: One.
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Pat Fauquet
Call office for dates

Computer Crafting Class

An informal class in a flexible format to help students combine regular art and craft skills with their computer. This combination will open many new doors for some, and make life easier for others. This will not be a class to teach a specific skill, rather it will teach how to open your creative spirit. Students are invited to bring clip art, graphic applications and projects to class. Instead of showing you new software you have to buy, this class is structured to help you get the best use out of software you own.

Learn how to create stencils, templates, silk screens, sponge patterns, etc. Using new ink jet media you can make elegant faux stained glass, personalized gifts, animated greeting cards, elegant wall hangings, memory books and quilts, jewelry, games, etc.

Requirement for attendance: imagination or a desire to imagine. New crafters may attend to learn new computer tricks and experienced crafters may attend to learn computer tricks. None of the classes require previous experience.

Creativity grows in a creative environment. Come play with us. Each class will be different based on the needs and skills of the students. Requests for specific content are invited. When you register, tell us what you want to learn, what software you want to use and anything else you want to share.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface, **Number of Sessions:** One.
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Mary Keene
1/5/00 9:30 am - 12:30 pm

Other Educational Opportunities

Apple Computer Inc., Reston, VA 703-264-5100 or www.seminars.apple.com

Mac Business Solutions 301-330-4074 or www.mbsdirect.com

Micro Center 703-204-8400 or www.microcenter-education.com

Piwowar & Associates 202-223-6813 or www.tjpa.com

Carol O'Connor 703-430-5881, graphicsss@ao.com

Home and Small Business Financial Management

Introduction to Quicken

This course will be an introduction to the personal use of Quicken 7 or 98, and will cover the following: Entering Accounts, Use of QuickFill,

Split Transactions, Categories, Writing Checks, Preferences, Passwords, Help, Reconciling Accounts, Reconciliation Report, Credit Card Accounts, Transferring Money.

Students should have some familiarity with the program and made an attempt to use it before class. The class will be taught using Quicken 7 (not the deluxe version). The instructor will try to answer all questions as long as they are within the curriculum outlined above. Bring your written questions.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface, **Number of Sessions:** One.
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Pat Fauquet
1/10/00 1 pm - 4 pm
2/2/00 1 pm - 4 pm
3/1/00 1 pm - 4 pm

Databases & Spreadsheet Programs

Introduction to FileMaker Pro and/or the AppleWorks (a.k.a. ClarisWorks) Database Module

This course covers what a database is, database terms, how to plan a database, and create database fields and layouts. Searching, sorting, printing and editing information in a database will also be covered. The differences between the AppleWorks module and FileMaker Pro will be discussed as well as when and how to migrate an existing database into FileMaker Pro.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface, **Number of Sessions:** One.
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Pat Fauquet
1/31/00 9:30 am - 12:30 pm
2/18/00 9:30 am - 12:30 pm
3/3/00 9:30 am - 12:30 pm

FileMaker Pro Clinic

This class is for those who have some experience with FileMaker Pro and are interested in asking questions and having specific problems discussed. The class will be a questions and answer format. You should bring along on floppy a sample of things you would like help.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface. **Number of Sessions:** One.
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Pat Fauquet
2/18/00 1 pm - 4 pm

Introduction to Spreadsheets

This class will introduce basic spreadsheet concepts. Students will learn how to set up a spreadsheet, how to enter and edit numbers and words, how to enter basic formulas and make basic charts and graphs. They will learn how to sort data and how to print the whole spread sheet or only a portion of it. Students will use either the spreadsheet module of AppleWorks (ClarisWorks) or Excel. This class is not meant for persons who are intermediate or advanced users.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface.

Washington Apple Pi Tutorial Registration Form

Washington Apple Pi
12022 Parklawn Drive
Rockville, MD 20852
301-984-0300

Name _____

Address _____

City/State/Zip _____

Phone (day) _____ (evening) _____

Member Number _____ Non-member _____

Number of Classes ___ x Class Fee $ _____ = Total Fee $ _____

☐ Check/Money Order ☐ Visa/MasterCard

Card Number _____

Card Expiration _____ Signature _____

Please fill in the name(s) and date(s) of the class(es) that you wish to attend.

Class #1 _____

Class #2 _____

Class #3 _____

Class #4 _____

Class #5 _____

Class #6 _____

Mail registration and payment to the above address.

Number of Sessions: One.
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Pat Fauquet or Jim Ritz
1/31/00 1 pm - 4 pm
2/22/00 1 pm - 4 pm

Professional Graphics and Desktop Publishing

Adobe Photoshop Part 1

Learn the basic fundamentals of Adobe Photoshop, the most widely used graphics program. Learn the proper way to configure the Photoshop preferences and how to use the tool, info, channel and color palettes. Also learn how to use each of Photoshop's tools, create new documents, define colors and manipulate text and images. Also covered will be the proper format to save your image in, and what compression will or won't do to your image. **Prerequisite:** Introduction to the Macintosh or a good knowledge of the Mac OS and its interface. **Number of Sessions:** One.
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Paul Schlosser
1/5/00 6 pm - 9 pm
2/2/00 6 pm - 9 pm
3/1/00 6 pm - 9 pm

Adobe PhotoShop Part 2

Adobe Photoshop lets you isolate different parts of an image on layers. Each layer can then be edited as discrete artwork, allowing unlimited flexibility in composing and revising an image. This lesson introduces creating an image with layers, and covers the basics of the Layers palette and how to select, view, and reorder layers. The concepts are fundamental for the use of Photoshop. In this lesson, you'll learn how to do the following: Organize your artwork on layers. Create a new layer. View and hide layers. Select layers. Remove artwork on layers. Reorder layers to change the placement of artwork in the image. Apply modes to layers to vary the effect of artwork on the layer. Link layers to affect them simultaneously. Apply a gradient to a layer. Add text and layer effects to a layer. Save a copy of the file with the layers flattened.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface, and Adobe PhotoShop Part 1 or a knowledge of the topics covered in that class.
Number of Sessions: One.
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Blake Lange
1/11/00 7 pm - 10 pm
2/8/00 7 pm - 10 pm
3/7/00 7 pm - 10 pm

Adobe Illustrator: Mastering the Bezier Curve

Illustrator has become so feature laden that current tutorials are just overviews of the product; they do not present the fundamental workings of the program in depth. The Bezier curve, otherwise known as a vector graphic, is the primary building block of Illustrator (and many other drawing programs). Mastering its use will fundamentally change your view of the power of the program. The way the Bezier curve works, however, may seem alien at first with its points and vectors, an approach to illustrating many find counter-intuitive. This class will start with creating and editing the simplest lines and curves and build up to the creation of complex illustrations. By the end of the class you should feel comfortable editing any illustration based on the Bezier curve, for example, all clip art that has the eps extension in its file name. This class serves as both a good introduction to the program and as a help for the more advanced user to become adept in its use.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface. **Number of Sessions:** One.
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Blake Lange
2/22/00 7 pm - 10 pm

Introduction to Quark XPress

Learn the basic fundamentals of Quark Xpress, the most widely used page layout program. Learn the proper way to configure the Xpress preferences and how to use the tool, measurement, color and documents palettes. You'll learn how to properly create new documents, define four-color process and spot colors, create master pages and manipulate text and graphic objects. Learn how to correctly use Xpress font and picture usage windows and how to configure the document for the laser printer or high-resolution imagesetter.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface. **Number of Sessions:** One.
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Paul Schlosser
1/26/00 6 pm - 9 pm
3/22/00 6 pm - 9 pm

Quark Xpress Clinic

This class is for those who have some experience with Quark Xpress and are interested in asking questions and having specific problems discussed. The class will be a question and answer format and you should bring along on floppy a sample of things for which you would like help. Prerequisite: Introduction to Quark Xpress or a good knowledge of the basics of Quark Xpress and its interface. The price is $35 ($50 for non members).
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface, and a good working knowledge of QuarkXpress
Number of Sessions: One.
Price: Standard Members: $35.00,

Associate Members: $50.00, Non-Members: $50.00.
Instructor: Paul Schlosser
Call office for dates

Introduction to PageMaker

Using the basic commands, tolls, and palettes, you will import, format, and position text and graphic elements needed to assemble a single-page, black and white flyer. This project will cover the following topics: Restoring default PageMaker settings. Changing the view of a publication. Creating a new publication. Opening an existing publication. Setting up the horizontal and vertical rulers. Displaying and hiding guides. Positioning the zero point. Using the pointer tool, the text tool, and the zoom tool. Specifying multiple columns. Locking the guides. Creating, placing formatting, and positioning text and graphic elements. Creating a drop cap. Applying a tint to text. Specifying a hanging indent. Creating ruler guides. Drawing circles, rectangles, and lines. Adjusting the stacking order of elements on the page. Range kerning text. Using the Snap to Guides option.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface. **Number of Sessions:** One.
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Blake Lange
1/25/00 7 pm - 10 pm
3/21/00 7 pm - 10 pm

PageMaker Clinic

This class is for those who have some experience with PageMaker and are interested in asking questions and having specific problems discussed. The class will be a questions and answer format and you should bring along on floppy a sample of things for which you would like help.
Prerequisite: Introduction to the Macintosh or a good knowledge of the Mac OS and its interface and Introduction to PageMaker or a good knowledge of the basics of PageMaker and its interface. **Number of Sessions:** One.
Price: Standard Members: $35.00, Associate Members: $50.00, Non-Members: $50.00.
Instructor: Blake Lange
Call office for dates ■

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What is Speed and how does it differ from Performance

The truth about the real world improvements

By: David K. Every
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MANY PEOPLE understand simple specs, and performance changes in a subsystems. What they don't understand is those effects on the whole system. The Subsystems speed may have a very small impact on the real world performance. This is why you hear things like Apple increases the speed of their bus from 66 MHz to 100 MHz (a 50% improvement) and in the real world, users see a 5% performance gain. Apple isn't defrauding anyone — people just don't get what the numbers mean. Things are far worse in the Intel world, because you have many more wannabe techies that care about things that are irrelevant. Let's explore what I mean in more detail.

Performance

Step 1

Let's say I want to compare one Application — like running Photoshop, Opening an Image, doing a filter (or two), saving the file, and quitting. Here is how the time component of that might break down:

It takes a certain percentage of your time to do each high level thing — like loading Photoshop, Opening a file, doing the filter, saving and quitting. The total time is your real world performance. If I made opening a file 100 times faster, it may have little (or no) significant difference on your workflow — because the majority of your time is spent filtering. There is much more to this than meets the eye.

Step 2

Let's keep breaking things down into more and more detail. Users think of steps like "load, open, filter", but computer engineers often think more at the different subsystems.

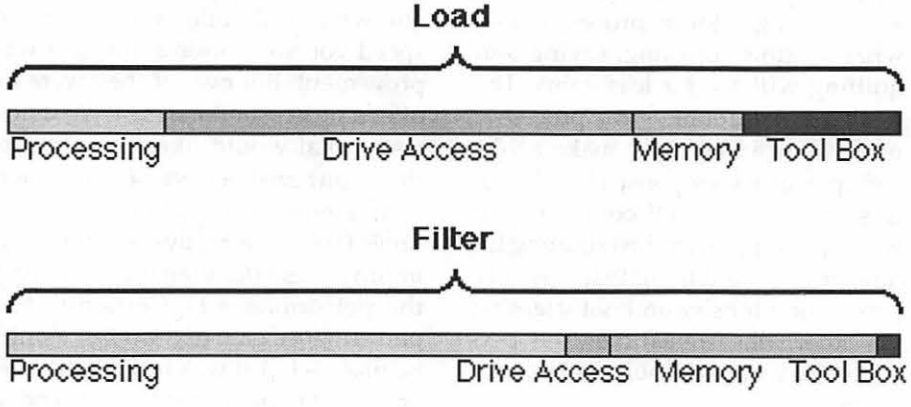

Figure 1.

Let's jump into a few of the logical areas (like load and filter) and see how the engineering elements might break down in timing.

From a engineers point of view, the function of "loading" or "filtering" can break down into the following groups, Processing, Drive (I/O), memory and toolbox (MacOS calls).

(Of course this breakdown detail is arbitrary. We can keep going until we are looking at what individual instructions are taking the most time in processor, or what area or metric of the drive performance is most important, and so on. But for explanation purposes this high level view is good enough).

Notice that for loading the image, most of the time may be spent doing one thing (like drive access) but in a filter there is likely little drive access, and a lot more time is being spent accessing memory (where the image is stored) and of course processing it. Different functions have dramatically different usage models of the computer, and they stress different subsystems differently. So improving one subsystem may have no noticable performance increase if you aren't using those things a lot, or if they are not the bottleneck (what is taking most of your time).

Step 3

Now we will pretend that Apple just doubled the speed of the systems bus (which should improve how long it takes to access memory). Here would be the simulated results.

When doing a load (running something from disk), a 100% improvement on BUS speed may only make a 5% difference on the total time. Memory access was twice as fast (there was no duping of any one) but memory was only one of many things that were going on (and not the costly one in this case). In fact, for speeding up the load part of the function, what Apple really needed to do is speed up the drive access — a doubling of

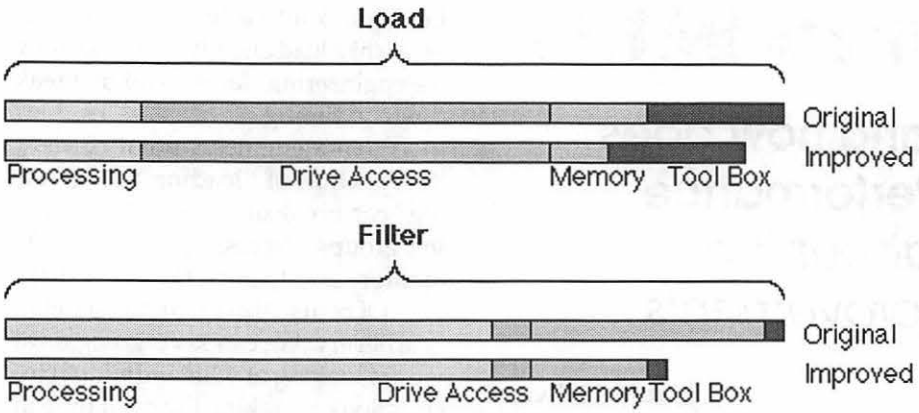

Figure 2.

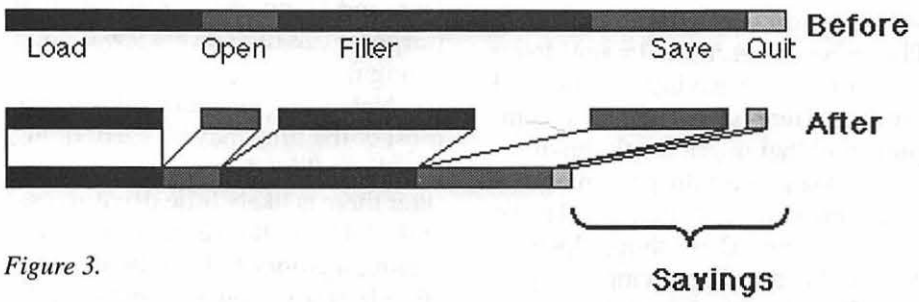

Figure 3.

that performance would have been far more noticeable — probably more like a 40% speed increase instead of 5%.

Of course remember that each of these items can be further broken down. What is drive access? It is the sum of the time it takes the I/O port (say SCSI, IDE or FireWire) to transfer the data — as well as the time it takes the drive to find, access and send the data to the I/O port. Drives themselves have many metrics like access time, transfer rates, latency and so on. All these functions can keep getting broken down further and further, or in different ways depending on what you are trying to measure.

Doubling the memory bus may have had a nominal effect on loading Photoshop (say 5%), but it will have had a far bigger effect (say 15 - 20% improvement) on doing a Photoshop filter. The Photoshop filter is far more likely to be memory bound (waiting for the processor bus) than loading was. So if you are spending all your time doing filters, that memory bus improvement could be a far bigger gain to you.

Step 4

Now lets really go hog wild. Lets double the performance of the processor and imagine what the real world results would be (looking at the highest level user functions again).

If we double the processor performance we know it will help some things far more than others. Like it is likely to help the Photoshop filter a whole lot (since it is processor bound — i.e. doing a lot of processing) — while loading, opening, saving and quitting will see far less gains. The total gain for doubling the processor performance may only make a 20 - 25% performance boost overall (for this specific test). Of course if you were spending hours just running filters (or doing anything that was very processor intensive and not stressing the other subsystems) then this performance increase would be far more dramatic.

Conclusion

Of course the point to all this is that tuning a few of the right things can have a far larger effect than tuning many of the wrong things — the trick is not to have better specs — but have better of a few key specs (for what you are doing). Unless you are an engineer and work on this stuff, you may never know what is the bottleneck (where does your computer spend most of it's time) — and this stuff does change a little Application to Application.

I hope this helps you learn a bit more about speed, and how dependent speed is on what you are doing. If you are loading all the time (accessing the disk), then you should really be paying more getting a fast hard drive. If you are spending all your time processing, then the faster processor will pay off. Your gains in each case will be dependent on what you do — and that varies for everyone.

Each of these areas can be broken down more and more. There is a near infinite amount of metrics for measuring performance. Engineers keep doing this to see what areas are the bottlenecks and need the speed improvements. But just because a company radically improves something does not mean that it will effect you at all — though odds are that it will be a big gain for someone!

There are diminishing returns on speed improvements. If it takes you 50 seconds to do something (20 seconds of that is processing), and someone were to double your processor speed you would see a nice 20% improvement. But even if they were to offer a processor that was 1,000 times faster, that would likely only mean that your real world performance would improve by 38% or so. So 1,000 times faster was really only twice the improvement (for you) than doubling the performance is. Certainly that performance gain (extra 18%) would be nice — but it was not revolutionary. What happened is the bottleneck

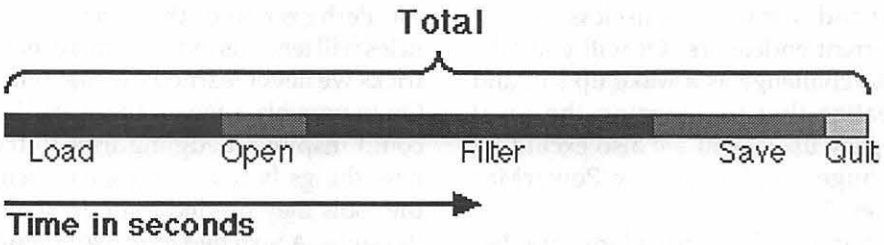

Figure 4.

shifted — what was taking most of your time (the bottleneck) was not improved. Improving any one area, without improving the others just moves the slow spots around. We started out with about 40% of our time spent in processing — but once we reduced that, improvements in that area became insignificant — it was the other areas that needed the improvement.

So what you should learn from all this is that your system (computer) is not as fast as the fastest component — your performance is likely more dependent on the slowest one. The bottlenecks and the balance of the whole system are what count.

This is part of the difference between the Mac and the PC and many measurements.

PC advocates (techno-wannabe's) often get real excited about performance improvements ANY area — whether that area matters or not. So they brag about faster busses when their machines were not memory bound! The spec looks great, "Now with a 133 MHz bus" — but the real world should read "Now less than 5% faster". Then PC advocates ignore the slow spots and the worst parts of their machines — like piping sound through an ISA bus (which can take up to 30 or 40% of their total I/O budget). You want to really speed up the PC, or make it better, free it from the things that are really holding it back, like ISA slots, antiquated Instruction Set, or Windows — the bottlenecks. Instead they will keep getting excited about things that don't matter that much (or that often) — "Now with a 200 MHz bus". Yawn. That is why I brush off many PC advocates and specs — they keep getting excited about some things that make almost no difference and only sound good to people who don't know any better.

Mac advocates care (more often) about real world results. The fastest whatever may not matter. I could design a system that was balanced and keep improving the slowest components, and make a far bigger difference on the real world that just keep dramatically speeding up the fastest components. Since Macs are by far better balanced and engineered systems (and Apple keeps eliminating the old and bad parts) this is why the specs may imply one thing (like MHz and Memory Bus and all those metrics) — and yet the real world may say something completely different! ■

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Because we can A challenge to MacWorld Magazine

©Mary Keene 1999

WHEN MY PMac was new, I subscribed to *MacWorld* magazine. It was a wonderful entry into the fascinating new world I was discovering. Over the years, things changed as changes dictated change. *MacWorld* soon began including CDs in some of the magazines on a "special" basis. Not too long after that, *MacHome* debuted a CD version and raised the price. *MacAddict* magazine was born on the heels of *MacHome's* conversion. Soon *MacWorld* also offered CDs on a regular basis but not to subscribers.

They would send the CD for an additional charge that matched the newsstand price, no reward for a year long commitment and payment in advance. With *MacAddict* I could get the magazine and CD for the same price I paid for *MacWorld* without a CD. I really liked the magazine much better and the "how to" stories were more in line with things I understood. I let my subscription to *MacWorld* expire and subscribed to *MacAddict* instead. One or twice a year, I might be tempted to buy a copy of *MacWorld* on the newsstand for a specific topic or article.

I never bothered to read the system

requirements for the CD because my Mac ran it or I was able to use work arounds to get what I wanted from the CD's. This week (12/1/99) I bought a copy of it for some of the demos on the CD. Somehow I noticed the disclaimer written in small type on the CD, "This CD requires a Power PC". What??!!!

I found myself getting angry on behalf of all the 68K owners. What are they—chopped liver? Even though *Apple* is rapidly developing the Macintosh products, the number of legacy users is legion. It was their use of and loyalty to the Apple brand that created the market for the iMac phenomenon. They provided the grass roots support that permitted Apple and the Macintosh third party market to exist, grow and thrive. Now they were being left out in the cold yet again. I was angry.

Just because there are new things out there, it doesn't mean that everyone will immediately discard their equipment and buy whole new systems. Even though PowerMacs are entrenched, the 68Ks **are not** dead. They are alive and well and kicking butt daily. We are talking about the indomitable Macintosh not some cheap, disposable PC. Legacy users may use a lot of work arounds and substitute applications, but they will find ways to do high end stuff. Even if they are not using PowerMacs, they are using **Macs**!

Maybe they can't run *PhotoShop 5.5*. They can run older version of *PhotoShop*. Maybe they can't imitate the features of *5.5*, they **will** find alternate ways to create similar effects. Mac people step up to the plate briskly when a challenge has been issued.

So I am issuing a challenge to *MacWorld* and other magazines, will you dare to turn your backs on the thousands of people who grew up with you? The hordes of users who made it possible for you to survive and thrive. Are they now to be cast off and discarded as useless to your current endeavors? Or will you take this challenge as a wake up call and realize that by ignoring the loyal legacy users, you are also excluding a huge number of new PowerMac users.?

Surveys show that a large number of iMac owners are computer virgins, PC/Wintel converts, neophytes and the curious. When you write in such a way to exclude legacy readers, your language is also over the heads of these new owners. You are tuning your back on a large chunk of people. Is your customer base and profit line so well established that you don't need these new Mac people? Have you managed to garner a huge enough loyal constituency that you can afford to ignore this sizable chunk of potential profit? I think not. Competition is pretty fierce and the wolf is always nipping at one's heels.

> "Legacy users may use a lot of work arounds and substitute applications, but they will find ways to do high end stuff. Even if they are not using PowerMacs..."

Reconsider serving the entire Mac community again. The articles you publish, some written is simpler terms to be comprehended by the virgins, converts, neophytes and revered ancients will also serve to remind those of us who have matured into other levels of technology about the good old days when we learned the software and proceeded to teach it how to do our favorite tricks. Hopefully, many of us will remember those days and be grateful for the options we have now instead of impatiently waiting for the next best and brightest. Perhaps one of these gentler articles will teach us old dogs many new tricks we never learned the first time. Quite possibly a few of these articles could inspire a fledgling user to try new things because you gave them the tools they needed to understand the steps. A wizened Mac user group member speaking to a mixed experience group of women made the comment, "PC people become expert in one application or part of an application. Mac people expect to do that also. However, they soon become expert in all things Mac, hardware and software because they can. Very soon after purchase, they discover all the fun things they can do, like changing the desktop pattern or color, making custom icons for all their generic ones, renaming the Hard Drive, etc. They progress from here to become comfortable with anything Mac they want to delve into BECAUSE THEY CAN ON A MAC, **even on a 68K Mac!**

The current technology race in progress threatens even diehard Macophiles at times. We get tired trying to keep up or stay ahead, we are so overwhelmed by all the new toys and goodies we are in danger of giving up on the things Macs do best—have fun. It is a good thing to occasionally remember less complex techniques and the elegant solutions they still offer.

Even though I have a lot of the more modern software, when rushed and stressed, I frequently revert to old trusted applications that don't tax me as much. After I have a design, I can transfer it to a more appropriate or complex application if necessary.. I have a lot of older software (that still runs happily on OS 9) that I intend to play with and learn from. I am not alone. Check out the Mac garage sales sometime. Mac people horde their software not simply because it is an old friend but also because they can. It still works!

Are you magazine enough to broaden your audience? ■

It's not supposed to be that easy!

©Mary Keene 1999

THE IMAC DVS finally arrived at the Sears store where I am working for Demo Days. I had been talking to the sales associates about how great iMovie is and how easy it is to use. I suggested that maybe if they had a camcorder with a FireWire cable we could hook it up to the iMac when they came in and show people on the spot how easy it is to use.

While I was installing some promotional files on the iMac for the associates to use in learning more about iMacs, one associate said, "Here it is". Startled I turned to see what he was giving me as he handed me a camcorder. Uh-Oh, I don't know anything about video camcorders but it looks like crash course time. Just as I had pulled out all the camera instructions trying to figure out how to connect it and work the camera, a couple comes in out of breath. The man points to the iMac DV SE and asks if we have one in stock. The associate offers to order one because we only have the demo unit.

They are crushed and ask how long the special order list is. They have been to all the local stores looking for one and can't find one in town. They have called MacMall and were told 600 people were ahead of them. The man has a Mac PowerBook and an iMac DV SE, he bought one for his mother and his wife is very unhappy she didn't get one. About that time, the man noticed the camera I was holding and mentioned the video capabilities were intriguing but he probably wouldn't be using it immediately.

He asked if it worked pretty good and I explained that I was just in the process of hooking things up to try it out. I also admitted that I wasn't familiar with camcorders. Since he was, he volunteered to get the camera working. When we had all the connections made, we didn't have a picture on the iMac and the screen kept reporting cable disconnected. Once we found and connected it, a picture showed on the iMac screen instantly. The salesman who had brought me the camera walked over just in time to see the live video appear on the screen. His eyes grew big and his mouth opened as he exclaimed, "It's not supposed to be that easy! You should have to fool around with things more. That how PCs are. You never get it the first time. You just have to keep adjusting until it works."

In his surprise, he was talking loud enough to be heard above the normal din on a Sunday morning. Soon all the associates gathered to see what the commotion was all about. They, too, were excited to see the video on the screen. I only wish we had been able to capture the wonderful astonishment on the face of the associate who thought it was too easy. That was a priceless "Kodak Moment" I would have loved to capture.

After all the excitement died down and we got the SE ordered for the customer, I proceeded to familiarize myself with the setup to see if the iMovie editing features were as simple as they had looked on the Satellite feed when Steve Jobs introduced iMovie. Since we did not have a tape for the camera, I had to make some adjustments to the mental image I had of the steps involved. I didn't have as much ability to edit and alter frames that were in the clipping album (on the "shelf") because I could not replay them to import the frames I wanted. I had to accept the clip as it was since it was written to disk as a static file. Normally, the clipping would be on tape and could be replayed from the tape so that the movie could be edited dynamically by importing different pieces of the video.

Nevertheless, I found that DTVideo (desktop video) is not only a possibility, it is a done deal. Any computer savvy person who has a FireWire camera, an iMac DV and iMovie will become so addicted to making movies that (s)he will soon be looking at the higher end video software for more effects and greater freedom to create more complex video. The quality of the movies even at full screen was amazing. There are options to select the type of movie to save just as there are multiple graphic formats for still pictures. You have the ability to save as an

Email movie, small (QuickTime 4.0)
Web movie, small (QT 4.0)
Web movie, small (QT 3.0)
CD-ROM movie, medium
CD-ROM movie, large expert

PAL format is supported and all the tutorial movies are NTSC format.

I was unable to get screen shots for this article since there was no internet connection to email from and there was no demo zip drive to save to.

The software people need to stop and take a good hard look at where this can go if they will provide consumer versions of their software or easier to learn mid-range applications. This puppy (iMovie) can play with the big kids. The memory book craze will rapidly give way to the "movie revery" as we capture our family and friends for posterity. (Granted, some family members would be best left out. (Did I mention iMovie is very easy to edit?) Once again Steve Jobs thought different and pulled yet another white rabbit out of his cavernous magical hat. Way to go, Steve! ■

One More Year

The Year 2000 will feature one more year of sunny days and storms, successes and failures, discoveries and mysteries. Even after the Y2K scare settles down, there will be new and old challenges to meet, unfinished tasks to complete, and new technological wonders to pose both promise and pain.

Before the new century begins in 2001, help make the world of computing safer and saner by recruiting new members into **Washington Apple Pi**, and inviting old members back. Much has changed since the Pi started in 1978; technology has made the world smaller. But it has also made the task of "keeping up" much bigger.

We can help, ourselves and others. We can explore, together and separately. We can discover, and share our discoveries. We can keep personal computing personal.

2001

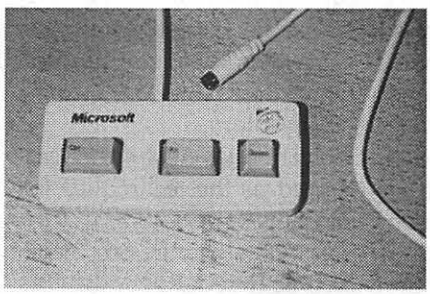
It is more than a new century.
It is more than a new millennium.
It is the next step to tomorrow.

Other Developments

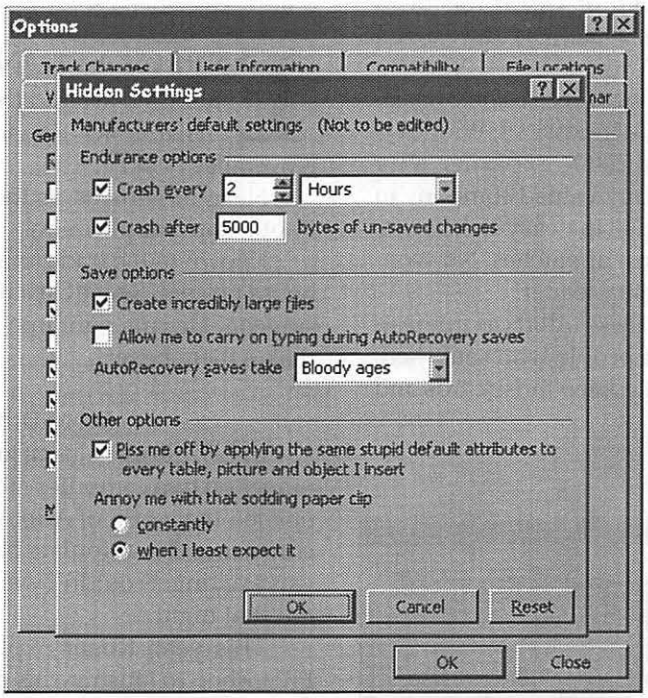
by Washington Apple Pi Labs

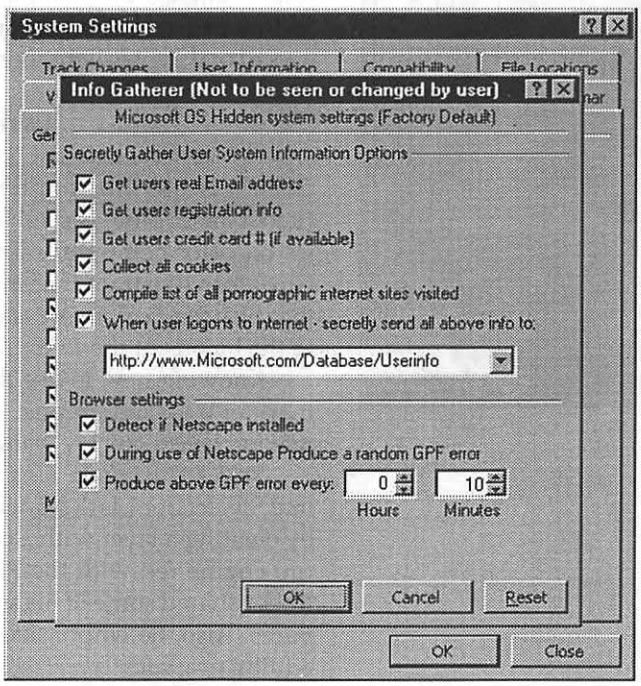
LEST OUR members think we deal only in the exalted world of Macintosh computers and Mac OS software, we present some new developments from outside our normal range of activities. But first, a disclaimer:

Washington Apple Pi Labs did not generate any of the illustrations for this article. In a break from past practice, we didn't test any of this, either. All of the illustrations were sent to us via electronic mail, usually without attribution or, in some cases, even without an accompanying message. We did, however, receive multiple copies of all illustrations. In one case, 27 copies of the same illustration. We thank our loyal readers, and sincerely hope they remove us from their address books.



The first item of interest is a satellite keyboard for use on Wintel computers. This clever item, attractively priced just in time for the holidays (Valentine's Day?), allows a Windows user to easily press the three most commonly used keys on a Wintel computer: Control-Atl-Delete. A careful examination of the photo, using high-powered, exotic software (the magnifying glass in Adobe Photoshop 5.5), reveals that, alas, this can't be used on a Macintosh, even with Virtual PC: the connector looks something like an ADB plug, but is actually a PS/2 connector. One rumor (which we just started) suggests that Microsoft might create a cross-platform USB version, for use on Wintel machines and USB-equipped Macs running Virtual PC.



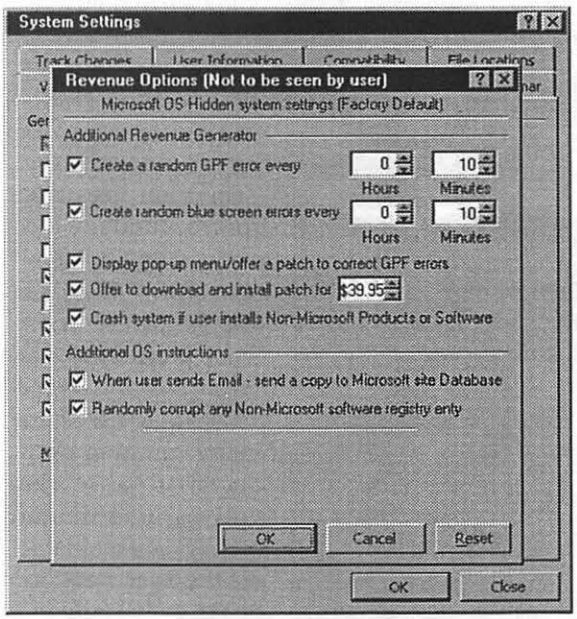


The next item (see above left) really isn't a product so much as a discovery: secret settings that control fundamental actions in Word 97 and Word 2000 on Wintel machines. Since Word 97 under Windows and Word 98 on Mac OS share many common characteristics, we can only assume similar settings are available on the Mac version. So far, we've failed to find such settings, but we have discovered several really funny suggestions to certain names using the Word thesaurus.

The next item (see page 85 lower right) is another discovery: where Spam comes from. This secret dialogue box, allegedly common to Windows 98, Windows NT 4.0 and Windows 2000, clearly reveals why your E-mail address is in the hands of every Spammer on the planet. For those unfamiliar with Windows terminology, GPF stands for "General Protection Fault," otherwise known as the "Blue Screen of Death." Note that the Blue Screen of Death has been eliminated in Windows 2000: it is now a red screen.

Another hidden settings box (see below), allegedly common to both Windows 98, Windows NT 4.0 and Windows 2000, explains why Microsoft is the most highly valued company in history. Note, for example, the easy-to-use setting for increasing the cost of patches. No wonder Microsoft is an industry leader!

We hope you found these tidbits as interesting as the several dozen people who sent them to us. No need to thank us; keep those cards and letters. ■



Seeing the Lighthouse Maker at Work

by Paul Gerstenbluth (ArieFound@aol.com)

EXPECTATIONS. First, Roger Gustafson had us all huddled around the color monitor at our informal Rhode Island SIG (Special Interest Group) Photoshop meeting in November 1999.)

Next, he showed us the exciting features of how to use Adobe Photoshop 5 application.

Known in the trade as a skilled artist for his New England lighthouse posters, Roger Gustafson uses the Adobe Photoshop tools as a surgeon. He cuts right into the heart of his graphics, fixes them and makes them better.

More Dramatic then Real Life

In 1997, Roger Gustafson demonstrated Adobe Photoshop techniques on two computer monitors. As one SIG member said, "Roger opened the world of Adobe Photoshop usage for me. His ability to enhance and manipulate photos and graphics in Adobe Photoshop was exciting. I couldn't wait to go home and try the new techniques out that night."

This year, Roger explained more fully how he uses Adobe Photoshop to illustrate his paintings and photographs. For example, Roger softened the straight edges of his Adobe Illustration graphics and made them more natural in Adobe Photoshop. This is just one way of making his lighthouse renditions more dramatic then real life.

Using CYMK or RGB

The general rule is CYMK (Cyan, Yellow, Magentas, "K - Key Color") is used for printing your photographs or graphics. RGB (Red, Green, Blue) is used for Web graphics and for viewing graphics on color computer monitors. Using Adobe Photoshop, Roger Gustafson illustrated the intuitive use of CYMK. Roger emphasized that blending colors is easier then the standard RGB that is limited to the blends of the RGB (Red, Green, Blue) colors.

Knowing how to use the Adobe Photoshop layers are the hallmark of a skilled graphic artist. He showed us the techniques for making layers quickly using Adobe Photoshop 5 application.

Roger Gustafson illustrated how to quickly change our informal SIG leader Mark Rafferty's car from blue to red. Roger did this by creating a layer with a copy of the car and quickly changed it to fire-engine red with the Photoshop paint brush tool. In addition, Roger shared some of his secrets of how to uses Adobe Photoshop's paths. Also, he emphasized the importance of color ranges when editing graphics.

Watermarks and the Digimarc Filter

Roger show us how to make watermarks in illustrations and graphics. Watermarks are normally invisible but they can be identified in Adobe Photoshop. Watermarks protect the artist's copyright status. In Adobe Photoshop, you view the watermarks using the special Digimarc demo filter.

You can embed watermarks in scanned graphics and photographs using the Digimarc filter. The use of watermarks is a graphic artist's protection to stop unauthorized use of their works. Digimarc filter is good insurance to protect graphic artists' works.

Computer users are reminded that artists' graphic works are copyrighted. Artist graphics on the web remain their property and are protected by the full extent of the copyrighted laws.

Note: Just because you see a wonderful graphic on the web you cannot legally use it without the artist's permission.

Missed the Adobe Photoshop Meeting?

For those who missed Roger Gustafson's demonstration on the use Adobe Photoshop, they can all ways turn to one of the Dummies series "How to use Book on Adobe Photoshop."

Attending our informal SIG meetings, I find this is just one more good reason is to get LIVE training in Photoshop. Attend a SIG meeting and enjoy. ■

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Paul Gerstenbluth is President of the ARIE Foundation. The ARIE Foundation's mission is to provide VA hospitalized patients with hobby materials and computers that helps in their stay and recovery. Visit > helping.org < and search on ARIE Foundation to learn what we do to help children and hospitalized veterans.

Beyond the Pail

(continued from page 6)

October, what do you think happened to all the other iMacs still in stores? The same is true for stores that struggled to get blue and white G3s. Suddenly they arrived, and a week later so did the G4. Gee whiz.

Item 4: Retailers have become more attuned to Apple's product cycle; it's that or get stuck with old inventory. The winner, of course, is Apple's bottom line. The inventory managers in Cupertino have done a masterful job of reducing the pipeline of unsold products while their counterparts on the production side have been equally astute in streamlining the product line and the need for different components in each of those models. Apple now shares greater numbers of components among its products. As a result, each is purchased at a higher volume; thus, each should have been acquired at a lower price. Topping it all off is lower assembly costs and significantly lower retooling costs as product demand changes.

Item 5: there is a strong belief in the retail community that Apple is developing a company-owned chain of retail stores, modeled after the ones they operate in Australia. In addition, Apple just opened a chain of similar stores in the Philippines. The prototype is the retail operations of Gateway Computers. You will be able to purchase a Mac from stock, have a custom configuration installed while you wait, get it serviced, or pick-up a Mac you ordered via the web store, in case you don't want to wait for UPS. Salespersons tell me that a Mac is sold before the customer walks in the door; they don't "sell" Macs - they process your order. Salespeople sell PCs: this model or that depending on the commission and under-the-table spifs available that week. After all, they do (or at least should) know their market.

Item 6: Apple once had an enlightened policy of accepting almost any of its products under AppleCare. It was quite reasonable for them to cut that back to more current stuff, which they did a while back. Now, the definition of current has been further tightened, taking more recent stuff out of being eligible for AppleCare. Fortunately, there is a strong nation-wide supply of parts to support these new orphans and knowledge on how to repair them.

"National chains don't seem to care about service. Yet, they get the best discounts on the wholesale price of a new machine while maintaining a veneer of a service department."

But, the warranty service policy on at least two of the newest products from Apple (iBooks and PowerBooks) is that the item be returned directly to Apple for repair. If that holds through the production cycle and warranty life of the product, how will a nation-wide supply of repair parts develop, much less the knowledge as to how to repair the unit once Apple considers it too old to bother with? What is the impact on us when we go to sell it? Yet a minute ago I wrote that Apple is encouraging its franchises to do more service and support. How does the dealer establish a relationship with you for support if the computer is serviced directly by Apple? Warranty service is not a big cash cow to a local shop, but it helps.

Another change made by Apple adjusts the fee paid to a dealer for a warranty claim. The program is called "Service Excellence." Among its many parts is a flat fee for all service, no matter how complex. Another is to connect the amount of reimbursement to the responses

Apple receives from the "consumer satisfaction survey" sent to folks who have had a Macintosh repaired. This sounds good until you note that the base fee was lowered from what it had been, with the delta selectively returned to the dealer as an incentive for generating happy customers—or at least encouraging the customers to return the survey form to Apple.

National chains don't seem to care about service. Yet, they get the best discounts on the wholesale price of a new machine while maintaining a veneer of a service department. You, the person looking for a new computer are attracted by the lower national's price, blow off their crappy service knowing that you can go to the local independent, but won't give him the retail sales business to save a nickel. Good reasoning. What is the message from your decision for independents?

This sounds like a self-fulfilling prophecy or one of those adults eat their young stories. We shop to save a nickel; the local retailer disappears; we complain about poor quality service; Apple pulls service in-house; the local has another revenue source cut; local goes out of business; Apple and web-based companies sell us new toys, which only Apple can fix; which allow them to time obsolesce; which generates cyclical sales, which ....

All right. Now you have a sense of some of the forces at work on your local Apple dealer. You know what the operations are: you can add, subtract, multiply or divide these pieces. You may also use parenthesis. But around which items? How do you see them and their interaction?

Have You Hugged Your Dealer Today?

Well, I am not quite sure that is my message. I do know that I am having trouble sorting through the pieces, obviously. What I keep reminding myself is that since it is our money they want, there must be a handle on this story somewhere, for us. —*Lorin*

Redmond on the Potomac
(continued from page 26)

routines throughout various files containing routines relied upon by the operating system. More generally, Microsoft has forced Windows 98 users uninterested in browsing to carry software that, while providing them with no benefits, brings with it all the costs associated with carrying additional software on a system."

Judge Jackson found that "There is no technical justification for Microsoft's refusal to meet consumer demand for a browserless version of Windows 98. Microsoft could easily supply a version of Windows 98 that does not provide the ability to browse the Web, and to which users could add the browser of their choice. Indicative of this is the fact that it remains possible to remove Web browsing functionality from Windows 98 without adversely affecting non-Web browsing features of Windows 98 or the functionality of applications running on the operating system. In fact, the revised version of [a] prototype removal program produces precisely this result when run on a computer with Windows 98 installed."

Microsoft repeatedly argued that this program and similar methods didn't remove Web browser functionality from Windows, but rather stopped you from invoking it through normal ways. The court clearly did not buy this argument. "To uninstall a software program or to remove a set of functionalities from a software program, it is not necessary to delete all of the software code that is executed in the course of providing those functionalities. It is sufficient to delete and/or modify enough of the program so as to prevent the code in question from being executed."

All this amounts to another factual finding of harm. "Microsoft has harmed even those consumers who desire to use Internet Explorer, and no other browser, with Windows 98. To the extent that browsing-specific routines have been commingled with operating system routines to a greater degree than is necessary to provide any consumer benefit, Microsoft has unjustifiably jeopardized the stability and security of the operating system. Specifically, it has increased the likelihood that a browser crash will cause the entire system to crash and made it easier for malicious viruses that penetrate the system via Internet Explorer to infect non-browsing parts of the system.

The court also found that Microsoft's actions "inflicted considerable harm on Netscape's business," by leveraging its Windows monopoly to ensure that the biggest and best browser distribution channels all but ignored Netscape, funding the development of the free Internet Explorer with "the vast profits earned licensing Windows."

In working to make sure that the Netscape browser and Java didn't catch on as a platform for software development, the court writes, "Microsoft also engaged in a concerted series of actions designed to protect the applications barrier to entry, and hence its monopoly power, from a variety of middleware threats, including Netscape's Web browser and Sun's implementation of Java. Many of these actions have harmed consumers in ways that are immediate and easily discernible. They have also caused less direct, but nevertheless serious and far-reaching, consumer harm by distorting competition."

In Summary

In Judge Jackson's words, "Most harmful of all is the message that Microsoft's actions have conveyed to every enterprise with the potential to innovate in the computer industry. Through its conduct toward Netscape, IBM, Compaq, Intel, and others, Microsoft has demonstrated that it will use its prodigious market power and immense profits to harm

any firm that insists on pursuing initiatives that could intensify competition against one of Microsoft's core products. Microsoft's past success in hurting such companies and stifling innovation deters investment in technologies and businesses that exhibit the potential to threaten Microsoft. The ultimate result is that some innovations that would truly benefit consumers never occur for the sole reason that they do not coincide with Microsoft's self-interest."

So What—What Findings of Fact Mean

Under US law, each party in any dispute before a court has a right to trial by jury. Each side may present *evidence* - facts as testified to either by physical means, such as a "smoking gun," or by witnesses - and *arguments* - attempts to organize the evidence into an explanation of the facts that supports a given party in the dispute. The major section of any trial is the presentation of evidence. Attorneys are not allowed to argue what that evidence may mean while it's being presented; that's reserved for "closing arguments," which are typically a lot longer in a real trial than you see in courtroom dramas.

When both parties waive their right to a jury, however, the court itself becomes the trier of fact *and* of law. The judge's deliberations are his own, but he is a legal professional and is able to separate the two kinds of findings. It's uncommon for a judge, trying a case, to release findings of fact and law separately, but Judge Jackson decided to do so in this case, perhaps because of its nature.

As a substitute for the jury, however, Judge Jackson's "Findings of Fact" are given the same weight a jury's findings would have received. The Judge and the Judge alone determines which witnesses he believes, which versions of conflicting stories, which timelines, and which explanations. These findings are all but etched in stone. A higher court can only invalidate them by ruling that they are, in whole or in part, "clearly erroneous." Unless a higher court ignores the law, such a ruling is extremely unlikely - the record in the case contains plenty of evidence to support Judge Jackson's findings. Appellate courts are required to give great weight to the trial court anyway, because that court is the one that actually *saw* the evidence.

In the next phase, Judge Jackson will determine "Findings of Law" - given the facts as previously determined, he will rule on what areas of the law, if any, Microsoft has broken. That opens the door for plenty of ki-

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"I didn't invent arithmetic either, but I do know something about it."

- Economist Franklin Fisher, witness at the Microsoft antitrust trial, on whether he had ever developed an operating system, or written a computer program.

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bitzing. Appellate courts overrule lower courts daily on points of law, but any such rulings will have to be based on the facts as the Judge found them. You've probably read some Microsoft apologists huffing and puffing that these findings of fact will be overturned on appeal.

PART II - Give Microsoft Some Credit

Much of the spin that you have read in the papers is from those jubilant that the findings of fact put the Evil Empire in its place, barely restraining enthusiasm for its imminent death or dismemberment. As with the opposite spin, much of the reasoning here unsupportable by the facts or by history.

- **In-not-vation**

As soon as Microsoft starts yelling about "freedom to innovate," detractors shout back that the company couldn't innovate its way out of a paper bag. They say Windows is a copy of the Mac OS, that Internet Explorer is based on purchased code and serves mostly to destroy Netscape Navigator, and so forth. They point to failed Microsoft projects like "Bob," the alternate computer interface, as an example of Microsoft's inability to invent new and compelling software and hardware.

It's a one-sided and inaccurate view. The vast majority of innovation is evolutionary, not revolutionary, and Microsoft is a master at evolving technology. They added a second button to Apple's one-button mouse and invented contextual menus to use it. They invented icon badges. They invented new file systems, advanced the state of XML and HTML, served as a powerful force for World Wide Web standards (admittedly most strongly for those the company invented or perfected), created new mice and joysticks, and turned flight simulators into a worldwide craze.

The company's application software also continues to push boundaries. You may think of Word or Excel as bloated, but there's no denying the excitement people felt in 1998 when the company first demonstrated Microsoft Office 98 for Macintosh. Features like tables you create by drawing lines with a pencil tool seem obvious in retrospect, but Microsoft implemented them first. The kind of software assistant known as a "wizard" is almost synonymous with Microsoft applications.

Microsoft Internet software has evolved nicely as well. Other brows-

ers and E-mail programs have their own notable features, but Microsoft's programs stand on their own. Outlook Express 5.0 is just about as powerful as any other E-mail client you could want - filters, labels, folders, Usenet news management, mailing list tracking, AppleScript support, and many other features make it the intellectual heir of Claris Emailer. Internet Explorer, unlike Netscape Navigator for Macintosh, uses the Internet Config system for its preferences, works better with other applications, is smaller and often faster, and is generally just a more convenient browser.

Did Microsoft invent the operating system, the Internet, a graphical user interface, or application software? No - but they advanced the state of each of these immeasurably. It doesn't excuse anticompetitive behavior, but anyone who says Microsoft can't or doesn't innovate simply isn't paying attention.

• **Unfair or Bust**

It was Windows that gave Microsoft a monopoly, and not because they leveraged an existing one. Microsoft didn't have the market strength to force OEMs to license Windows instead of MS-DOS or DR-DOS. They got monopoly power because people *flocked* to Windows 3.0 and later. It delivered what Apple would not - a graphical interface that worked with prevalent Intel-based hardware and software. It was like getting most of the benefits of a Macintosh on your existing computer, or was at least perceived as so, and was therefore too good to pass up. Windows was, and is, a compelling product for non-Macintosh computers.

But Microsoft was competing aggressively and profitably long before Windows gave the monopoly power recently found by the court. When Windows 3 was released, the predominant word processing program was WordPerfect; the dominant spreadsheet was Lotus 1-2-3. Microsoft dethroned these programs by making Word and Excel for Windows, fully leveraging the advantages of the graphical interface it knew better than any other company.

There was nothing unfair about this - none of Windows, Word, or Excel held monopoly power over the market at that point. It was no more controversial than it would be if Apple released a new version of AppleWorks fully leveraging Mac OS X technologies - it's just smart business and good competition. It only starts to become unfair if Microsoft's application programmers have access to OS information not available to external developers. Apple has always trod this line carefully, treating Claris (and later FileMaker, Inc.) just as any other third-party developer. It was not so separate with Apple-labeled applications like "At Ease," where the company simply declared the application as "part of the operating system" and permitted it access to routines unavailable to outside programmers. Where AppleWorks fits in as an Apple-labeled application is uncertain. Microsoft, on the other hand, is facing other lawsuits alleging that it maintained no separation at all, giving its own developers an unfair advantage once Windows garnered monopolistic market share.

But Microsoft has always played to win. Its products complement each other; they exploit each other's strengths and mask weaknesses. Until the Internet age, 70% or more of Microsoft's revenue came from applications, with a quarter or less coming from operating systems. Those applications had to bring home the bacon, and thanks to synergy and innovation they did. It's good business and common sense - how many Macintosh owners can you name who have complained that Apple's software doesn't take full advantage of Mac OS features? (Think about how many have complained that Mac OS 9's Finder doesn't allow 255-character Unicode file names on HFS Plus disks before discounting the idea.) Such synergy is fair competition because customers and OEMs who don't like the intertwined features are free to turn to other vendors. When there is no competition, the landscape changes.

That Invisible Line

Somewhere, somehow, Microsoft Windows captured enough mindshare and market share to become the monopoly operating system. At that ephemeral point, whenever it was, the same tactics that had made Microsoft merely aggressive and well-managed became unfair. There is automatic notification, no e-mail alert that the rules have changed. To be perfectly safe would have required Microsoft's voluntary admission of monopoly status and self-acceptance of increased government regulation, a move opening it to third-party legal action for perceived slights and driving shareholders insane with rage. No business of the 20th century would willingly accept monopoly designation. Without it, Microsoft had little reason to change its business practices from the go-getter attitude every non-monopoly business must have to succeed.

Make no mistake - Microsoft succeeded without monopoly power, though obviously not as spectacularly as it did with the monopoly club to wield. It will find ways to succeed if the monopoly power is removed, or lost, or simply if the remedial phase introduces regulation prohibiting unfair business practices as determined by the court. Microsoft isn't inherently evil or unfair - Microsoft just became so successful that it crossed an invisible line where normal business practices can no longer apply if competition is to be preserved. You see remnants of this in Microsoft statements - in fact, everything in the findings of fact would be legal if only Windows did not hold a monopoly position. The rules have now changed under-

neath Microsoft's virtual feet, and the company has maintained a death grip on the pre-monopoly way of doing business, to the point of obfuscation, denial, and approaching outright dishonesty. This has won them no friends.

PART III - And What's In Store For Us?

It seems clear that after such comprehensive findings of monopolistic behavior, the court is extremely likely to find serious violations of antitrust law by the Microsoft Corporation.

Given that, the final responsibility of the trial court is to determine remedies - if something is illegal, what must Microsoft do to fix it? Here too, speculation is rampant; but, there are three possibilities:

- **Minor Restrictions and Regulations**

The first and simplest remedy available to the trial court is simply issuing orders about which business practices Microsoft may continue and which ones may not. If the court believes Microsoft can adhere to such orders and that they will eliminate any illegal anticompetitive behavior, this would be the preferable path.

Unfortunately, Microsoft does not have a good track record for obeying judicial rulings. For starters, Judge Jackson has ordered Microsoft to stop anticompetitive behavior before and the company thumbed its nose at him. In a preliminary injunction in this case way back when, before being overruled by a more conservative Circuit Court of Appeals panel (one probably reason Jackson's findings of fact are so detailed, as they bind the appellate court), the judge ordered Microsoft to prepare a version of Windows 98 without integrated Internet browsing functionality and make it available to OEMs that wished to ship it. Jackson clearly intended Microsoft to recompile windows without the Internet Explorer routines and any code that depended on them, making an OS more like Windows 95 but otherwise enjoying Windows 98 features. Instead, Microsoft simply removed all the shared libraries that contained any Internet browsing code, including core Windows 98 code that happened to live in the same files. The resulting "operating system" did not function and would not even boot. Microsoft offered that to OEMs and claimed it fulfilled the judge's instructions. The court was not amused.

The court was also not amused over Microsoft shenanigans during the trial. The company presented demonstrations it said would show certain points about systems with nothing but Windows installed, only to have the plaintiffs correctly point out that the systems had other software installed. One videotaped demonstration, purportedly of a single machine, was actually of multiple machines or excluded changes to the configuration that affected the demo's outcome. Microsoft executives, when confronted with E-mail messages contradicting their direct testimony or depositions, developed remarkable cases of amnesia or inability to comprehend simple questions. In short, nothing Microsoft did was what anyone, much less the court, would call "confidence-inspiring."

Judge Jackson has already experienced Microsoft's idea of complying with his court's orders, and is therefore unlikely to issue remedies in that fashion - he has no reason to believe Microsoft will obey the letter and the spirit of the orders given the company's past obstructionist actions. Any remedies telling Microsoft what to do or not to do would, require some kind of court-ordered monitoring and verification to ensure similar antics don't frustrate the court's will. Microsoft has made no bones about its belief that the findings of fact are wrong and unsupportable, as if they weren't really findings of fact. It's easy to imagine the company just ignoring orders because it similarly disagreed with them. The court is therefore unlikely to risk crafting a solution to protect consumers and competitors from monopoly power that requires Microsoft's goodwill to succeed.

- **Opening the Source Code:**

The facts as determined by the court are so antithetical to Microsoft's position that observers have correctly realized the entire range of potential remedies is open for discussion, whether Microsoft wishes to accept them or not. One suggested remedy [10] that has Microsoft's competitors salivating is the potential requirement to make the source code to Windows public. The idea is that competing operating systems, like IBM's OS/2 Warp, would then be able to see exactly how all the routines are implemented so they could clone them, allowing alternative operating systems to duplicate the Windows API and therefore eliminate the "application barrier to entry" the court found to exist.

If this at all tempting to the folks at Justice, they should reconsider before acting. Far from reducing the application barrier to entry, it would do nothing but increase it. Windows, the Mac OS, OpenStep (now "Cocoa" in Mac OS X), and others are massive sets of monolithic operating system APIs. Programmers must conquer a fairly steep learning curve to use them efficiently, and questions still remain - does one routine affect another? Does a routine have any undocumented side effects that might benefit a program? Could a program include similar functionality itself and therefore not depend on that part of Windows?

If the Windows source code was available, all these questions would be answered for both Windows and Linux - but not for the Mac OS. The barrier to creating Macintosh applications would dramatically rise almost instantly, as programmers could know everything about Windows but only some of the details of Mac OS.

Writing applications for Windows would become even easier. It would be an effective declaration by the court that the Windows APIs are a non-proprietary industry standard. The goal behind the idea is to let other OS vendors copy the APIs so their OSs could also run Windows applications.

Apple is moving away from these kinds of open data structures and APIs to opaque "black box" routines. Over 15 years of Mac OS support, Apple has discovered that if internal OS details are publicly available, developers will use them in programs despite explicit warnings not to do so. Once applications use those internal structures, any change risks breaking an unknowable number of applications, risking compatibility and the ability for customers to migrate to new OS versions.

Opening the source code to Windows would remove opacity from every data structure and every routine. Microsoft's ability even to release new versions of Windows would be seriously compromised, with potential compatibility risks in every nook and cranny of Windows. If Microsoft or any other OS vendor changed some of them, programs would break. Then would come the utilities to restore the old innards to new systems to fix compatibility problems. Far from encouraging innovation and competition, a fully-open Windows source code release could spawn so much fragmentation that Windows APIs essentially freeze, unchangeable by any vendor because so many programs rely on the previously-undocumented internal structure no one would be able to change.

Releasing the source code wouldn't accomplish the intended goals of competition, either. Even if other vendors decided to clone the Windows APIs, they wouldn't be allowed to lift Microsoft's code to do it. If Microsoft added a "find by content"-like feature to a future version of Windows, a release of the source code would show how those routines were implemented, how index files work, how searching works, and more. Once an alternate OS vendor has that information, however, that vendor must then write *new* code that matches the Microsoft specifications. The code Microsoft would release is the company's intellectual property, and the court would have difficulty forcing Microsoft to license it to competitors. Cloning software is not an instant process - at best, after specification, coding, and testing, Microsoft Windows would have a three-month-plus lead on any functional copies. That's a long time in the technology world, especially if Microsoft keeps revising the code the whole time.

Apple, however, would be in deep doo-doo. Institutionalizing Windows APIs only serves to fragment any competing operating system - Linux, Mac OS, and BeOS would only become more marginalized unless each implemented the Windows API. But the whole point of alternate operating systems is that they offer functionality the others don't. Would the court expect Apple to add the full Windows API to the Mac OS system, doubling the OS size and all but guaranteeing few applications were ever written to Macintosh APIs again? Or would Apple have to release its own source code to compete for developer attention, wiping out any competitive advantage the Mac OS may offer? Nothing else Apple could do would compare to the full availability of Windows source code, and neither of these options holds out much hope for the continued survival of the Mac OS, BeOS, or anything else that doesn't aspire to be Windows.

Microsoft, for its part, doesn't even seem to admit that this is possible. Counsel William Neukom told the *New York Times*, considering court-ordered releases of source code, "We take the simple-minded view that it is our intellectual property, we made it - it's our song, and you should play it our way." Neukom doesn't seem to know that copyright protections don't allow songwriters to prohibit performance of their songs; they only allow controlling who *first* records the song, and setting higher (but not exorbitant) royalties for those who use the work without the songwriter's blessing.

Forcing publication of the source code wouldn't create real operating system competition. It would only make it possible for other companies to sell Windows clones. It doesn't reduce the application barrier to entry for other operating systems - in fact, it raises it significantly. This proposal does not benefit customers, other OS vendors, or much of anyone else except Microsoft's most bitter enemies (who are already salivating at the prospect of fondling the crown jewels). The court should reject this proposal, if offered by the plaintiffs, as it would be the death knell for any set of APIs other than Windows.

- **Breaking Up Microsoft:**

The harshest remedy available to the court is ordering the dismantling of Microsoft into separate companies so each new subsidiary can't leverage any monopoly held by another. Reports quickly surfaced with analysts hastening to assure the market this is an unlikely scenario [3]; don't be so certain.

In the common discussions, Microsoft would be split into three companies. The Windows Company would own the Windows operating systems, maintain and enhance them, and sell them to customers and OEMs. The Applications Company would own Microsoft's consumer and business software, from Office to Encarta, probably including the hardware products (joysticks, mice, keyboards), game software, and the server software. The Internet Company would own all the Internet applications and servers, from the browser up through the Internet serv-

ers bundled with Windows NT. Microsoft stock would be retired and replaced with appropriate shares of the three new companies.

The benefits to competition would be immediate and manifold. The Windows Company would serve customers, software developers, and computer OEMs (just like now), but former Microsoft products like PowerPoint and BackOffice would belong to other companies now and wouldn't have an inside track or a higher priority for changes than other "third-party" products. Word's developers would lobby for changes they wanted in Windows just as would the WordPerfect programmers at Corel. The Windows Company would also be free not to use technologies made by the other former Microsoft subsidiaries: if The Internet Company invented a new streaming media technology to replace Windows Media, The Windows Company could license it from them and include it in Windows, or it could write its own version, or it could even license QuickTime from Apple. Without the requirement to support Microsoft products first and foremost, Windows and The Windows Company should become more open and more responsive to customer needs, instead of putting Microsoft needs first as Microsoft understandably does.

The Applications Company, for its part, would not be tied to Windows technology - it would be a software developer like any other company. It would no longer be able to justify keeping key technologies (like DirectPlay, Microsoft's equivalent of NetSprocket from Apple Game Sprockets) proprietary because doing so advanced the Windows platform: advancing Windows would not be a corporate goal of The Applications Company. It might make more Mac OS products, embrace more third-party technologies, release more cross-platform peripherals, and otherwise seek revenue opportunities outside of the Windows mainstream.

The Internet Company would be free to create its servers for Windows NT, Linux, UNIX, Mac OS X, or any other operating system - or all of them. Its browser-level technology could shift away from ActiveX and other proprietary Windows technologies, either by using cross-platform standards or by porting those technologies to other platforms to make them true standards. It would not be motivated to create products like Windows Media solely to keep QuickTime or RealPlayer from becoming a multimedia platform that might compete with Windows. It might actually make Mac OS products!

We virtually drools at the prospect of a trifecta Microsoft - not because it would cripple the company, but because each part would by its very nature be more open to Mac OS technologies. For the most part, each of the parts would inherit strong, stable, mature products for which there are immediate and significant untapped revenue opportunities in cross-platform sales. The Windows Company itself would be free, for the first time, to consider licensing and building in cross-platform technologies when they serve customers and developers instead of rejecting such ideas as antithetical to the Windows monopoly. All three companies would have, as Wall Street says, significant upside potential. The breakup could make Bill Gates even more fabulously wealthy than Microsoft itself ever could - and that's shocking. Everyone would benefit.

The plaintiffs are said not to favor a breakup along these lines because there's a major catch: The Windows Company would *still* hold a monopoly on operating systems. As the *New York Times* put it in a previously-referenced story, "Even if this company's business were limited to selling operating systems, it could still bundle other products with the operating system - the very problem that initiated Microsoft's current problems with the government. Monitoring that would also require continuing government involvement, something no one in state or federal governments want." Plaintiffs are allegedly considering a separate breakup proposal - dividing Microsoft into several parts, but giving each part non-exclusive ownership of all former Microsoft technologies so they compete with each other. It won't work - all those alternate Windows vendors will create the same compatibility logjams that opening the source code would, while still not opening competition to any outside companies.

The breakup of Microsoft would require safeguard to prevent The Windows Company from becoming Microsoft II. However, the Windows Company would have fewer reasons to commit such atrocities, as it would not be doing so to promote other former Microsoft products. Situations like the one where Microsoft delayed delivery of Windows 95 to IBM and charged it higher prices because it insisted on competing with Microsoft Office wouldn't be on the table. But in the end, the choice is one between necessary regulatory approval (perhaps through a court-appointed special master to monitor bundling choices) and fragmenting existing Windows APIs among several companies. The former is an inconvenience to the government, but the latter could kill all Windows competition and paralyze future development. Inconvenience is the lesser of two evils.

Is This Trip Necessary?

Will the Department of Justice really have to take such drastic action against Microsoft? We believes they will - Microsoft's competitive nature and history as a non-monopoly, plus its large combined nature across all software products and disciplines, make it far too easy for the company to act anticompetitively, even acciden-

tally, to advance its own interests. It would be far better to create smaller companies that, with few exceptions, are free to compete as aggressively as they want because they're not monopolies.

As a final reminder of the inherent risks, think about OpenDoc. Apple's component software technology was poised to be the first truly revolutionary change in software development and deployment in about a decade. Instead of using several different applications, each with their own documents, OpenDoc promoted *parts* - small software components that all worked invisibly on the *same* document with seamless integration. Every document is from an integrated program since every OpenDoc document can use any part you have installed - word processors, outliners, spreadsheets, Web browsers, movie players, anything at all. Apple's own suite of Internet parts, CyberDog, was deeply loved by a significant community of fans. Small developers could write parts that interoperated with documents from the largest developers. It was a true sea change.

Microsoft couldn't abide it - OpenDoc threatened the Windows hegemony - so they fought it. They promoted ActiveX and OLE as a superior method of component software though they were not comparable. Apple and its partners pledged to bring OpenDoc to Windows and make it a superset of OLE, so any OpenDoc part could also be an OLE control and interoperate with Microsoft's own Windows applications. Another threat: Microsoft circumvented this one by refusing to release the full OLE specification for Macintosh so Apple couldn't implement it across platforms. Microsoft trash-talked OpenDoc, said its own technology was better, refused to embrace it in any way, and even went so far as to make a preliminary, developer-level version of ActiveX for Macintosh to show that they could use their muscle and market power to drive their technology into the Macintosh better than Apple and IBM could bring OpenDoc to Windows.

It worked - Windows developers never got interested in OpenDoc, and a financially-troubled Apple considered it too expensive as a single-platform technology. They dropped it in 1997; the last major OpenDoc application went away as AppleShare IP 6.3's administration program abandoned its reliance on the technology.

And, as it turns out, Microsoft was lying. In a very quiet press release [4], Microsoft entered "a broad ranging patent license agreement" with Object Technology Licensing Corporation (OTLC), "whereby Microsoft has acquired the rights to use in its products the inventions covered by OTLC's extensive portfolio of over 150 US and 300 foreign software-related patents." Brian Naylor, president of OTLC, said in the statement, "OTLC's patent portfolio provides Microsoft with access to a number of essential leading edge Internet and distributed computing technologies available nowhere else. The agreement's provision that Microsoft will be automatically licensed under any future US and foreign patents that may issue to OTLC ensures that in the future Microsoft will continue to receive full access to the latest OTLC technologies."

OTLC is described as "a privately-held Cupertino, California based marketer of Internet and distributed computing technologies," but that's too modest. The company's Web site [5] reveals its address as "One Infinite Loop, MS 38-OTL, Cupertino, CA 95014." That's Apple Computer's mailing address. That mail stop may be in the old "Mariani One" building, the former corporate address of 20525 Mariani Avenue. In fact, OTLC is a joint venture of IBM and Apple, created to jointly hold patents related to OpenDoc and other ventures between the two companies so third-party vendors could license them in a vendor-neutral fashion. Although it includes patents from the failed joint ventures Taligent and Kaleida, two other technologies Microsoft resisted mightily, its most active period was in licensing and promoting OpenDoc.

Two years after it got the last of the "inferior" technologies killed with its market might, Microsoft has turned around and licensed those same technologies for its own use. You could not invent a more appropriate example of the last two sentences of the findings of fact by Judge Jackson:

"Microsoft's past success in hurting such companies and stifling innovation deters investment in technologies and businesses that exhibit the potential to threaten Microsoft. The ultimate result is that some innovations that would truly benefit consumers never occur for the sole reason that they do not coincide with Microsoft's self-interest." [2]

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[1] The Commission is tasked to conduct a thorough study of Federal, State and local, and international taxation and tariff treatment of transactions using the Internet and Internet access. Their recommendations are to be submitted to Congress no later than April 2000.
[2] <http://usvms.gpo.gov/>
[3] <http://www.nytimes.com/library/tech/99/11/biztech/articles/10soft.html>
[4] <http://dailynews.yahoo.com/h/nm/19991107/tc/microsoft_implications_3.html>
[5] <http://biz.yahoo.com/bw/991105/ca_object__2.html>
[6] <http://www.otlc.com/>

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ERRATA

There are two updates to what you have read. The first is that Judge Jackson has asked a senior judge, Richard Posner, chief judge of the US 7th Circuit Court of Appeals in Chicago to act as a mediator to help bring the two side to an agreement. A quick resolution is to Microsoft's advantage, but compromise in the classical sense of the word is not the Microsoft lexicon. There are at least two class-action lawsuits now filed against Microsoft for price-gouging with Windows 98, based on facts as determined by Judge Jackson in his findings. A settlement makes those findings go away, and those suing Microsoft would have a more difficult task making their case. Typically, rhetoric is bound to heat up as the deadlines draw nearer.

Second, Microsoft has publicly said, many times, that Judge Thomas Penfield Jackson's findings of fact will not change the way it does business. A recent event seems to support that. At Streaming Media West '99, a San Jose trade show for the computer media industry, Microsoft in essence announced that it is making its own version of iMovie and is giving it away with the next release of Windows, but it only works with Microsoft's Windows Media APIs. Those who buy the Windows upgrade can either make Microsoft-only movies for free, or they can pay for QuickTime software to make QuickTime movies that require Windows users to download and install the QuickTime software. It's exactly what Microsoft threatened to do if Apple didn't roll over and give Microsoft control of media presentation APIs, and it's exactly what Judge Jackson noted in his findings of fact. And the firm is doing it anyway. Microsoft either is hoping no one notices this tactic or is convinced it can act as it pleases, findings or no findings.

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I currently subcontract to many local Mac schools. Hire me directly and save. I teach: Excel, Word, Quark, PageMaker, Illustrator, MS Project, and more. References available. Alan Stillman: 703-370-5505 or Toll Free 800-958-2907; email at ‚gaiacomm@his.com>.

For Sale

—Computers on Demand
Used Macs, Powerbooks & Peripherals. We Buy, Sell, Trade, Repair & Upgrade all Mac Equipment. Call for Quotes. All Major Credit Cards Accepted (301) 718-0822

—ClarisWorks Users Group Discount. Loyal WAP members receive a $5 a year discount on their CWUG (ClarisWorks User Group) membership and renewals as a benefit of their WAP membership. WAP Members must identify themselves as such and then deduct $5 from the regular $39 (printed ClarisWorks Journal) or $34 (electronic ClarisWorks Journal) membership dues when they join or renew. Contact the ClarisWorks Users Group directly at Box 701010, Plymouth, MI 48170; toll-free at (888) 781-CWUG; Fax: (734) 454-1965; Email: <membership@cwug.org> or web site http://www.cwug.org.

For Sale

—PowerMac 8500/120, 48 MB RAM, 5GB HD, CD, $795; Apple LaserWriter IIf, 16 MB RAM, legal & letter trays, toner cart., $395 OBO; Panasonic KX-F90 fax/answering machine, $75 OBO. Call Lynn at 301-972-6137

—Exc. family computer $650, 1998 Umax Supermac 500; 2 GB HD, 48 MB RAM; CD-ROM built-in; Monitor: Sony Multiscan 15", Modem: Teleport 56KBS K56 Flex. Please call Rebecca at 301-330-4134 or email at rgaw@erols.com

Nominations for Board of Directors due at the February 26th General Meeting.

Washington Apple Pi, Ltd. 12022 Parklawn Drive, Rockville, MD 20852

Membership Application

Please print or type:

Name _____ Company _____

Address _____

City _____ State _____ Zip _____ Email _____

Home Phone _____ Work Phone _____

(Must have for the TCS)

Occupation _____

Please answer a few questions for us regarding your computer use. Check the computers/equipment that you use on a regular basis.

- ☐ Apple II
- ☐ Apple II GS
- ☐ Apple III (SARA)
- ☐ Mac Plus, SE
- ☐ Mac SE30, Mac IIx
- ☐ Mac LC (series)
- ☐ Mac II
- ☐ Performa (all)
- ☐ Other _____
- ☐ IBM, PC clone
- ☐ PowerBook
- ☐ Centris (all)
- ☐ Quadra (all)
- ☐ Power PC/Mac
- ☐ G3
- ☐ iMac

WAP has many Special Interest Groups (SIGs) and Regional Groups (SLICEs). Please check each group you would be interested in.

- ☐ Annapolis Slice
- ☐ Columbia Slice
- ☐ Delmarva Slice
- ☐ Frederick Slice
- ☐ Disabled SIG
- ☐ Excel SIG
- ☐ FileMaker SIG
- ☐ Geneaology SIG
- ☐ Graphic SIG
- ☐ NOVA/Educators SIG
- ☐ Game SIG
- ☐ QuickTime SIG
- ☐ Retired SIG
- ☐ Stock SIG
- ☐ Women's SIG

☐ *I can serve as a Hotline contact for* _____

Enclose check or money order payable to Washington Apple Pi, Ltd. *If you are using a credit card please remember that we only accept VISA and MasterCard.*

☐ Check/Money Order ☐ VISA ☐ MasterCard

Card Number _____

Exp. Date _____ Signature _____

(Required)

- ☐ Basic Membership—1 year $49
- ☐ Student rate* for 1 year $42

For other options please add correct amounts

- ☐ WAP Bulletin Board System (TCS)**with e-mail **$ 20**
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- ☐ Airmail to Canada, Mexico, West Indies or Cental America **$20**
- ☐ Airmail to Europe & South America **$38**
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Total enclosed $_____

Indicate desired New Member Kit (1 only)

- ☐ Mac 400k
- ☐ Mac 800 k
- ☐ Mac 1.44 k
- ☐ Mac CD

Please circle Yes or No for the 2 items below.

1. Please leave my name on the Pi mailing list. (The list never leaves the office and all mailings are supervised by the Pi staff.)
   Yes No
2. My name, address & phone number may be published in the membership director.
   Yes No.

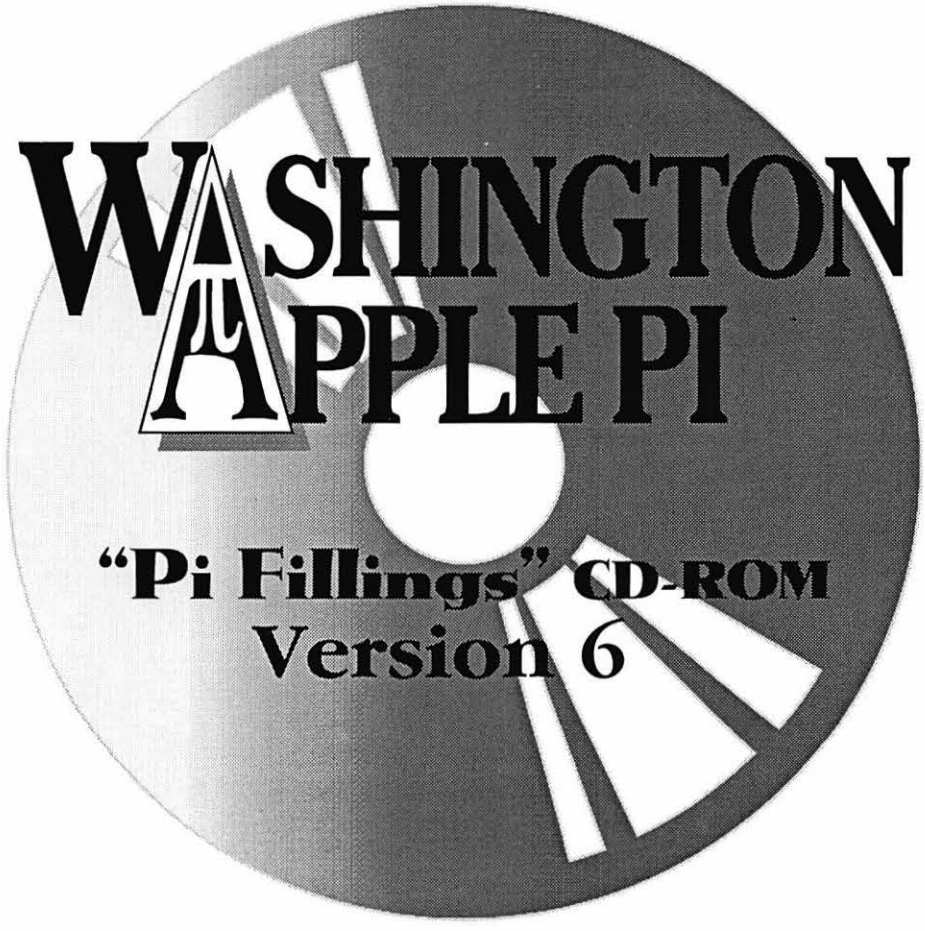
Applicant signature and date

*Please enclose photocopy of current student ID.

** Access to the TCS is contingent on WAP having a current home telephone number for the member.

Pi Fillings—The CD: Version 6

Version 6 is your companion CD if you are using Mac OS 8.x through 9.0. This *one-stop updater will save you hours* of downloading time. Here is where you will find the updates and drivers to all your Macintosh peripherals whether the device is USB, Firewire, or Old Faithful. We include updates to Java, Open Transport, ColorSync, and PowerMac G3/4 ROMs. In addition, we freshened the essential Internet tools and utilities; added more large updates for the more popular applications; and of course, put in some interesting diversions. In all, *more than a billion bytes worth of stuff fills our latest offering* in the Pi Fillings—The CD series.



How to get it: Pi Fillings—the CD, version 6 is available for $10 at Pi General Meetings, or for $12 via snail mail.
Call the Pi office at (301) 984-0300 and place an order, or send a check to the Pi office.
You can also place an order over the Internet by visiting the Pi store at: http://store.wap.org

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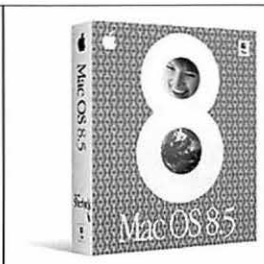

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