

HAAUG

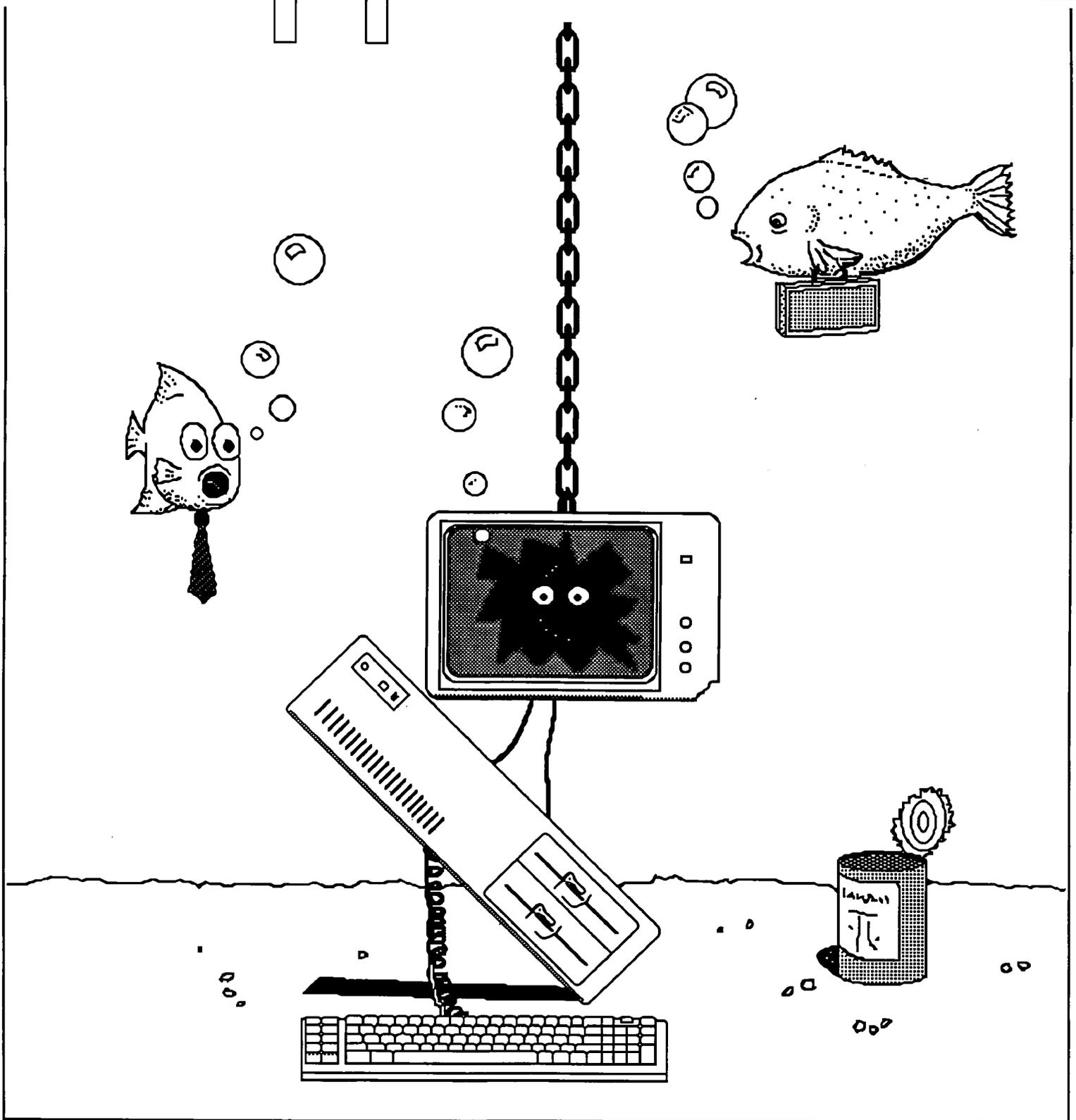
Apple Barrel

The Monthly Journal

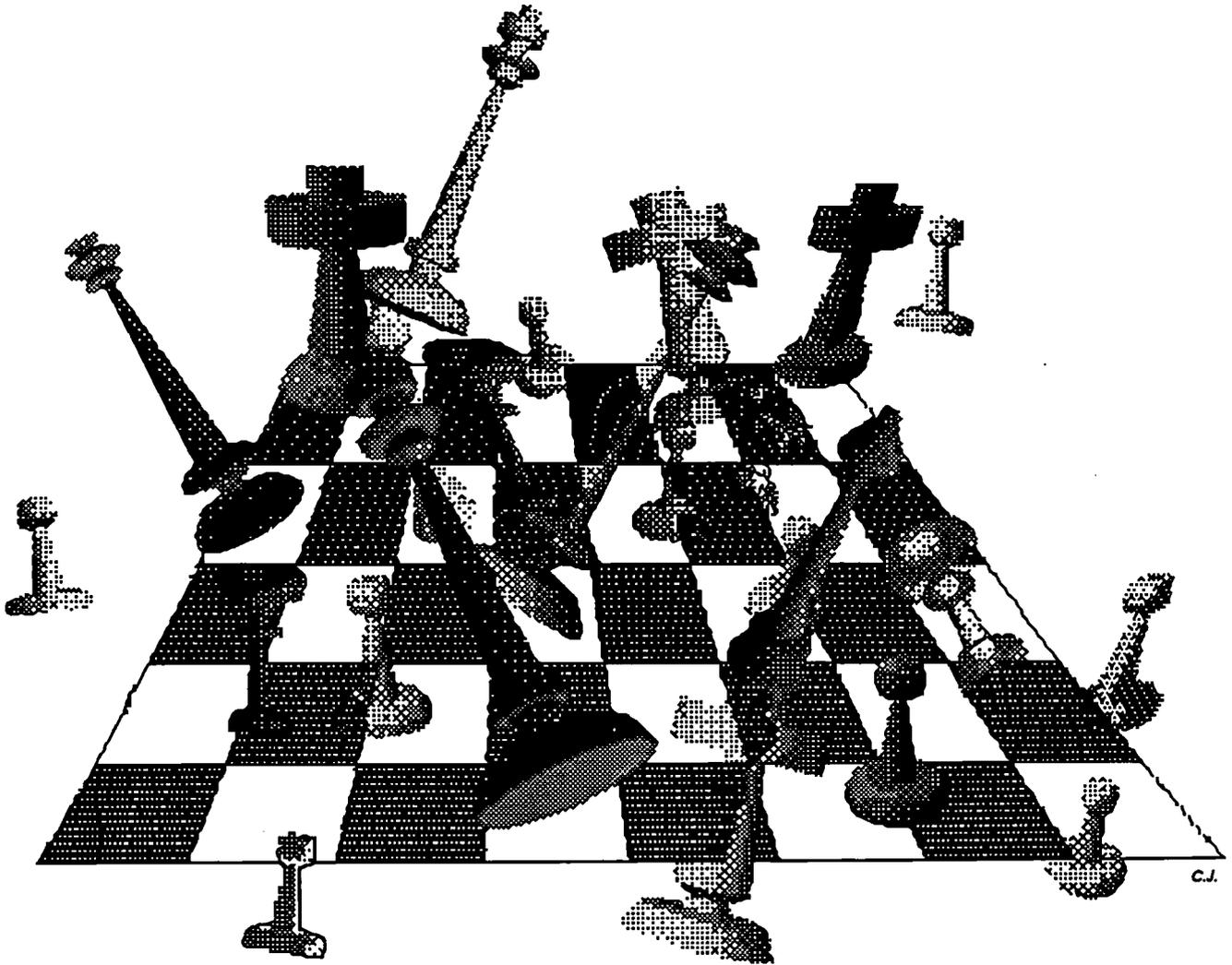
of the

Houston Area Apple Users Group

\$2.00



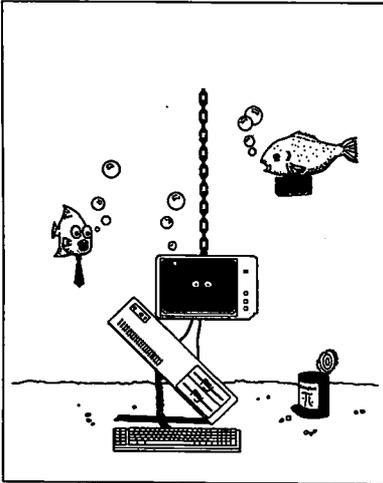
YOUR MOVE ?



Williams Computer
Center

25770 I-45, Spring, TX 77386
(713) 367-1600

YOUR AUTHORIZED APPLE DEALER & SERVICE CENTER
WCC Texas Talker BBS - 24 Hours 713-367-8206



About the Cover

Chris Flick created this month's cover using *ComicWorks*.

Editors

Tom Engle
Chris Flick
Cleland Early

The HAAUG *Apple Barrel* is the official monthly newsletter of the Houston Area Apple Users Group. The opinions presented herein are solely those of the editors and contributing authors. All trademarked product names are used only in an editorial fashion and therefore no trademarks are included in the text. So there.

Unless otherwise noted within the article, any original material published herein may be reprinted without permission by any not-for-profit Apple club provided proper credit is given to the author and the *Apple Barrel* and a copy of the publication in which it appears is sent to the *Apple Barrel*. If you don't, we'll break your knees.

Contents

Volume 10 Number 3

March 1987

Inside HAAUG	4
Volunteer Specialists	6
General	
Random Thoughts: The Mystery of "Look and Feel" — Cleland Early	7
Empirical Fumblings and Arcane Language: Modems — David Scheuer	10
News from Cupertino	14
Quick Connect	22
Macintosh	
The Kraft Quickstick — Bob Lewis	30
Precision Drafting on the Macintosh — Ronnie Haws	31
Gaming on the Mac — Bob Lewis	34

Advertisers

Williams	IFC
MICROTYPE	33
Astro Audio Visual	IBC

March Meeting Location Changed!

The next meeting will be held at the

Stouffer Greenway Plaza Hotel
6 Greenway Plaza East

More information available
on the Hot Line.

Overview

The Houston Area Apple Users Group provides a forum for the exchange of ideas and information about Apple Computer products and their associated hardware and software. Meetings, newsletters, and special interest groups are just a few of the ways this forum is maintained. Below are listings of the club officials and descriptions of the groups' functions.

Club Officials

President	
Robin Cox	778-1635
First Vice President	
Jeanne Boucher	723-9519
Second Vice President	
Mike Barnaba	527-9953
Secretary	
John Marek	782-3898
Treasurer	
Jack Cowart	467-4215
Directors	
Cleland Early	941-7247
Chris Flick	363-3153
Jim Huck	496-9508
Mike Kramer	358-6687
George Pierce	526-5103
David Scheuer	464-1228
Senior Advisor	
Rudge Allen	622-3979
Membership	
Neal Scott	890-0532
Apple Barrel Editors	
Tom Engle	774-9055
Chris Flick	363-3153
Publicity Coordinator	
Dennis Bilbe	HotLine
IAC Representative	
Ina Levinson	270-0137
Vendor Coordinator	
Jeanne Boucher	723-9519
Program Coordinators	
Mike Kramer	358-6687
Steve Bass	847-4407

The club officials meet on the first Thursday of the month at the Marriott Astrodome Hotel at 6:30 pm. These meetings are open to the membership. Members interested in the inner workings of the group are encouraged to attend.

Membership Information

A one-year membership to HAAUG is available for thirty dollars and includes the Starter Kit, a subscription to the *Apple Barrel*, and a membership card giving access to all the club's services. Memberships are available at the Answer Desk during the meeting, through brochures located at local dealers, or by calling the HAAUG HotLine and having a brochure mailed to you. Renewals are twenty-five dollars per year.

Meeting Dates

The HAAUG monthly meetings take place at the Marriott-Astrodome Hotel, 2100 South Braeswood at Greenbriar. The meetings are scheduled for the third Saturday of the month and begin at 11 am. All new members should attend the New Member Orientation.

Meeting Schedule

10:00	New Member Orientation
11:00	Special Interest Groups
12:00	HAAUG Club Business
12:30	Main Presentations
1:30	Special Interest Groups
2:30	Special Interest Groups
3:30	Special Interest Groups

HAAUG Hot Line (713) 522-2179

The HAAUG Hot Line provides a means for members to learn of the meeting time and location. Non-members can leave their name, address and phone number if they want more information about the club. If you have a question about a particular commercial product, please check the list of volunteer specialists in this issue.

Special Interest Groups

SIGs focus on one topic of common interest during these meetings within a meeting. Meeting locations and times are contained in the meeting handout.

SIG Leaders

Apple II SIG Coordinator

Tom Dillon 376-6502

AppleWorks

John Slack 491-1747

Advanced Topics

Bill Hensley 980-4993

Jim Record 353-1119

Advanced BASIC Programming

Richard Lemay 749-3135

Best of the Public Domain

Robin Cox 778-1635

Education

Ann Petrillo 489-7535

Games

Thomas Carson 861-5425

John Newell 531-9139

Green Apples

Richard Goss 463-0640

Hardware

Dave Simek 496-3304

Home Use

David Jaschke 461-2450

Mike Stoops 242-1312

Mac SIG Coordinator

Steve Bass 847-4407

Communications

Mike Conway 495-2292

Desktop Publishing

Cleland Early 941-7247

Tom Engle 774-9055

Developers

John Pence

Games

Bob Lewis 242-0990

Helix

Larry Stage 358-1105

Omnis

Buddy Jacks 299-1555

Programming

Mike Martin 333-6405

Tips & Techniques

Steve Bass 847-4407

Public Domain Software Libraries

The Public Domain Libraries are divided into two sections: Macintosh and Apple II.

Macintosh Library

The Macintosh library contains over ninety disks of public domain software. Copies may be purchased at the meeting for five dollars apiece. In addition, there are two directory disks which may be copied for free. These disks contain the listings of what is on the other disks. Also, the latest disk submissions are available for copying.

Macintosh Librarian
Larry Saphier 496-0507

Apple II Library

The Apple II library may be copied at the meeting for one dollar per side. Books are available at the meeting describing what is available in the library.

Apple II Librarian
John Marek 782-3898

Hardcopy Library

The Hardcopy Library maintains an archive of back issues of the *Apple Barrel*, issues of other magazines, and other paper material. It is open to the membership and is available at the main meeting. At present, no provisions for loaning the material have been made.

Hardcopy Librarian
Les Brown 795-2741

"HAAUG Heaven" Bulletin Board System

HAAUG Heaven is HAAUG's computerized Bulletin Board System. The BBS's telephone number is (713) 664-9873 and operates 24 hours a day. The recommended protocol setting is 8-N-1-Full.

Writer's Guidelines

The HAAUG *Apple Barrel* exists to provide the membership with timely information about their Apple computers. We at the *Barrel* hope that readers will write articles on subjects such as reviews, computer techniques, and casual observations of computerdom. For those of you interested in writing for the *Barrel* (hopefully most of you), we have established helpful guidelines to follow when writing and submitting articles.

1. Try to include some form of graphic or table which helps to explain points made in the article. The saying that a picture is worth a thousand words certainly applies here.
2. For those including graphics and tables, please make references to them within your text. This will help both the reader understand what you are saying and assist us in the paste-up of the article.
3. Include references to other sources of information if possible. By doing so, the reader is directed to other useful material beyond that of the actual text.
4. For Apple II users, we will accept text created either in *AppleWriter* or in the *AppleWorks* word processor. We prefer ProDOS, but can handle DOS 3.3 as well.
5. For Macintosh users, we accept text created in either *MacWrite* or *Word*. Please do not include graphics within the actual text. Graphics accompanying the articles should be saved as *MacPaint*, *MacDraw*, or *Chart* files.
6. Articles should be provided on disk as well as printed hardcopy. The hardcopy is primarily used to allow us to see where you as the author place emphasis. (A backup copy for yourself would be advisable)
7. Article submissions can be given to either of the editors or left at the

Apple Answer Desk. Include both your name and phone number with the article to help us communicate with you if problems arise.

We hope that these guidelines will not only help you but also make it easier for us to provide a more consistent and classy newsletter.

Advertising

Rates

Inside Covers	\$100
Full Page	\$80
Half Page	\$60
Third Page	\$40
Business Card	\$15
Other	Contact Editors

Ads are to be prepaid, camera-ready, and received at least one week before the first of the month in which the ad is to appear. Contact either of the Editors for further information.

Volunteer Specialists

Apple II

Apple Access	Patrick Hennessey	342-0643
AppleWorks	Jack Cowart	467-4215
	John Slack	491-1747
AppleWriter II	Robin Cox	778-1635
AppleWriter III	Shorty Hirsekron	697-9797
BusinessWorks	Ron Burgess	270-8243
CAD-Apple	Dick Fairman	723-9619
CP/M	Kip Reiner	550-0568
dBase II	H. Helm	529-7405
Data Factory	Dick Fairman	723-9619
Dollars and Sense	Leon Cesazini	467-3650
DowJones Market Analyzer	Ed Hurley	497-8877
Family Roots	Clifton Taylor	462-1698
Home Accountant	Rick Oshlo	578-8530
IAC Calc	Chris Kravits	320-0381
Letter Perfect	Bill Muhlhausen	668-3963
List Handler	Rick Kravits	320-0381
MCI Mail	Patrick Hennessey	342-0643
Multiplan	Mackie Brown	688-8655
	Jack Bailie	440-5963
	Glen Ray	359-2103
MultiScribe	Henry Bernstein	728-0081
Palantir	Re Kramer	358-6687
Pie Writer	Ray Fielding	358-4217
Quickfile	Jack Cowart	467-4215
ScreenWriter II	Dick Fairman	723-9619
Space Eggs	T. Sloan Engle	774-9055
Time Is Money	Dick Fairman	723-9619
VersaForm III	Shorty Hirsekron	697-9797
VisiCalc(Advanced)	Gerald L. Penn	498-0079
Wordstar	Ed Haymes	522-1863
Word Handler	Rick Kravits	320-0381

Hardware

Abaton Optical Character Reader	H. Helm	529-7405
Applied Engineering Upgrade Cards	Bruce Sprague	360-1000
DataFrame Hard Disks	Mike Kramer	358-6687
Mac XL	Mike Conway	495-2292
Sider Hard Disk Drives	Robin Cox	778-1635
Mac XL	Mike Conway	495-2292

Macintosh

Aztec C	Mike Martin	486-9169
BeamMac	Ronnie Haws	444-6720
Cricket Graph	Rudge Allen	622-3979
	David Ullman-Dougherty	995-5795
DB Master	Mike Conway	495-2292
Dollars & Sense	Gerald L. Penn	498-0079
Filevision	Mike Martin	486-9169
FrameMac	Ronnie Haws	444-6720
FullPaint	David Ullman-Dougherty	995-5795
Helix	Steve Bass	847-4407
	H. Helm	529-7405
Mac-SIG	Steve Bass	847-4407
MacDraw	Billy Jacobs	480-4410
	Mike Kramer	358-6687
MacDraft	Jim Huck	496-9508
	Billy Jacobs	480-4410
MacLink	Mike Kramer	358-6687
MacPaint	Bill Hailey	682-5147
Mac Transfer	Mike Kramer	358-6687
MacWrite	Bill Hailey	682-5147
Mac 3-D	Larry Stage	358-1105
Megamax C	Chris Flick	363-3153
MGMS CAD	Steve Bass	847-4407
Microsoft BASIC	Tom Dillon	367-6502
Microsoft Chart	Mike Martin	486-9169
Microsoft Excel	Les Brown	795-2741
Microsoft File	Rudge Allen	622-3979
	Mike Martin	486-9169
	Gerald L. Penn	498-0079
Microsoft Multiplan	Mike Conway	495-2292
	Peter Lemettais	523-1390
Microsoft Word	Virginia Conway	495-2292
OverVue 2.0	H. Helm	529-7405
	Neal Scott	890-0532
PageMaker	Re Kramer	358-6687
Ready, Set, Go!	Cleland Early	941-7247
Reflex	Mike Kramer	358-6687
Red Ryder	David Ullman-Dougherty	995-5795
ResEdit	David Ullman-Dougherty	995-5795
Silicon Press	Re Kramer	358-6687
SuperPaint	Mike Kramer	358-6687
TML Pascal	Grady Beard	529-8420
Tekalike	Mike Martin	486-9169
Thunderscan	David Ullman-Dougherty	995-5795
Turbo Maccountant	Jack Cowart	467-4215
XLisp	Mike Martin	486-9169
ZBasic	Tom Dillon	376-6502

Would you like to be a specialist? Leave your name and phone number at the Answer Desk during the meeting or mail it to the *Apple Barrel*. Please remember that the specialists are volunteers and be considerate when you call them. Don't call late at night unless you clear it with them beforehand.



Random Thoughts

by Cleland Early

The Mystery of "Look and Feel"

Imagine yourself as an aspiring mystery writer. You write a mystery about a man who isn't really a private detective, but solves mysteries nonetheless. The character calls himself a salvage consultant. He lives on a houseboat in Florida, a houseboat he won in a poker game. He drives a custom Rolls Royce pick-up and has an economist friend named Meyer. The salvage consultant calls himself Ravis McGhee.

The book is a best-seller; it sells 500,000 copies. You're set for life, right? Probably not. More likely, the administrators of the late John D. MacDonald's estate sue your socks off. Clearly, you've stolen your ideas from MacDonald's fine series of detective novels about Travis McGee.

Imagine another novel, told in the first person. The protagonist is a tough, cynical private detective named Smith. Smith works sporadically, and has trouble paying his bills. Women find him attractive, but he has trouble sustaining a relationship with any of them. Smith's dark experiences have made him an adept observer of the human condition. His perceptiveness doesn't make him happy, however. Instead, he's lonely.

This second novel is also a success. Does the author have to fear a suit? Probably not. Even though Smith's nature is a lot like that of many fictional detectives who have gone before, none of the authors of those other detective stories would have much of a claim against our second imaginary author. Detective novels tend to follow a bunch of conventions, widely used and accepted devices and techniques that are original to none. If John D. MacDonald's heirs sued this second author, they'd be wasting their money.

Stolen Idea or Convention?

The difference between stolen ideas and convention is not always so clear. Suppose Ravis McGhee lived in Seattle instead of Florida; suppose he drove a Porsche pick-up instead of a Rolls? Suppose his friend was named Beyer instead of Meyer and was a stock speculator instead of an economist? Make these and a few more changes, and the MacDonald estate's lawyers might have trouble making a case.

Like detective novels, microcomputer programs are protected by copyright laws. It's illegal for you to buy a copy of, say, Microsoft *Word* and then sell (or gave away) copies that you made on your computer. You'd also be breaking the law if you somehow got ahold of the source code for *Word*,

made a few changes, recompiled, and started selling the pirated program.

Suppose instead you and a team of programmers decide to create a word processing that mimics *Word* but costs a whole lot less. You don't disassemble *Word* and look at the code; you start from scratch. In the end, you introduce a new program with the same menu and command structure, the same operational methodology and speed, and the same everything except price. Your product, called *Drow*, costs \$95 instead of \$395. Have you violated Microsoft's copyright?

This is exactly the sort of question the courts are now being called upon to decide. In one case, Broderbund versus Unison World, a court ruled that Unison's greeting card program did indeed violate Broderbund's copyright for its *Print Shop* program. Broderbund argued that their copyright extended not just to the source code, but to the "look and feel" of the program.

Twin Dangers

Broderbund's successful suit has spurred a number of other court actions. Lotus Development, creators of *1-2-3*, has sued both Adam Osborne's Paperback Software and Mosaic Software, creators of *VP-Planner* and *Twin*, respectively. Lotus claims that Paperback and Mosaic have violated Lotus' *1-2-3* copyrights because *VP-Planner* and *Twin*, with only minor variations, duplicate the look and feel and user interface of *1-2-3*. Again, I'm not familiar with any of these programs (they are, after all, IBM PC software; yeech), and thus I can't make any judgements about the merits of Lotus' claims, but I think the personal computing community faces dangers however the courts rule.

The first big danger is that, if Lotus wins, software innovation will be stifled because new developers will fear the legal clout of the larger, more established firms like Lotus and Microsoft. Defining exactly what is original and what is conventional is going to be extremely difficult. After all, microcomputer software has been around for some ten years; mystery novels have existed for 40, 80, or maybe 120 years.

The criteria for determining what is copyrightable and what isn't are likely to be more intuitive than historical. Is, for example, the concept of a "spreadsheet" so obvious that the row-and-column structure can be imitated freely, or did Dan Bricklin's company, Software Arts—the creators of *VisiCalc*,

have the (unexercised) right to sue anyone who subsequently created a spreadsheet program (including Lotus)?

Another example. As far as I know, Living Videotext created the first outlining program, *ThinkTank*. Could LVT sue anyone who creates a computer software outlining tool? Or, if the outlining software idea is so universal that it can't be copyrighted, how about the idea of an outlining program where the outline subtopics contract or expand by "clicking" on a higher level topic? Does Living Videotext have a legitimate claim to copyright protection here?

I'm not sure what the legal or moral answer is. In general, I believe that disputes should be resolved in the marketplace rather than in the courtroom. In the abstract, I tend to believe that we benefit by the free exchange of information.

Nevertheless, I think innovators are entitled to some protection and maybe even a more substantial competitive advantage as a reward for their innovative ideas. If Lotus' claims are legitimate, and they still lose the suit, the danger is that innovation will be stifled because the cloners will have free reign to knock off anything and eventually there will be little incentive to create anything new.

Apple and "Look and Feel"

The look and feel argument is particularly important to Apple users because Apple is in the center of the argument. Apple has been very vigorous in defense of its copyrights. Apple successfully sued Franklin, a maker of Apple II clones, and essentially put Franklin out of business. Now, Apple has warned developers that they may face legal action if they attempt to port the Macintosh user interface, an integral part of all Mac applications, to other computers (read: IBM PC).

Already, Aldus Corporation has been forced to make changes in its IBM version of *PageMaker* to comply with Apple's demands. In an out of court settlement about a year ago, Digital Research agreed to make changes in their *GEM* operating environment to forestall a crippling lawsuit. Because its Windows environment is similar to the Mac *Finder*, Microsoft has signed a licensing agreement with Apple. Apple

has taken a lot of criticism for these and similar actions, but certainly Apple must actively defend its rights or it risks losing them.

Many IBM drones dispute Apple's claim that the Mac interface is original enough to deserve "look and feel" protection. True, the concept of a graphic user interface was born at Xerox's Palo Alto Research Center, and Xerox's Alto was the first graphics-oriented computer. Yet, contrary to what some have implied, Apple *has* compensated Xerox for Xerox's contribution to the Mac user interface.

Last time I checked, Xerox owned a sizeable chunk of Apple stock and indirectly benefited every time a Mac was sold. Further, I've read (but can't swear) that Apple is (or was) quietly paying licensing fees to Xerox for use of their technology.

Still, I don't see how the fact that the PARC work inspired Steve Jobs and cronies invalidates the clear originality of Apple's implementation of the graphics environment. Heavens, Apple actually was granted patents for parts of the Mac user-interface.

No Sympathy for Whiners

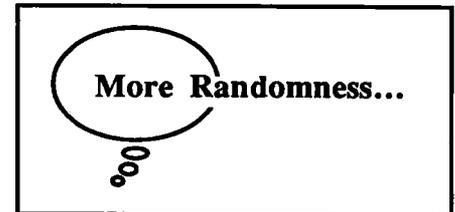
As a Macintosh enthusiast, I have little sympathy for all the whiners in the IBM-oriented computer press who now gripe because Apple is flexing a little muscle and trying to limit PC-imitators of the Mac interface. These whiners are the same guys who, two-and-a-half-years ago, dismissed the Mac as a toy and called the *Finder* a cutesy tool for simpletons.

Now, when they see how great Mac software has become and how more productive you can be using a Mac Plus, they want Mac-like tools for themselves. Trouble is, the whiners and their timid, risk-averse followers are stuck with millions of baby blue boat-anchors.

How things have changed. Even with the Apple-imposed restrictions, the IBM PC continues to grow more Mac-like, not the opposite.

Apple took the risk in creating the Mac instead of another IBM clone, which is what all the "experts" said Apple should do. Only Apple, its stockholders, and customers should enjoy the

benefits of Apple's contrariness. In particular, only people who took a risk and bought Macintoshes instead of IBM's/clones should enjoy the increased productivity, ease-of-use, and fun the Mac brings to computing. Mac purchasers should enjoy a competitive advantage over people who made the safe choice. Let the IBM buyers suck lemons, I say.



Word Warnings

If you own Macintosh Microsoft *Word 1.05* and are waiting for Microsoft to send you an upgrade notice, don't wait any longer. You must call the *Word 3.0* hotline (1-800-323-3577) and request a saving coupon before you'll receive a notice.

Microsoft is offering two upgrade prices, depending on when you bought *Word*. If you bought *Word* before October 1, 1986, the upgrade price is \$99. If you bought *Word* after that date, the upgrade cost is only \$50. You must also provide proof of ownership (a registration card, sales receipt, or the title page torn from your *Word* manual). If you claim eligibility for the \$50 price, you must include a dated sales receipt with your order. The upgrade offer expires April 30.

If you want *Word 3.0* and don't presently own *Word 1.05*, the smart plan is to buy 1.05 now and upgrade. *Word 1.05* lists for \$195 and can be had for \$110, mail-order. *Word 3.0* costs \$395. If you mail-order the old *Word* and upgrade, you in effect will be getting a 60-percent discount. However, supplies of *Word 1.05* may be getting short, so you'd best hurry.

Is *Word 3.0* worth the money? Most of the advanced, ahem, word has been extremely positive. Mike Kramer, for example, liked his beta copy so much that he took a copy of the old version out of his Encode inventory so he could buy an official upgrade. However, I noticed that

the reviews of 3.0 in the March issue of MacUser were more cautious than earlier reports. *Word 3.0* may not be the ultimate word processor after all.

I, for one, am not completely sold on the way Microsoft handles some aspects of the Mac interface. I hate *Word 1.05*. Changing a font style in *1.05* is a pain. You select a menu item, a dialog box pops up, you have to click in a bunch of boxes and scroll through a font list...yeech. At least *Word 3.0* has a style menu.

Another gripe. Every text-handling Mac program I own has adopted the following conventions: Command-I = Italic, Command-B = Bold, Command-U = Underline, and so on. Not *Word*. You have to use some retard command-option-shift-capslock combination to get bold-faced text. The programmers must have been on another planet when they created the original Mac *Word*. Thank god for *ResEdit*.

In other words, to get the power offered by the high-end Microsoft Mac products, *Excel* and *Word*, you must put up with a fair degree of funkiness.

HAAUG Notes

At last reckoning, HAAUG had some 1225 members. The February meeting brought sixty new members, the most joining during a meeting in quite a while. Neal Scott, our terrific membership chairman, hadn't yet deleted the overdue renewals from the membership list when he calculated the total, so the actual membership count is probably somewhat less than the 1225 figure. The general membership trend has been down rather than up. That's troubling.

Even at 1225, HAAUG is too small to support our present level of activities. Our meeting site, the Marriot Astrodome, costs about \$1500 per month to rent. The *Apple Barrel* costs about the same to print.

If all 1200 or so members renew every year, that's about \$30,000 in revenue. Twelve meetings: \$18,000. If we meet our goal of publishing the *Apple Barrel* ten times per year (and we are on schedule), that's another \$15,000 per

year, not counting postage. You figure it: \$30,000 in revenue, \$18,000 plus \$15,000 in expenses. That's a deficit.

The picture I've drawn is admittedly a little over-simplified, but it is generally accurate. Over the years, the club has managed to build up some capital which will help us weather bad times. However, as a newly-elected board member, I can't see the board of directors allowing deficit spending to continue for very long; that accumulated capital is simply too precious a resource.

The answer is simple (maybe not so simple)—we need to keep the members we have and get new ones. If a larger percentage of members renewed, we'd be on a growth path instead of a decline.

If you like HAAUG, pass the word. If you're disgruntled, let an officer know why, so we can fix it. If you know someone who comes to the meetings regularly but hasn't paid, put the bite on him or her. It's not fair for people to consume our services without helping to fund them.

Finally, befriend a new member. A lot of people come to one or two meetings, then drop out because they feel excluded.

Apple Barrel Changes

I hope that at the end of my term as director, the heretofore irregular publishing schedule of the *Apple Barrel* will no longer be a cause for griping. In that area, at least, things are looking up.

Last month, the *Apple Barrel* went through a second major redesign. Gone are the gray patches at the tops of the pages and the rules between columns, which are now ragged-right instead of fully justified. Our goal was to increase the flexibility of the underlying page structure and improve our ability to handle graphics.

In addition, the February issue was composed using both *PageMaker* and *Ready,Set,Go!3*. Half the pages were done in each program. This issue, the proportion will be roughly the same.

Unfortunately, it's not possible to exactly duplicate the *PageMaker* layouts using *RSG*; *PageMaker* allows you to print closer to the edge of the paper, so I was unable to put page numbers on the pages I designed with *RSG*. We solved

this problem by running the *RSG* pages through the *LaserWriter* twice, and using *PageMaker* to print the footers.

In general, I'm pleased with the results. The magazine looks cleaner and more interesting. We've continued to build on Tom's and Chris' fine work. Even more encouraging is the clear improvement in the quantity and quality of contributions. Keep writing.

If you do write, please be advised that you *will* be compensated. In the past, contributors have been promised a disk or two per page published; however, because the editors have been so harassed trying to get the magazine out, they never seemed to get around to paying some people.

We've now set up a formal system for handling the distribution of our writers' compensation. When the final composition of the magazine has been determined, we will mail a notice to whom-ever had an article included in the magazine. This notice will tell you what you're due. You'll need to pick up your disks at the Apple Answer Desk (in the lobby) during the next meeting.

One last change. You may have noticed that I used the editorial "we" a lot in this section. I find that my name has been added to the list of editors. This was the other two guys' idea, not mine, but I do appreciate the recognition.

In any case, HAAUG members should be aware that even with a lot of good contributions, assembling the *Apple Barrel* requires a tremendous effort. And, unlike contributors, editors don't receive any payment for that effort. Keep that in mind next time you approach to chew one of us out.

Free Stuff Department

This is my fifth *Random Thoughts* column, and I've yet to see the anticipated flood of free stuff influential columnists usually receive.

Software publishers, hardware developers—get your PR people in gear! Why send free stuff to Jerry Pournelle, when it will just get lost in the pile? Send it to Cleland Early instead. That's C-L-E-L-A-N-D E-A-R-L-Y.

Empirical Fumblings and Arcane Language

by David Scheuer

Modems

MODEM is an advertising-agency combined word, a contraction of Modulator-Demodulator. It's a computer peripheral device that when transmitting, **modulates** a computer signal into a signal that can be carried by telephone lines. When receiving an incoming signal, the computer **demodulates** the signal back into computer usable form. A modem allows us to move data and programs between computers over long distances. We can connect computers without modems, but only for short distances.

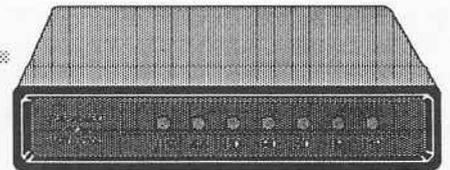
As a method of getting data and software into a microcomputer, a modem is the most fun since the replacement of keypunch cards by video terminals.

Modem software and terminal emulation programs refer to programs that we use to assist us in modem communications. They enable us to transfer programs in binary form and selectively save text files to a disk for later reference. They remember our phone numbers and passwords, and do a host of tasks to automate using the modem. The phrase "terminal emulation" relates to the main use of modems. In business one frequently calls up a modem line on a mainframe computer. The host computer doesn't know what has called it, and in fact doesn't care. The mainframe is designed to communicate with terminals, not microcomputers. So, we use programs in the microcomputer that can mimic several types of terminals and select whatever suits the mainframe. We fake it into thinking we're another terminal.

Years ago, we set up our computer and modem, dialed the phone, and when we heard an answering "beeeeeeeep," slammed the phone into a device known

as an acoustic coupler, hopefully before either computer got bored waiting and went off line. If all went well they happily beeped and whistled their data to each other through the handsets of the telephones. Each acoustic coupler had a microphone listening to the earpiece, and a small speaker shrieking into the mouthpiece. Acoustic modems are currently used in portable applications. Removing a motel phone line from the wall to plug in a modern electronic modem frequently requires cutting tools, and involves alarm circuits.

At fixed locations such as home or job, we use newer direct-connect devices that connect a microcomputer directly to a phone jack. Everything is electronic and we dial from the keyboard. With many modem programs, we enter our list of phone numbers and log-ons, and



thereafter select what we want from a menu.

There are free sources to access, such as the many private bulletin boards around. There are "for member only" sources, such as the HAAUG club board. There are commercial services of which the high visibility ones such as CompuServe, Genie, and The Source are just the tip of the iceberg.

Want the latest games in the free-ware-shareware area? Why wait and hope they're on one of the new disks in the club library next month? Just dial up one of the sources that have games

As a method of getting data into a microcomputer, a modem is the most fun since video terminals replaced keypunch cards.

for downloading, and read your copy of *MacWorld* while your computer does the rest. Even *Byte* magazine has a board for subscribers.

Chart stocks or commodities in the market? Dial up a commercial service that supplies securities data and download the figures. These services cost, but it may be worth a few dollars to have eighty volume-high-low-last entries appear without spending the weekend going through old financial papers, keying in the data, and then proof reading it.

Computer chit-chat and gossip straight from Silicon Valley. Join in like a C.B. Latest handy little utilities. Reviews of hardware and software. Weather Maps. Bug reports and neat tricks with your favorite program. Templates for almost any conceivable task for your spreadsheet. Play games with real opponents in Alaska. College courses for credit. An encyclopedia. All out there for the microcomputer modem owner.

Most of these boards have been simplified to the level where all the beginning user has to do is read the menu, enter the number of the selection, and press return.

There are multiple modem purchase decisions.

If you're generally going to access local services, design sophistication is of surprisingly little importance. By that, I mean the ability of the modem to reliably be able to differentiate between various noises and real signal on the line, and to reliably cope with signals that vary from too strong to too weak. Calling within Houston, I've seldom found a difference between a deluxe super-stable high-priced unit with multiple filters and discriminator circuits, and a minimum box at one third the price. Calling to California and Colorado, I encountered worlds of difference. There were modems that dropped carrier regularly (hung up by mistake) requiring a re-dial and a re-send. There were

modems that had problems differentiating data from phone noise. If the software detected transmitted errors it requested the sending computer to re-do, and a normal ten minute transmission might stretch to twenty-five minutes.

Sometimes an error crept into a file and the downloaded software wouldn't run, or the data was corrupted. Long distance phone time is expensive, and this kind of problem can become very expensive. But, to repeat, it just doesn't seem to matter on local calls, the cheaper modems will do nicely.

Go for speed. It's worth it. About five years ago 300 Baud was it. Baud rate, another term coined to preserve the mystique of the computer consultant, translates to "bits per second" or "bps." We know there are 8 bits to one byte, and a byte means one character. Some of the bits in modem transmission, about 10%, are used to mark data and check its accuracy. A 300 baud modem actually transmits about 30 characters per second, not the 37.5 you might compute. That's pretty slow. We can read faster than that. Some, not I, can type faster than that. Even a very slow microcomputer can handle files faster. Technology in this area is improving rapidly, as in most areas of electronics. Only a few years ago 1200 baud (about 120 characters per second) became practical, and right now 2400 baud is available and reasonably priced. Quite possibly in eighteen months we'll be looking at 9600 baud home modems.

Why is speed so important? Most club bulletin boards limit users by time. Perhaps 30 minutes is the daily allocation. After that, it hangs up and lets the next person on. You can download or read a lot more in 30 minutes at 1200 baud than at 300. In theory, 4 times as much. In practice, there is some wait

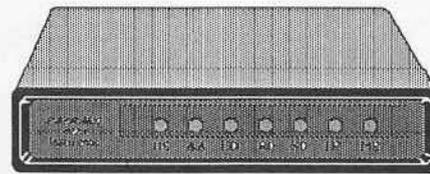
time for the host machine to read a disk and get its ducks in order, but it's still more than twice as fast. Commercial boards have varying rules. Genie, for example, charges the same hourly rate, regardless of your access speed. That helps recover the cost of a higher speed modem. Some commercial boards such as Dow Jones and CompuServe pretty much double their hourly rate rate when you go from 300 to 1200 baud, but that still leaves a data-to-cost advantage. For many very expensive services the price is the same at 1200 and 2400 baud.

Even where there is no time charge, the rest of the family would probably like to have the modem user off line, and the phone back to normal. My two teen-agers certainly feel that way.

A low priced generic 2400 baud modem running at 1200 baud generally seems to perform better than a low priced 1200 baud modem running at 1200 baud.

A 2400 baud modem should be capable of operating at 1200 and 300 baud. A 1200 baud modem should be capable of operating at 300. Each modem should be able to operate at the popular speeds below its maximum. Caveat—there are exceptions.

The speed of operation is selected by the caller. The receiving modem should recognize the baud rate at which it is being called and adjust to it automatically. If you were to call me at 300 or 1200 baud my modem would automatically adapt. If you were to call me at home at 2400 baud we would not be able to communicate, since my 1200 baud modem can not match that speed. Most commercial services can automatically handle 300/1200/2400. If the user knows that his modem is capable of a higher baud rate than the modem he's calling, he simply



I prefer to buy from makers such as Microcom and Hayes, who have made important contributions to the state of the art.

sets his program to the maximum baud rate he knows the device at the other end can accept. The calling modem never tries to automatically match the rate of the receiving modem.

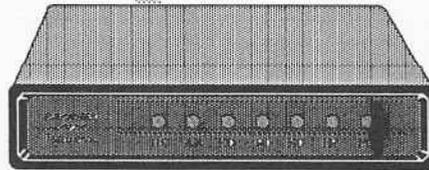
Go for Hayes AT command set compatibility. Hayes created a limited set of commands that their modems would recognize from a microcomputer keyboard or program, each command beginning with "AT". These are the commands that tell the modem to dial, whether to use pulse or tone, number to call, when to answer the phone, what baud rate to run at, and all the good little things we take for granted. We can take it for granted only because our terminal emulation software that we use with the modem handles this automatically. When Hayes was about the only game in town, all modem and terminal emulation software was written to use this command set. Most still is. Other manufacturers of modems for microcomputers designed their devices to accept these Hayes commands and use existing software. A *de facto* standard was born. Regardless of the make of microcomputer and operating system, there are a variety of good programs available that use this command set to control the modem, many are shareware, and some are even free-ware.

A modem not using this command set can still be an excellent modem. The best modem I ever used was borrowed off a minicomputer. However, I had to enter all the configuration commands directly from the keyboard each time I used it. Kind of a nuisance after a while. Some modems of this type come with their own microcomputer software, but that leaves you with no good options should that software be unsatisfactory, and it usually is.

All current Macintosh software uses the AT command set, and most software, including old *MacTerminal* 1.0, will handle 2400 baud.

A very few programs will not accept anything but a Hayes modem when it comes to auto dialing. These are programs that take nothing for granted, and actually check registers (memory locations) in the modem to make sure it's off hook, has a dial tone, and is ready to go.

With other brands those registers will not be in the same place, giving the same answer, and a problem will occur on auto dialing, unless someone has walked all over Hayes design patents and copyrights. These programs generally do allow you to dial from the keyboard, and then go back on automatic pilot.



Internal versus external modems. Does it install in the computer? Does it sit in a small box outside the computer and connect with a cable? Mac and IIC owners have no slots and no choice. They must use an external modem in its own case, and connect to a built-in serial port. Apple IIE and GS, IBM, and most other machines have internal slots into which a modem can be installed. On the plus side, an internal modem is inside the machine, out of sight, and out of the way. If the particular microcomputer does not have a serial port, an internal modem avoids the cost of a serial card and connector. An internal modem does not have a power supply or case and is usually less expensive. On the negative side, it is always powered up when the computer is turned on, it draws on the computer power supply, and adds to the heat load. External modems have their own power supply. Avoid the couple of really cheap external ones that require a 9 volt battery.

Internal modems are designed for specific machines. II+ internal modems

can usually be shifted to a IIE, but IBM internal modems cannot be shifted to an Apple or vice-versa. External modems are transferable between any microcomputers that have or can be equipped with serial communication ports.

Check the default settings before buying. The default settings determine the mode the modem will be in when your computer is not controlling it. Many models on the market come up in auto-answer mode. This means they will answer the phone if it rings, without waiting for instructions. Read that as without your permission. Some of these do not even have off-on switches. Wow, yes, there are such things. Picture this. You're working with a spreadsheet or word processor. About two hours worth of work so far since your last save to disk. Your modem is on. It's in auto-answer mode.

The phone rings. "This is station beeeeeeeeeeeeeeeeeeeep \$10 Million if you beeeeeeeeeeeeeeeeeeeep. Too bad! beeeeeeeeeeeeeeeeeeeep." Finally you've either turned off your system and lost your work, or yanked a plug out of the wall, bashing your skull as you crawl back out from under the table. You pick up the phone again in time to hear "And, by the way, your only rich relative, aunt Sally, just called the station. She's cutting you out of her will for total nerdism."

Modems that always auto-answer can be a pain. Almost any modem can be set to answer the phone either from the keyboard or by a switch. That's not the problem. Make sure yours doesn't automatically set out to answer the phone each time it's turned on. All good designs, even the low priced ones, have a switch to allow you to disable this feature if present.

Physical quality and price. Prejudices versus logic. I prefer to buy from makers such as Microcom and Hayes, who have made important contri-

Buy a modem when you're ready to take it home and use it, not before. The value per dollar keeps improving.

butions to the state of the art. I also prefer equipment that goes for years without problems. However, the technology at this time is such that the average modem will probably be obsolete, and not worth repairing, before it requires service, even if it isn't of the best quality. The price difference between major name brands, and some of the newcomers is so great that if buying a new one at this time, I would take my chances, and go for low price.

Don't over-do the extras.

Back when micro computers were slow and had tiny memories, modem manufacturers began to develop smart modems. These devices were intended to reduce the work the controlling computer had to do, have memories to hold phone lists, baud rate and parity settings, buffer memories, and a multitude of features designed to unload work from a relatively feeble microcomputer. It is quite practical with a modem of this type, with a microcomputer much simpler than the Apple II, to set the baud rate and parity checking, dial into a bulletin board, send and receive messages and E-mail, and even print it out, all from the keyboard, without any terminal program. Microcomputers are now much faster, have larger memories, use more sophisticated software, and many of these features have become needless. Manufacturers still keep adding them.

Some makers have hosts of these deluxe features available at extra cost. Current technology can supply you with a modem that can answer the phone, check a password, receive and store a message as well as transmit it, all with the microcomputer turned off. Unless you have a special need, many features are of no value. Most terminal programs for your computer will do as much, even more, along with recording

and using settings for baud rate and such, so this is usually not worth extra cost. Clocks also leave me uninterested. A Mac has a clock built in. As with a new car, you can order power seats, electric windows, a sun roof, and an entire catalogue of goodies that will run the price up by 50%. Extras are fun to have, but will not enable you to get from here to there any faster. They just add to the number of components that can fail in service.

A speaker is nice to have, not essential. Many modems have a little internal speaker that lets you hear them dial, ring, and connect. Then it politely and automatically shuts off during data transmission. Some modem makers prefer a design that sends messages to the screen telling you whether the phone is ringing on the other end or not. A ring, busy signal, and an area busy signal, are easily recognized by a human

ear, not by a modem. I prefer the audible cue, many people don't care, and some prefer it quiet. Modems with lights to indicate

status are nice to have. The lights indicate off-hook, baud rate in use, whether files are coming in or going out, and more. Like a speaker, those status lights will sometimes provide helpful information. A standard feature of many external modems.

Auto-dial refers to the ability of the modem to respond to computer commands to go on line, dial a phone number, wait for an answer, and then return control to the program that did the calling. Very nice to have these days, and standard on most modems.

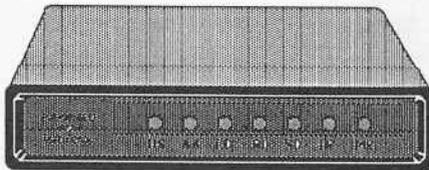
In 1981 an internal 300 baud modem for my Apple II+ was about \$300. It had auto-dial, and a speaker. An acoustic modem, always external, was only about \$200, but would have re-

quired a serial card to connect to, another \$200. A 1200 baud external modem was \$595 and the serial card would have boosted the installed cost to \$800. The only commercial modem board that I used had an off-hours rate of \$2.50 per hour.

What are prices like, early in 1987? Major and generic brand 300 baud modems, internal and external are under \$100, some even come with software. Minor brand external 1200 baud modems have dropped to \$120 to \$200. 2400 baud versions are in the \$200 to \$350 area. Regretfully, the really major brands in 1200 and 2400 baud speed ranges sell for about twice as much. Commercial boards vary, but the lowest off-hours rate is effectively \$6.00 an hour, any speed. Special services such as Dow Jones have prime-time rates for some information areas of \$1.20 per minute at 300 baud, \$2.64 per minute at 1200 and 2400 baud. Deciding that a high-speed modem is price-justified is far easier now than six years ago.

Buy it when you're ready to take it home and use it, not before. The value per dollar keeps improving. Leave it on overnight for the first day or two. This type of equipment usually fails early, or not for years. Remember, a modem develops heat, and has vents. If you block them the usual consequence is death by heat stroke.

Keeping in mind phone noise problems and compatibility, try for a clear understanding with your dealer that it can be returned if it doesn't function properly with your software, on your phone line.



•Second Generation of
Macs Unveiled

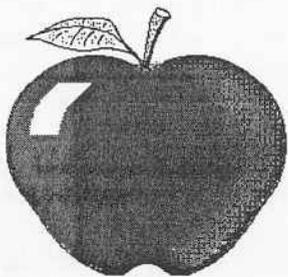
•New Mac Peripherals

•Apple II Software Up-
grades

•Powerful Open Mac

•MS-DOS for the Mac

•New Mac Software



News from Cupertino

Gathered from AppleLink

Macintosh II

The Macintosh II is a high performance, open architecture Macintosh for advanced productivity, high end desktop publishing, and scientific and engineering applications. Its features include:

— A 68020 microprocessor with a 32-bit data bus that operates at 16 Mhz. The Macintosh II can open and close applications and files, access data, and execute graphics and calculations up to four times faster than the Macintosh Plus.

— 68881 floating point co-processor works with the 68020 microprocessor to perform operations such as multiplication, division, sine, and cosine. The 68881 co-processor enables the Macintosh II to carry out mathematical calculations 40 to 200 times faster than the 68020 microprocessor.

— 6 NuBus expansion slots. Each expansion card can be placed in any of the slots, avoiding the need for DIP switches. Any card can take control of the system from the main logic board, allowing users to work within other operating environments.

— One internal 800K floppy drive, along with the capability of adding another drive as memory requirements grow.

— An enhanced internal SCSI connector. It allows users to increase their storage capacity by installing an internal SCSI hard disk.

— Six built-in ports including:
— One SCSI port (internal and external)
— Two RS-422 serial ports
— One stereo sound port
— Two Apple Desktop Bus ports

— One megabyte of RAM, expandable to two, four, five, or eight megabytes.

— 256K ROM, which is a superset of the Macintosh 128K ROM. It supports the Hierarchical File System, external drives, AppleTalk, and the SCSI port. ROMs contain support for color.

— The Apple digital sound chip provides four-voice stereo sound.

The entry system includes the CPU, 68881 floating point co-processor, one megabyte of RAM, one 800K 3 1/2-inch floppy disk drive and a mouse. The hard disk system includes everything in the entry system plus an internal 40 megabyte hard disk drive. Remember that the keyboard, monitor, video card, and video card expansion kit for the Macintosh II must be purchased separately.

Macintosh SE

The Macintosh SE adds expansions and flexibility to the power of the Macintosh Plus, making it Apple's mainstream business computer. Processing speed is improved 15 to 20 percent over previous models allowing faster recalculation of spreadsheets and faster document processing. SCSI performance is up to two times faster allowing faster launches and quits, database searches, and document retrieval.

The Macintosh SE comes standard with either two 800K internal drives or one 800K internal drive and one internal 20MB SCSI hard disk. The Macintosh SE incorporates the features of the Macintosh Plus including:

- The same compact design
- A 68000 microprocessor
- One megabyte of memory (expandable to four megabytes)
- A connection for SCSI peripherals

Other features of the Macintosh SE include:

- The Macintosh SE-Bus Expansion Slot allows external products to be directly connected to an internal card.
- 7 built-in ports including:
 - One SCSI port
 - One drive port
 - Two RS-422 serial ports
 - One sound port
 - Two Apple Desktop Bus ports
- One megabyte of RAM, expandable up to four megabytes.
- 256K ROM, which includes support for:
 - Internal and external SCSI connectors
 - Internal drives
 - One expansion slot
 - Apple Hard Disk 20SC, 40SC, 80SC
 - The Hierarchical File System
 - QuickDraw
 - AppleTalk
 - The Apple Desktop Bus

Users can add:

- Accelerator cards
- External monitor adapters
- MS-DOS co-processor cards
- Networking and communication cards
- A 5.25-inch MS-DOS disk drive controller card

A keyboard is not included with either configuration of the Macintosh SE. However, two keyboards—the Apple Keyboard and Apple Extended Keyboard—are available.

Second Generation of Macintosh Family Unveiled

AppleWorld, Los Angeles, California. March 2, 1987. Apple Computer, Inc. today introduced the second generation of the Macintosh personal computer family with two new models that offer users the ability to flexibly configure systems to suit their particular needs or to expand these systems as their needs grow.

The high-performance, open-architecture Macintosh II, designed for advanced applications features six internal printed circuit card slots for adding multiple functions—including an optional color display, network connections and MS-DOS compatibility. The Macintosh SE (System Expansion), a powerful system with added internal storage capacity and an additional slot for added functions, is expected to become Apple's mainstream system for business and higher education applications. The Macintosh Plus and 512K Enhanced models are the entry-level systems in the Macintosh family. Most Macintosh software is upward compatible with the new Macintosh II and Macintosh SE systems.

The new computers are expected to strengthen Apple's current position in business and higher education markets and to help the firm expand into new markets.

Speaking at AppleWorld, a two-day series of seminars, expositions and application environments for Apple's constituency groups — including customers, dealers, third-party vendors, press and analysts — chairman and chief executive officer John Sculley said, "Apple's vision is intact. The values that carried us to success at the end of our first 10 years have made the second generation of personal computers possible. The Macintosh family is now a broad family of products—high-end, mid-range, and entry-level computers—that can suit nearly any application."

Apple also introduced a host of products, including storage devices, memory upgrade kits, keyboards, two display monitors, and a series of prod-

ucts that permit the integration and enhancement of MS-DOS files with Macintosh files. In a joint announcement with Dow Jones & Company, Inc. and MCI Communications Corporation, Apple also introduced new electronic mail software, *Desktop Express*, that lets users send graphic documents over telephone wires. The company also introduced A/UX, an implementation of AT&T's System V UNIX software, for operation with the Macintosh II with delivery later this summer.

As part of Apple's commitment to increase worldwide productivity, the company introduced 15 localized versions, in 10 languages, of the new Macintosh computers. Available in English, French, German, Spanish, Flemish, Norwegian, Japanese, Dutch, Swedish and Italian, the systems incorporate a universal power supply that operates with any voltage. International sales for Apple accounted for 26 percent of revenues in fiscal year 1986.

Macintosh technology features ease of use, graphics and unique functionality. It maintains a very high level of software consistency and tight integration across all applications, resulting in low requirements for user support and training. The Macintosh personal computer family—including the Macintosh 512K Enhanced, the Macintosh Plus, the Macintosh SE and the Macintosh II—ranges in price from \$1699 to \$5498.

Powerful Open Macintosh Expands Applications

AppleWorld, Los Angeles, California. March 2, 1987. Apple Computer, Inc. today introduced a high-performance, open architecture member of the Macintosh personal computer family, the Macintosh. The new Macintosh offers users high speed, expansion and flexibility. Its modular design and open architecture permit a number of display options, including color displays, and the ability to incorporate add-in cards from Apple and third parties for additional functionality. This top-of-the-line model is intended for advanced

New Macintosh Peripherals

AppleColor High-Resolution RGB Monitor. The AppleColor High-Resolution RGB Monitor is a high resolution color display for the Macintosh. Its features include:

- 640 x 480 pixel resolution and analog input format.
- A 13-inch Trinitron CRT that allows users to display information in either color or black and white (with a resolution of 69 DPI).
- With the Macintosh II Video Card, the AppleColor High-Resolution RGB Monitor can display 16 colors or gray scales simultaneously from a palette of 16 million, or 256 colors or gray scales simultaneously with Macintosh II Video Card Expansion Kit.

Apple High-Resolution Monochrome Monitor. The Apple High-Resolution Monochrome Monitor offers high quality Macintosh display on a 12-inch black and white screen, and a higher refresh rate and gray scale capabilities. Its features include:

- 640 x 480 pixel resolution.
- Analog input format. When driven by a Macintosh II Video Card, the Apple High-Resolution Monochrome Monitor displays shades of grey.
- A flat, 12-inch black and white screen that displays the full width of an 8 1/2- by 11-inch page.
- Glare protection and a screen refresh rate of 66.7 Hz, both of which reduce eyestrain.
- A Universal power supply.

Included with the Apple High-Resolution Monochrome Monitor are a video cable and a power cable.

Apple 1MB and 2MB Memory Expansion Kits With the Apple 1MB and 2MB Memory Expansion Kits, users can expand their Macintosh CPUs' memory and maintain larger files.

SIMMS, or Single In-line Memory Modules, are plug-in RAM expansion strips that are configured with up to eight RAM chips in either 256 kilobyte or one megabyte configurations. Up to eight of these modules can be snapped into the Macintosh II computer's motherboard, allowing memory expansion options of 2MB, 5MB, and 8MB. Up to four modules can be installed in the Macintosh Plus and Macintosh SE, bringing the configuration up to 2.5MB or 4 MB.

The 1 MB Memory Expansion Kit consists of two 1Mbit SIMM strips, allowing Macintosh SE or Macintosh Plus users to expand the RAM from its standard one megabyte of memory to 2.5 or 4MB of RAM. This allows a Macintosh II user, who must upgrade with two kits at a time, to expand from 1MB to 5MB or 8MB of RAM.

Apple Hard Disk 40SC and 80SC. The Apple Hard Disk 40SC and Apple Hard Disk 80SC are external hard disks that can be used with the Macintosh Plus, Macintosh SE, Macintosh II, Apple II Plus, Apple IIe, and Apple IIGS. The Apple Hard Disk 40SC provides users with 40 megabytes of memory, while the Apple Hard Disk 80SC provides 80 megabytes of memory. With an access time of 30 milliseconds and the SCSI interface, both drives provide faster transmission of information.

The SCSI port located on the back of these hard disks allows users to expand

applications in business, desktop publishing, higher education and engineering environments.

"Because of its power and expandability, the Macintosh II strengthens Apple's position in markets in which we are already participating and extends the

Macintosh personal computer family into new markets," said William V. Campbell, executive vice president U.S. Sales and Marketing.

At introduction, the Macintosh II operates most existing Macintosh applications up to four times faster than the

their systems with additional hard disks, tape backup systems, or other SCSI peripherals. Users can connect up to three additional devices when using any CPU from the Apple II family or up to six additional devices when using a CPU from the Macintosh family.

When used with the AppleShare file server, these hard disks allow users to build a powerful AppleShare network server with up to 40 or 80 megabytes of accessible information. Both of these Hard Disks require the SCSI System Cable and SCSI Cable Terminator, and can be easily installed by the user.

Apple Tape Backup 40SC. The Apple Tape Backup 40SC offers users unlimited storage capacity when backing up large quantities of critical data. It features 40 megabytes of backup storage with each tape cartridge, or 50 times the storage capacity of a single 800K disk. Its SCSI interface allows users to operate it with all the Macintosh hard disk based systems, and a SCSI expansion port provides room for additional growth by allowing them to connect hard disks, other tape backup systems, and external Apple Hard Disk SC drives. It can be stacked with all of the external Apple Hard Disk SC drives.

A tape backup program is included with the Apple Tape Backup 40SC. It offers Volume and File backup/restore options. Users also receive one QIC-100 pre-formatted quarter-inch tape cartridge enabling them to backup or restore their entire 20MB or 40MB hard disk in one easy operation or select individual files as needed.

A five-pack of pre-formatted backup tape cartridges may be purchased separately.

Macintosh 20SC, 40SC, and 80SC Internal Hard Disks. There are three ways users can internally expand storage capacity of the Macintosh II and Macintosh SE. The Macintosh Internal 20SC Hard Disk provides 20 megabytes of internal storage for the Macintosh SE and Macintosh II. This 3.5-inch hard disk provides fast access and transmission time because of the SCSI interface. It also connects to the Apple Tape Backup 40SC to efficiently backup and restore information. Users can add up to six additional hard disks, tape backup systems, or other SCSI peripherals. The Macintosh Internal 20SC Hard Disk comes standard with the Macintosh SE Hard Disk 20 CPU and may also be purchased separately to install in the Macintosh SE or Macintosh II.

The Macintosh 40SC and Macintosh 80SC Internal Hard Disks provide Macintosh II users with high performance SCSI hard disk solutions. Both feature 5.25 hard disk assemblies and access time of 30 milliseconds. The Macintosh Internal 40SC Hard Disk and Macintosh Internal 80SC Hard Disk provide 40 and 80 megabytes, respectively, of internal formatted storage. Both can connect to the Apple Tape Backup 40SC, and both are expandable with up to six additional hard disks, tape backup systems, or other SCSI devices. All Internal Hard Disks must be dealer installed.

Macintosh II Video Card and Video Card Expansion Kit. The Macintosh II Video Card is a NuBus card supporting both the Apple High-Resolution Monochrome Monitor and the AppleColor High-Resolution RGB Monitor. The standard configuration of 1 through 4 bits provides users with a wide range of colors as well as gray scales. The monitors can display up to 16 colors or gray scales simultaneously from a palette of 16 million colors. The Macintosh II Video Card Expansion Kit allows users to expand the Macintosh II Video Card from 4 bits to 8 bits. The expansion increases the number of colors they can display—up to 256 colors or gray scales simultaneously from a palette of 16 million.

cludes a floating point arithmetic chip, the 68881, that can perform mathematical operations up to 200 times faster than the 68020. These features let the Macintosh II process at a speed of 2 million instructions per second (2 MIPS). The Macintosh II also features transfer rates greater than 1 megabyte (MB) per second over its Small Computer Systems Interface (SCSI) interface. The Macintosh II comes standard with 1 MB of random-access memory (RAM), expandable to 8 MB on the logic board. Additional RAM expansion of up to 1.5 gigabytes (GB) can be achieved with add-in boards.

The Macintosh II provides Macintosh Plus-compatible ports for a SCSI connection, two RS-422 serial ports, an external SCSI disk drive interface and a sound port with four-voice stereo capability. Like all other Macintosh computers, the Macintosh II has the AppleTalk network built in. In addition, the Macintosh II includes six slots that use the high-performance NuBus protocols. NuBus is a processor-independent, industry-standard bus that supports 8-, 16- or 32-bit data paths. It permits the fast transfer of large quantities of data between add-on cards and the logic board. NuBus features fair arbitration and geographical addressing. These two characteristics let the add-on cards "identify" themselves so, unlike other computer systems there is no need to set DIP switches to configure a system. Because the NuBus lets add-in cards be placed in any slot, there is exceptional flexibility and ease associated with system configuration. The six slots let the Macintosh II operate a wide range of performance-driven, demanding applications and expand as users' needs expand.

The video interface is provided by the Macintosh II video card which fits in one of the slots. The card can drive either of the high-resolution monitors introduced today. In its standard configuration, the card can simultaneously generate 16 colors or shades of gray from a standard palette of more than 16 million colors. With the addition of the Macintosh II Video Card Expansion Kit, the card can generate up to 256 colors or shades of gray from the same palette. Users may choose a 12-inch, high-resolution, monochrome monitor or a

Macintosh Plus. The Macintosh II offers upward compatibility with the majority of existing applications. Apple is working closely with third-party hardware and software developers to ensure that a wide range of software, peripherals and add-in cards are developed to take

full advantage of the advanced features of the Macintosh II.

Macintosh II Specifications

The Macintosh II is based on the 32-bit, Motorola 68020 microprocessor operating at 16 megahertz (MHz). It in-

13-inch, high-resolution red-green-blue (RGB) color monitor.

Both display units feature 640 x 480 pixel resolution and utilize an analog input format. This format lets the monochrome monitor display millions of gray values and the color monitor display millions of colors or gray values. The monochrome monitor, which is capable of displaying the full width and over half the length of a page, suits a need in productivity applications such as word processing, spreadsheets and business graphics. The RGB monitor combines this full-width viewing area with the unique capability of displaying high-resolution text and graphics in both color and black-and-white. This provides Macintosh II users with a versatile, high-performance monitor capable of satisfying a broad spectrum of user needs from word processing to advanced graphics. A tilt-and-swivel monitor stand is available as an option for the high-resolution monitors. Users can configure the Macintosh II with multiple monitors by adding video cards in slots. Various monitors and video cards are also available from third parties.

The Macintosh II also includes the Apple Desktop Bus (ADB) standard interface for input peripherals. ADB is also used on the Macintosh SE as well as the Apple IIGS. The ADB lets users connect up to 16 input devices concurrently, including such peripherals as a keyboard, mouse or graphics tablet. Users may also choose from two Apple keyboards: the Apple Keyboard includes a typewriter-style layout, a numeric keypad and cursor keys; and the Apple Extended Keyboard includes the numeric keypad, function keys and special-purpose keys for using alternative operating systems, such as MS-DOS or terminal emulation programs. Keyboards are packaged and sold separately.

The Macintosh II can internally accommodate, simultaneously, up to two 800 kilobyte (KB) floppy disk drives and one 20, 40, or 80 MB hard disk. Both the 40 and 80 MB hard disks feature a very fast access time of less than 30 milliseconds (ms). In addition, up to six storage devices can be daisy-chained through the external SCSI port. For those users who want to backup critical data from their hard disks, Apple also

Apple II Software Upgrades

Apple II *Instant Pascal* Version 1.5. Apple II *Instant Pascal*, an educational language for the Apple IIGS, IIe, and IIc is available in Version 1.5. This version replaces Version 1.0 and can be used with the Apple IIGS, Apple IIe, and Apple IIc. Version 1.5 enhancements include:

— A new utility program IP.CUSTOM that enables users to configure *Instant Pascal* to use a variety of non-Apple printers (including Epson and Okidata).

— By using *Instant Pascal* on a 3.5-inch disk drive or installed on a RAM card or a hard disk, users can increase its performance. The IP.CUSTOM utility is used to install *Instant Pascal* on a hard disk or RAM card with at least 312K of contiguous memory. However, since you must have at least 356 contiguous blocks available to install *Instant Pascal*, some RAM cards, such as RAMworks from Apple Engineering, are not supported.

— Copy protection has been removed so that users can make backups or install *Instant Pascal* to RAM or hard disk.

— The *Instant Pascal 1.5 Update* is offered on a double-sided 3.5-inch disk, as well as 5.25-inch disks, allowing users to start it up and use it on their Apple II UniDisk 3.5 Drive.

Customers who have earlier versions of *Instant Pascal* can upgrade their current disks to Version 1.5 by copying the new software onto their existing disks, or onto a new 3.5-inch 800K disk.

Customers can also receive a copy of *Instant Pascal*, Version 1.5, by mailing their original invoice or a Version 1.0 startup disk to:

Instant Pascal Upgrade
450 E. Trimble Road
San Jose, CA 95131

Customers must include their name and address and specify whether a 5.25-inch and/or a 3.5-inch disk is required. This upgrade is offered free of charge and will be available until August 28, 1987.

introduced an optional SCSI 40 MB tape backup unit, which provides file and image backup on preformatted, one-quarter-inch tape cartridges.

Apple also introduced the Apple EtherTalk Interface Card, which provides direct connectivity to Ethernet networks for the Macintosh II. Apple will support the AppleTalk network architecture and A/UX (Apple's UNIX product) networking software environment for use with the EtherTalk Card. Third party vendors are expected to provide software support allowing connectivity to other environments. The EtherTalk product will be available in the second

half of 1987.

New Operating Environments

A/UX, a version of AT&T UNIX. Apple also announced today that it will offer a version of the UNIX operating system for the Macintosh II. This operating system is widely used in universities, in government, and by technical professionals. An optional Motorola 68851 paged memory management unit (PMMU) is required for A/UX and will be available from Apple. UniSoft Systems developed a significant portion of A/UX under contract with Apple.

A/UX is a full implementation of

SuperPILOT Special Edition. A Special Edition of *SuperPILOT*, Apple's personal computer authoring language, will be available in May, 1987, from the Apple Programmer's and Developer's Association (APDA). The *SuperPILOT* Special Edition includes these enhancements:

- Pascal 1.3, 128K version. *SuperPILOT* has been rewritten in Pascal 1.3 to allow users to attach their own device drivers. It also takes advantage of the additional RAM in a 128K Apple II system.
- Hard disk and UniDisk use. Lesson development is not restricted to the secondary drive. Users can develop their material on a ProFile or Corvus Systems Inc. OmniDrive hard disks, Apple Hard Disk 20SC, or UniDisk 3.5.
- Quicker disk access. Disk access to lesson material has been speeded up for repeated Jump and Use commands that go across block boundaries.
- Technical improvements. *SuperPILOT* Special Edition includes many technical changes for Pascal 1.3.
- Special Edition is supported on the Apple IIGS.

SuperPILOT Special Edition is exclusively available through APDA, a distribution channel for development tools, languages, system software, technical notes, and manuals for Apple hardware. ADPA's \$20 per year membership is also available to technically sophisticated customers who need advanced tools and information in order to create Apple-compatible products.

SuperPILOT Special Edition is available only for current *SuperPILOT* with Log customers who want enhanced *SuperPILOT* capabilities. It does not include user manuals. To place an order, or to become an ADPA member, contact: ADPA 290 SW 43rd Street Renton, WA 98055 (206) 251-6548. The source code for the Special Edition can be purchased from Apple Software Licensing. A separate license is also available for runtime *SuperPILOT* Special Edition purchasers who want to distribute *SuperPILOT* lessons. For more information, contact: Apple Software Licensing Department Apple Computer, Inc. 20525 Mariani Avenue Cupertino, CA 95014 (408) 966-1010.

the AT&T UNIX, System V, Release 2 Version 2 operating system and includes features from Berkeley's 4.2 BSD version. The features incorporated from 4.2 BSD provide easy portability of programs from 4.2 BSD to A/UX and advanced communications capabilities. A Macintosh II running A/UX offers the traditional user interface of a UNIX operating system: a high-powered command line interpreter. Standard UNIX System V applications can be easily ported to A/UX.

Additionally, a key enhancement from Apple lets A/UX developers have full access to the Macintosh toolbox.

A/UX applications can therefore have the complete look and feel of Macintosh programs. New applications, properly designed, can operate in both environments. A/UX also offers, through add-in cards, connections to Ethernet, AppleTalk, and serial communications networks using standard UNIX communications and electronic mail systems. It can also act as a server or client on a Sun Microsystems Network File Systems (NFS) Ethernet network.

The Apple EtherTalk Interface Card provides direct connectivity to Ethernet networks for the Macintosh II. A/UX is expected to ship this summer. Pricing

and licensing will be announced in May.

MS-DOS

Apple's goal is to provide data file interchange with other operating systems. To provide MS-DOS data file compatibility, Apple is introducing *InterFile*, file transfer software, a 5.25-inch MS-DOS floppy disk drive, and drive controller cards. In addition, MS-DOS coprocessor cards for the Macintosh II and the Macintosh SE are available from third parties. For example, users who purchase the 5.25-inch drive and controller card from Apple can read in a Lotus 1-2-3 data file so it can be used in a spreadsheet program, such as Microsoft *Excel*, on the Macintosh. Or, users who choose a coprocessor card from a third party can run *dBase III* or Lotus 1-2-3 in a window on the Macintosh screen.

Price and Availability

The Macintosh II will be available in May in two configurations in a new platinum color: a basic system, including 1 MB of RAM and one 800 KB floppy disk drive is offered at a suggested retail price of \$3,898; a second configuration, including 1 MB of RAM, one 800 KB floppy disk drive and one 40 MB internal SCSI hard disk drive is listed at a suggested retail price of \$5,498 (prices include keyboard).

New MS-DOS Options for Macintosh Family

AppleWorld, Los Angeles, California. March 2, 1987. Apple Computer, Inc. and two third-party developers announced a number of add-on products today for the new Macintosh SE and the Macintosh II personal computers that provide customers with a range of MS-DOS compatibility options. These products let users of Macintosh personal computers integrate and enhance MS-DOS information by accessing software created for computers that run under the MS-DOS operating system.

AST Research, Irvine, California, announced the first two coprocessor cards that provide IBM PC-XT and IBM

PC-AT capabilities for the Macintosh SE and Macintosh II respectively. Apple Computer and Dayna Communications, Salt Lake City, Utah, separately announced MS-DOS disk drive and file transfer software options for the new Macintosh systems.

"Apple understands the importance of information sharing in multiple vendor environments, particularly with MS-DOS computers," said John Sculley, Apple chairman and chief executive officer. "Apple also recognizes that different customers have different needs. These new products, in conjunction with existing network solutions, offer a spectrum of MS-DOS compatibility options."

Three types of compatibility options are available: connectivity products that let computers share data via network or other wired connection; media compatibility products that facilitate the exchange of MS-DOS data files with Macintosh; and applications compatibility products that let Macintosh computers run MS-DOS applications software. Each option permits Macintosh users to integrate and enhance information from the MS-DOS world.

Product Specifications

To facilitate the sharing of data files on MS-DOS formatted 5.25-inch disks, Apple introduced the Apple PC 5.25-inch external drive (360 kilobytes), two interface cards—one for the Macintosh SE, the Macintosh SE-Bus Disk Card, and one for the Macintosh II, the Macintosh II Disk Card—and a software utility, *InterFile*, that performs two-way data transfer and transformation operations between MS-DOS and Macintosh. *InterFile* lets users install special conversion programs, called Translators, which transfer a given MS-DOS file format into a given Macintosh file format and vice versa—Micropro's *Wordstar* to Apple's *MacWrite*, for example.

Dayna Communications announced an MS-DOS disk drive that works with the entry-level Macintosh Plus, the Macintosh SE and the Macintosh II. Called the DaynaFile, the Dayna product connects to the Small Computer Systems Interface (SCSI) port on Macintosh family computers and works without a separate interface card. AST

New Macintosh Software

UNIX for the Macintosh II. The Apple A/UX Operating System is based on AT&T System V UNIX. Some of its features include:

- Compatible with System V software.
- Easy software portability from Berkeley 4.2 UNIX to A/UX
- Multiuser, multitasking ability
- Extensive networking facilities

A/UX is designed to address the needs of customers who already have workstations and networks built around UNIX. It applies the power of the Macintosh II to the high-end engineering, design, and communications applications common in such installation.

Apple A/UX is an alternative to the usual Macintosh operating system used on the Macintosh II. Instead of the usual Macintosh visual interface, A/UX provides customers a choice of command-line interfaces ("shells") and a variety of software development, text processing, and utility tools:

- Bourne, Korn, and C shell command interpreters
- C, FORTRAN 77, and Snobol programming languages
- Software Generation System (SGS) and Source Code Control System (SCCS) for Software Development
- Documenter's Workbench (DWB) for high-volume technical publishing
- File transfer and electronic mail with UNIX systems via UUCP protocols
- Local area networking over Ethernet with the Apple EtherTalk card
- Transparent file sharing over Ethernet with the Sun Network File System (NFS)

In addition, software developers using A/UX can create applications that can use a subset of the Macintosh User Interface Toolbox, so new programs on A/UX can have the look and feel of Macintosh applications.

Apple A/UX is an implementation of AT&T System V UNIX, Version 2, Release 2. It conforms to the System V Interface Definition (SVID) and has passed the System V Validation Suite (SVVS). This ensures maximum compatibility with applications designed for System V systems. It also incorporates many enhancements

Research's coprocessor cards facilitate applications compatibility for the new Macintosh computers. The coprocessors—the Mac86 for the Macintosh SE and the Mac286 for the Macintosh II—let the Macintosh SE and Macintosh II run MS-DOS applications in a window

on a Macintosh. These products were developed as part of a cooperative effort among AST, Apple and Phoenix Technologies LTD, Norwood, Mass.

Although sold separately, the cards require an external MS-DOS drive, such as the Apple 5.25-inch PC Drive, which

and additional utilities from the Berkeley 4.2 version of UNIX, to enhance portability of the large base of programs in that environment. To this, Apple has added several features for reliability and ease of use:

- Automated recovery of sensitive system files in case of a disk crash
- Automated reconfiguration of device drives when cards are added. Both of these features can operate without user intervention, allowing customers to perform operations that usually require trained administrators on other systems that use UNIX.

Minimum system requirements are a Macintosh II with 2MB RAM, the Apple Macintosh II 68851 PMMU (Paged Memory Management Unit) Upgrade, and at least 40MB of hard disk storage. A recommended configuration is 4MB RAM, 80MB hard disk and the 68851 RMMU.

Desktop Express. Individual Apple Macintosh personal computer users can send and receive graphics between remote locations with *Desktop Express*, a new desktop-communications product which brings ease of use and the visual quality of Apple desktop publishing to electronic mail.

Because it uses the Macintosh interface, *Desktop Express* makes it easier to share information compared to existing command-oriented electronic mail products. The software product is the result of joint development by the three companies.

Desktop Express will be published by Dow Jones Software and will receive marketing support from Apple and MCI. Available from participating authorized Apple dealers in the second calendar quarter of 1987, its suggested retail price is \$149.

Sharing of graphics and text is done via MCI Mail, the public electronic mail network of MCI. The product offers three communication options: Macintosh to Macintosh. With *Desktop Express*, any document created on a Macintosh can be exchanged, viewed and printed on the recipient's Macintosh. Moreover, if the sender and recipient have the same application software on which the document was created, they can revise documents.

Desktop Express documents can be sent overnight via courier or via the postal service, to anyone in the U.S. This option takes advantage of the Macintosh/LaserWriter systems installed by MCI in its U.S. print sites. Text messages across environments. Users can send text messages to any MCI mail user in the world, including those with MS-DOS computers.

The product includes a free MCI mailbox for a year, a password to the Dow Jones News/Retrieval service for business and financial news, and Macintosh pull-down menu interface for the News/Retrieval service. *Desktop Express* works with the Macintosh 512K and 512K Enhanced, Macintosh Plus and the new MacintoshSE and Macintosh II, and supports color graphics on the Macintosh II.

Two 400-kilobyte drives, or an 800-kilobyte drive or a hard disk drive is required, as is a modem. *Desktop Express* was developed by Solutions, Inc., of Montpelier, Vermont. Solutions' application-independent software product, *Glue*, is part of *Desktop Express* and makes possible transmission of graphics among users who have different applications.

connects directly to the coprocessor card. MS-DOS operating system software will also be included in each Mac86 or Mac286 AST products.

The Mac86 card for the Macintosh SE uses the Intel 8086 microprocessor and shares the Macintosh SE system

random-access memory (RAM). It provides monochrome display adapter (MDA) and color graphics adapter (CGA) display compatibility. The Mac286 card for the Macintosh II uses the Intel 80286 microprocessor and includes 1 megabyte (MB) of its own on-

board RAM. It supports the MDA, CGA and the Hercules graphics adapter, a popular high-resolution video display adapter.

To a user of one of the new coprocessor cards, the MS-DOS application appears in a Macintosh window, but appears just the same as if it were running on any MS-DOS machine. Many important Macintosh features, however, remain available to MS-DOS applications. For example, the user can copy and paste data, access Macintosh desk accessory programs and share Macintosh peripherals such as the LaserWriter or disk drives.

Moreover, users can install copy-protected MS-DOS applications on the Macintosh hard disk, save MS-DOS data files to a Macintosh disk and then integrate them with other files using Macintosh applications. All MS-DOS keyboard functions are available from either the Apple Keyboard or the Apple Extended Keyboard. Both coprocessors also emulate the Microsoft mouse.

Connectivity products include a wide assortment of previously announced products. Among these are Apple's AppleTalk PC Card that, when used with the Think Technologies *In-Box* PC software, supports electronic mail and messaging service and document exchange between PC-compatibles and Macintosh computers. The AppleTalk PC Card, when used with the Tangent *PC MacBridge* AFP software and the *AppleShare* file server, supports information sharing over an AppleTalk network. The PC LaserWriter Program is included with the AppleTalk PC Card, which lets the MS-DOS computers access the Apple LaserWriter printer via an AppleTalk network.

The Centram System *TOPS* lets a PC-compatible or Macintosh computer become a non-dedicated file server on an AppleTalk network. The 3Com EtherSeries Enhanced software and 3Server3 provides disk sharing for Macintosh computers on the AppleTalk Personal Network and MS-DOS computers on Ethernet. The Dataviz *MacLink Plus* provides translation of documents between a wide range of formats, including those of many popular PC and Macintosh applications.



A New Look for a New Year

This is the sixth issue of Apple® Quick Connect and the first one of 1987. What better time to kick off a new look for Quick Connect than now, while Apple stands poised on the brink of another blockbuster year—perhaps our most exciting year to date.

“The new Quick Connect will exemplify the advanced use of Apple technology in a creative, graphics-oriented format.”

After five years at Apple, I must confess I've heard that each new year would be the most exciting one to date. But I feel it's true that 1987 will be like no time before. For starts, this is the year we'll celebrate our tenth anniversary—and it's a year when we start off on a wave of excitement generated by both of our product families.

It's also the first year we commence with a User Group support program firmly in place. Over the past 12 months, the number of groups we interact with has grown eightfold. This newly strengthened relationship

demonstrates Apple's commitment to the User Group community, and to all of the end users who give our products the power to be their best.

So it's significant that this issue—1987's first—reflects a new look and expanded content.

The new Quick Connect will exemplify the advanced use of Apple technology in a creative, graphics-oriented format. It will also zero in on a favorite subject area: how experts within Apple and in the personal computer industry use our products. And it will feature some new areas of interest that we think you'll enjoy.

We hope you enjoy this first new Quick Connect, and all the other great things we have planned for you this year. Best wishes for 1987 to all of you in the User Group community. And thanks, as always, for your ongoing support.

Sincerely,

*Ellen Leanse
Program Manager
The Apple User Group Connection*

We're Listening!

The Apple User Group Connection started the New Year with a resolution worth keeping: that of checking our course with the User Group community and making any adjustments needed to meet User Group expectations.

How did we do this? By bringing 16 Ambassadors from representative User Groups together with Apple Computer people for a two-day exploration of needs, expectations, and top priorities for the new year.

During the two-day session, council members addressed Apple's 1987 outlook on User Group issues and customer issues as represented by User Group members. Although a variety of issues were discussed, the council identified five top priorities regarding Apple's ongoing User Group support.

- ▶ Encourage better interaction between Apple User Groups and dealers.
- ▶ Provide a technical support solution to User Groups through Ambassadors.
- ▶ Extend User Group evangelism to Apple's field offices.
- ▶ Improve access to management aids for User Groups to help groups become stronger and better connected.
- ▶ Identify the User Group role in end-user support and training.

Continued On Page 2

WHAT'S INSIDE

▶ GUY KAWASAKI
Apple Evangelist

▶ Apple II Getting Stronger

▶ Students Get Equal Time

▶ Apple Publications How To Get Them

▶ Putting Apple Technology To Work

Listening!
Continued From Front Cover

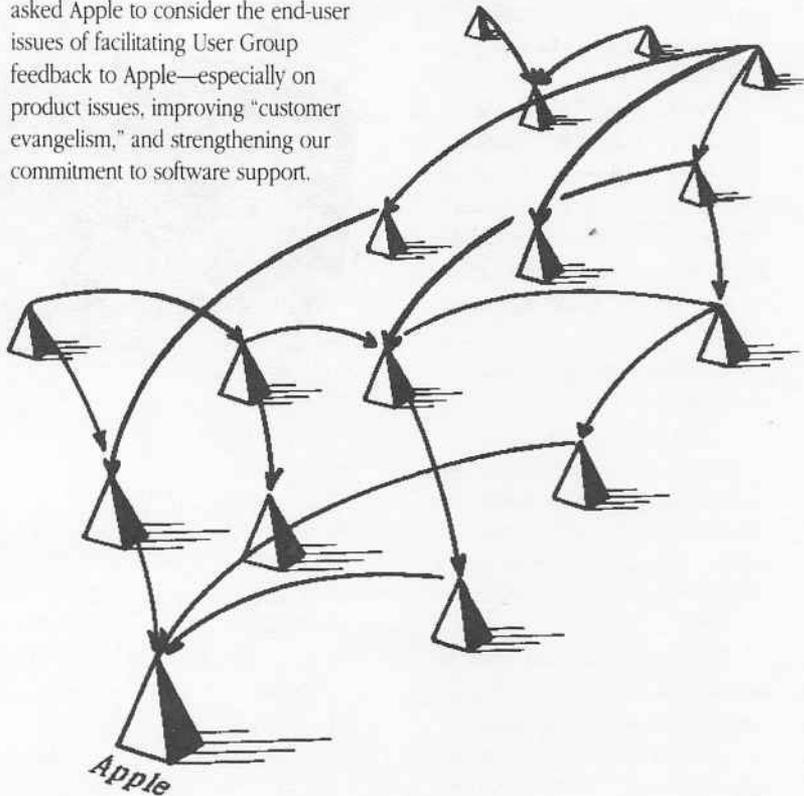
These issues, the group stressed, were in addition to continuing the existing services offered to groups by Apple's User Group Connection. In general, the Ambassadors were very pleased with Apple's support to date and claimed it had "exceeded their expectations."

In addition, the Ambassadors asked Apple to consider the end-user issues of facilitating User Group feedback to Apple—especially on product issues, improving "customer evangelism," and strengthening our commitment to software support.

Apple is extremely pleased with the outcome of the council and with the results of the User Group Connection program at large. We are committed to further developing our relationship with the User Group community and will keep you apprised of actions resulting from this very productive meeting.

Special thanks go to the following User Group Ambassadors for their outstanding contribution to this advisory council:

- Leon Ablon,
New York Macintosh Users Group
- Jerry Cline,
AzApple
- Jim Coates,
Apple-Dayton
- Raines Cohen,
Berkeley Macintosh User Group
- Bill Cronister,
*The AppleWorks User Group
& Computer Cache*
- Gerry Gentile,
North Eastern Ohio Apple Corps
- Mike Kramer,
Houston Area Apple User Group
- Bob Maraen,
Southern Tier Apple Corps
- Ralph Megna,
Little Rock Apple Addicts
- John Moody,
Quad Cities Apple Users
- Lavona Rann,
Third Apple Users
- Andy Reese,
Apple Corps of Dallas
- Jonathan Rotenberg,
the Boston Computer Society
- Charles Shipp,
Northrop Corporation MUG
- Franklin Tessler, M.D.,
*Los Angeles MUG & San Gabriel
Valley Apple Users*
- Bernie Urban,
Washington Apple Pi



*Quick Connect—Putting
Apple Technology to Work*

The Tools



This issue of Quick Connect was produced exclusively using Apple technology. It never saw the blade of a pasteup artist, the pen of an illustrator, or the keystroke of a typesetter. What you see was produced electronically using a Macintosh, LaserWriter, Cannon scanner, Allied Linotron 100 Imagesetter, and some of the best desktop publishing tools available today. Here's a quick introduction to the tools we used.

MacWrite™ by Apple Computer and Microsoft® Word by Microsoft Corporation were the word processing programs used to write the original text. The text files were then telecommunicated to the design group responsible for the publication's production.

There, the illustrations were produced using programs such as MacDraw™ version 1.9 by Apple, SuperPaint by Silicon Beach Software,

Continued On Back Cover

Meet GUY KAWASAKI

Guy Kawasaki is an evangelist. He's also a blessing to User Groups, an everlasting source of inspiration and support to software developers, and the guiding light to a host of Apple computer enthusiasts.

As manager of software products for Apple Computer, Guy oversees the management of Apple-labeled software products and the development efforts of third-party developers. His mission is to get the best and the most software for Apple. As he puts it, he and his group "are the gardeners that make sure Apple has the best flowers."

We asked him to tell us about his group, his work, and his connection with User Groups.

Q. How is your group organized and what does it do?

A. There are five departments: Evangelism, Developer Technical Support, Tools and Compilers, Developer Services, and Apple-labeled Software.

Evangelism uses fervor and zeal to convince developers to do Apple products. Developer Technical Support helps developers design, program, and complete their products. Tools and Compilers manages the Apple languages, such as MPW, and evangelizes third-party language companies. Developer Services provides general assistance to developers with seminars and equipment purchases, and administers the Certified and Registered Developer Programs. Apple-labeled Software manages the development of our own software.

Q. You are considered primarily an evangelist. What is evangelism? How does an evangelist do his or her job?

A. Evangelism is the purest form of sales. It involves convincing a company to make a very large commitment of technical, marketing, and psychic resources to Apple. Like any good salesperson, an evangelist listens to his or her customer to make the sale.

Most developers that we meet already have a predisposition to support Apple. We listen and help them achieve their own goals. Some don't want to be on only one horse, some hate IBM, some want to make more money. It doesn't matter why evangelists aren't proud.

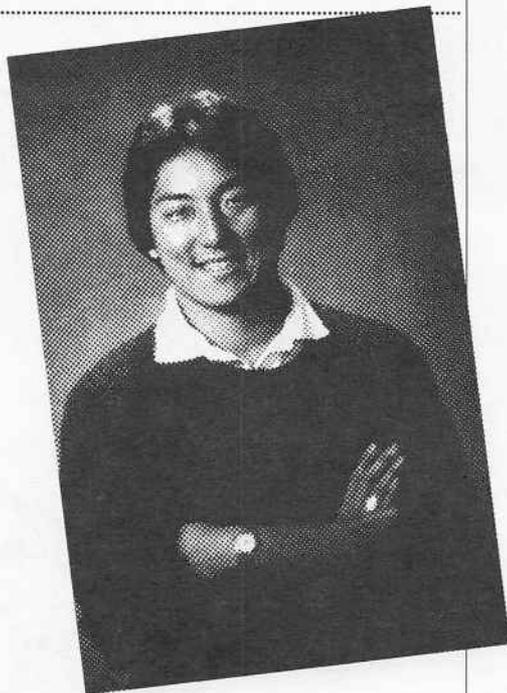
Q. How can you spot a good developer?

A. It's easier to spot a lousy developer. A lousy developer asks for upfront money or comarketing. "Me thinks the lady doth protest too much." I have never been successful with any developer that started the conversation this way.

The way to spot a good developer is to look in his or her eyes. If you see fire and guts, you've got a good developer. If the developer is in the Cupertino facilities and you can tell that he thinks he's in the Holy Land, you've got a player.

Q. What do User Groups mean to you?

A. If you look at our relationship with developers, you can see how thousands of companies make Apple's products better. They are a tremendous way for us to extend our resources. User Groups are the same thing. They extend the warmth, support, and love of our computers. It's too bad our developers and User Groups can't be put on the balance sheet—we'd be selling way under book value.



Apple Evangelist

Q. How often do you visit User Groups?

A. I try to make two or three User Group speeches per month. Going to a User Group is like playing in the Super Bowl for me—it is an uplifting experience that recharges my batteries. In the last nine months, I've spoken to groups in Honolulu, Princeton, New York, Portland, Atlanta, Eugene, Stanford, Berkeley, Santa Cruz, Monterey, the Pentagon, Chicago, Santa Clara, Santa Barbara, and Dallas.

Q. Do you ever get hammered by User Groups?

A. No. Not really. When I first started speaking to them, I was afraid of that—being an official Apple representative—but it has never happened. Without exception, I have always been warmly received by User Groups.

Continued On Back Cover

Apple II: Here to Stay, and Getting Stronger Every Day

Power can mean all sorts of things in a personal computer: speed, memory, software, graphics, expansion, and ease of use, to name a few. But there's another kind of power: staying power. And there's no better example of it than the Apple® II.

Already 10 years old and boasting more than 2.7 million owners and 10,000 software programs (and still counting), the Apple II is the world's most popular personal computer. And to ensure that it stays that way, Apple Computer has just introduced an enhanced Apple IIe to the product line. Available immediately, the updated version features an expanded keyboard, improved training and reference materials, Apple's new color scheme, and, of course, complete compatibility with all existing Apple IIe software and peripherals.

Like the original Apple IIe, the enhanced model provides 128 kilobytes of user memory (RAM), built-in speaker, 40- or 80-column text display, and built-in graphics that can be displayed in three different resolutions in up to 16 colors. But unlike its predecessor, the new version includes a redesigned keyboard with an 18-key

numeric keypad, as well as two programmable function keys (like the Apple IIgs™ keyboard). The machine comes with an owner's manual, a guide to AppleSoft Basic, and two double-sided training diskettes, all of which have been newly revised. And just so you can't miss it, the updated machine sports Apple's new platinum product color—a light gray with darker gray keycaps and accents.

According to Delbert W. Yocam, executive vice president and chief operating officer, "The introduction of an updated IIe completes the revitalization of the Apple II product family that Apple began in September by launching the IIGS, a memory expansion module for the IIc, and several new peripherals." These three systems constitute what Yocam calls "a foundation on which the Apple II family can grow far into the future."

And grow it will, thanks largely to the expandability of the Apple IIe. Its versatile open architecture provides eight expansion slots—one with the Apple 80-Column Card already installed—that accommodate a wide variety of accessories. Here are just a few of them.

▶ **Apple II Memory Expansion Card.** Plugged into one of the expansion slots, it can add from 128 kilobytes to a full megabyte or more of extra memory.

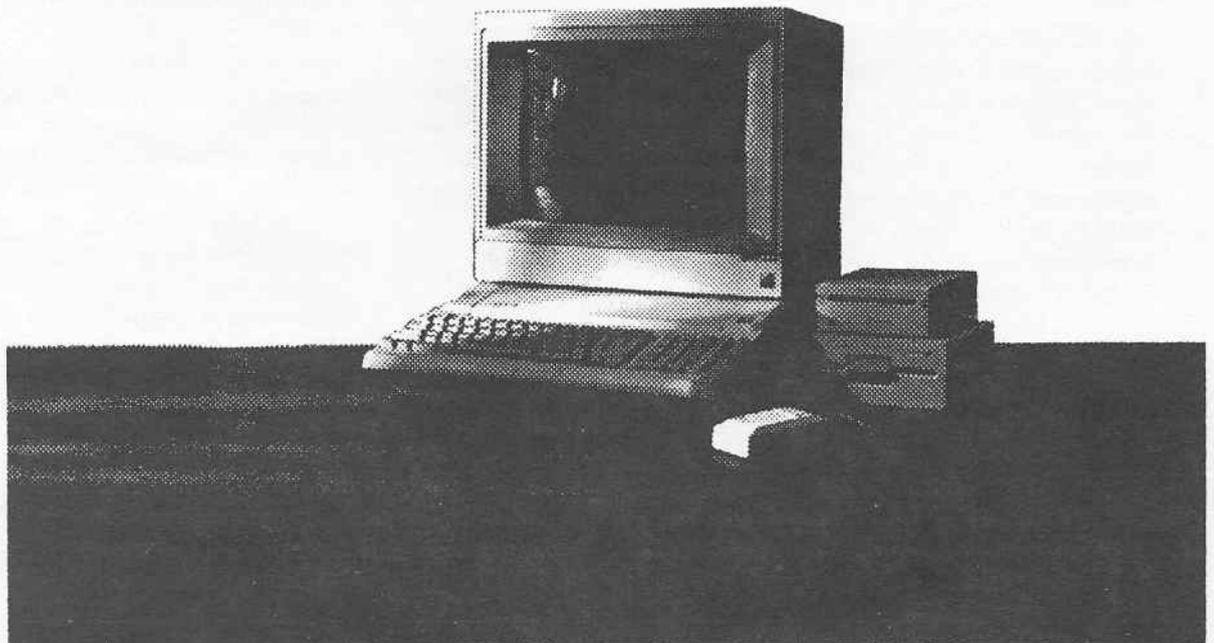
▶ **Apple II SCSI Interface Card.** A new standard for peripherals, the Small Computer System Interface (SCSI) can connect several peripherals in a "daisy chain" from a single slot in the IIe. What's more, it can move data to and from those peripherals up to six times faster than it would through an ordinary serial port.

▶ **Apple Personal Modem.** This 300/1200 baud modem, along with a communications program, will put you on speaking terms with computers all over the world, using regular telephone lines.

▶ **AppleMouse IIe.** With appropriate software, a mouse can turn the IIe into a Macintosh-like machine, allowing you to point, click, and drag to make things happen on the screen.

▶ **Apple 5.25 Drive.** This high-quality drive runs all 5.25-inch Apple II software and can store up to 140 kilobytes of data. There's also a connection for plugging in a second drive.

”
The introduction of an updated IIe completes the revitalization of the Apple II product family that Apple began in September by launching the IIGS, a memory expansion module for the IIc, and several new peripherals.
”



► UniDisk™ 3.5. This drive uses 3.5-inch disks, which have more than five times the storage capacity of a 5.25-inch disks (800 kilobytes). It's also faster than the Apple 5.25 drive.

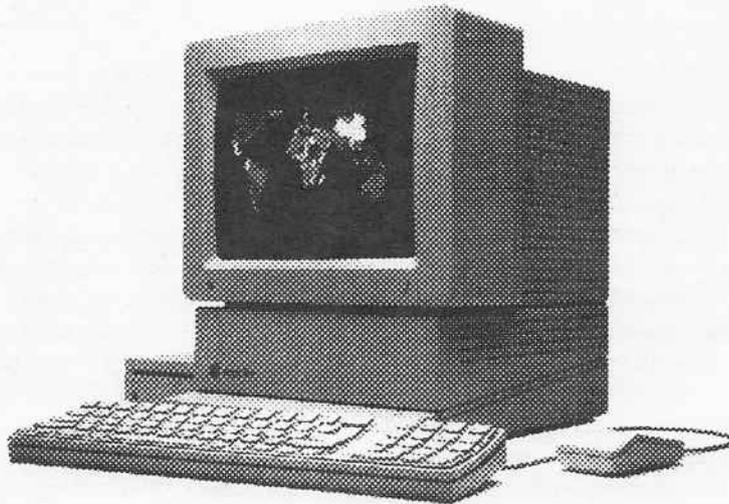
► Apple Hard Disk 20SC. With a capacity of 20 megabytes (about 10,000 pages worth), this hard disk can store all your applications and files in one location. Because it works through the Apple II SCSI Interface Card, data access is six times faster than with a 5.25-inch disk drive.

► ImageWriter® II. Printing at speeds of up to 2 1/2 pages per minute, the ImageWriter II can produce quick drafts or near-letter-quality documents. By switching the ribbon and using the appropriate software, it can even print full-color graphics. Options include an automatic SheetFeeder attachment and a 32K Memory Option printer spooler that lets you continue to work on the Apple IIe while the ImageWriter II is printing.

► Apple Monochrome Monitor IIe. This 12-inch, high-resolution monitor features a black and green display, 80 columns, and a nonglare, tilt-adjustable screen.

► Apple Color Composite Monitor IIe. By pushing a button, you can switch from monochrome to full color on this 13-inch, high-resolution, 80-column monitor.

And if all these ways to make an Apple IIe grow aren't enough, consider the upgrade kit that will soon allow conversion to the new Apple IIGS—the next generation of Apple II computers. With a direct line to the most powerful member of the family and its recent enhancements, the updated Apple IIe ensures that the Apple II family is here to stay.



What a Connection!

Five lucky User Groups have just been drawn from the hat to win one of the Apple IIGS systems awarded in the Apple II Connection contest. The winning groups are:

*Davidson Apple Users Group
Davidson, North Carolina*

*Country Computer Club
Wooster, Ohio*

*Caldwell Apple Users Group
Caldwell, Idaho*

*Apple SMUG
Salinas & Monterey, California*

*Champaign-Urbana Apple
Users Group
Rantoul, Illinois*

These groups were randomly selected in a drawing by Apple's President and CEO, John Sculley, with the assistance of the Apple IIGS Marketing Manager, Tom Virden, and Apple User Group Evangelist Ellen Leanse.

The Apple II Connection put authorized Apple dealers and Apple User Groups together to spread the word on something they both were excited about: the introduction of the new Apple IIGS. More than 320 User Groups met with local dealers to host the special Apple II meeting that qualified them for the Connection contest. All participants—dealer

and User Group coordinators—received a colorful, limited-edition Apple IIGS T-shirt in appreciation for their involvement in the program. All dealer reps also qualified for an individual certificate recognizing their role in the successful introduction of the Apple IIGS.

The winning groups have some hard work in store for their new systems—demos at meetings and BBS support are of interest to each of the winning groups. In addition, the Davidson group plans to place their system in a local college's Computer Service Center to provide an alternative to other systems available on campus. The Caldwell group will place their new GS in their local library (where they hold meetings) so that the entire community can benefit from their winning ticket.

We greatly appreciate the involvement of each group that hosted an Apple II Connection meeting—and the 320 dealer representatives that supported their local groups in this contest. We hope the Apple II Connection contest helped your group connect with a local Apple dealership—and that yours will be a winning combination!

Join the Club!

An Apple Computer Club, of course! Since 1983, Apple Computer Clubs International (ACCI) has offered in-school and after-school programs to students in kindergarten through high school. The clubs provide an environment where students can learn about computer technology, develop leadership skills, and share their accomplishments with each other and even with their communities. Each club is directed by a teacher/advisor who receives resource publications and computer application project ideas from Apple Computer as part of their membership.

Apple Gives Students Equal Time

For the second straight year, Apple Computer is offering a grant program for underserved students in public and private grade schools. The program, called "Equal Time," is designed to provide greater access to computer technology for such students as the economically disadvantaged, the disabled, ethnic and linguistic minorities, and females studying math and science. Last year under a similar program, Apple donated \$1.2 million in Apple equipment to 20 projects

Each year, club members look forward to participating in the club's annual merit competition—a contest designed to encourage program development and provide recognition of the most useful applications for Apple® personal computers. This year, the lucky winners will enjoy an all-expense-paid trip to Washington, D.C. (which includes an awards ceremony and planned educational activities), as well as a chance at one or more Apple II computer systems. Additional prizes will be awarded to semifinalists and runners-up.

nationwide. In fact, over \$6 million of computer equipment has been donated by Apple since the first grants were made in 1979, indicating Apple's strong commitment to education.

According to Andrea Gonzales, program officer of Equal Time, this year's grants are aimed at developing critical-thinking and problem-solving skills in daily classroom subjects. "We want to encourage students to use computers as tools to understand concepts and communicate more effectively," she explains.

Likely candidates for the grants include schools that have long-range plans for the implementation of technology and adequate resources for in-service training and technical support. Complete guidelines for the Equal Time grants can be obtained by writing to Apple Education Affairs, 20525 Mariani Avenue M/S 5-B, Cupertino, CA 95014.

If you know of a deserving school, pass on the good news!

This year's competition features the four categories described below for three levels—kindergarten through 5th grades, 6th through 8th grades, and 9th through 12th grades.

► Community Service encourages clubs to develop Apple computer projects that provide a service to their local community or solve a social or educational problem facing their sponsoring organization.

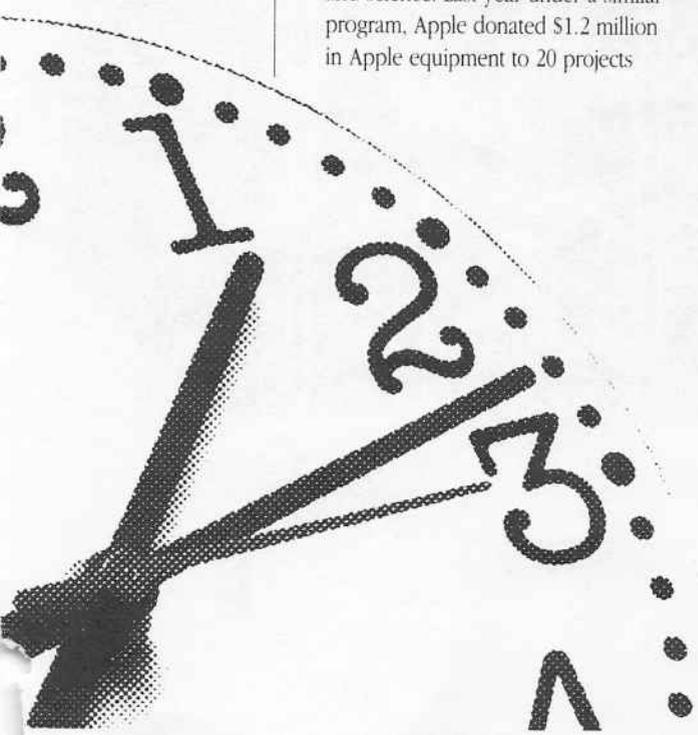
► BASIC Programming challenges students, working individually or in pairs, to create original BASIC programs. Students are encouraged to create programs that teach, entertain, or help people solve problems.

► Computers in the Curriculum encourages computer club advisors to integrate computers into the regular educational curriculum, such as English, social studies, music, science, and mathematics.

► Judges' Choice gives clubs the freedom to design projects that don't fit into the other categories. This is where "anything goes."

Official rules and entry forms are available from Apple Computer Clubs International, 175 Middlesex Turnpike, Bedford, MA 01730, and must be postmarked on or before April 15, 1987. The names of approximately 60 semifinalists, runners-up, and winners will be announced in mid-May.

If you'd like more information in a hurry, dial the toll-free "Call to Action" number: (800) 343-1425.



Apple Publications and How to Get Them

We know that members of User Groups usually want as much technical information about Apple products as they can get, and then some. Whether you're a programmer or new user interested in learning more about a product, Apple Computer's User Education department probably has just the book for you. Here's the scoop on what this group does, what's available, and how to get it.

Introducing the User Education Department

In the old days, Apple had one department that produced all the manuals for our products. But as the number of products increased and the needs of users diversified, so did the department. Today, User Education has four groups that handle a wide range of publications.

► User Publications creates the manuals that all users need. Those are the owner's manuals and installation guides that come with the products.

► Technical Publications produces technical reference books for Apple computers, peripheral devices, and software. These books are needed by the people who support the products, including the developers of applications and hardware, and the people who do repair and training. While some products have a single reference manual, others have a whole suite of books, each devoted to a specific aspect of the product. Such a suite of books may include introductory books, hardware references, firmware references that describe built-in software (such as the Toolbox), and books about development system software, such as compilers, assemblers, debuggers, and the like.

This group also writes developer notes—less formal documentation for registered developers working on programs and peripheral devices for new Apple products that are not yet available.

Interactive Education produces training disks and other computer-based materials to help you get the most from your system.

Publications Services handles the editing and production of all the printed and computer-based materials—no small task when you consider the volume of publications being developed.

Obtaining Technical Reference Books

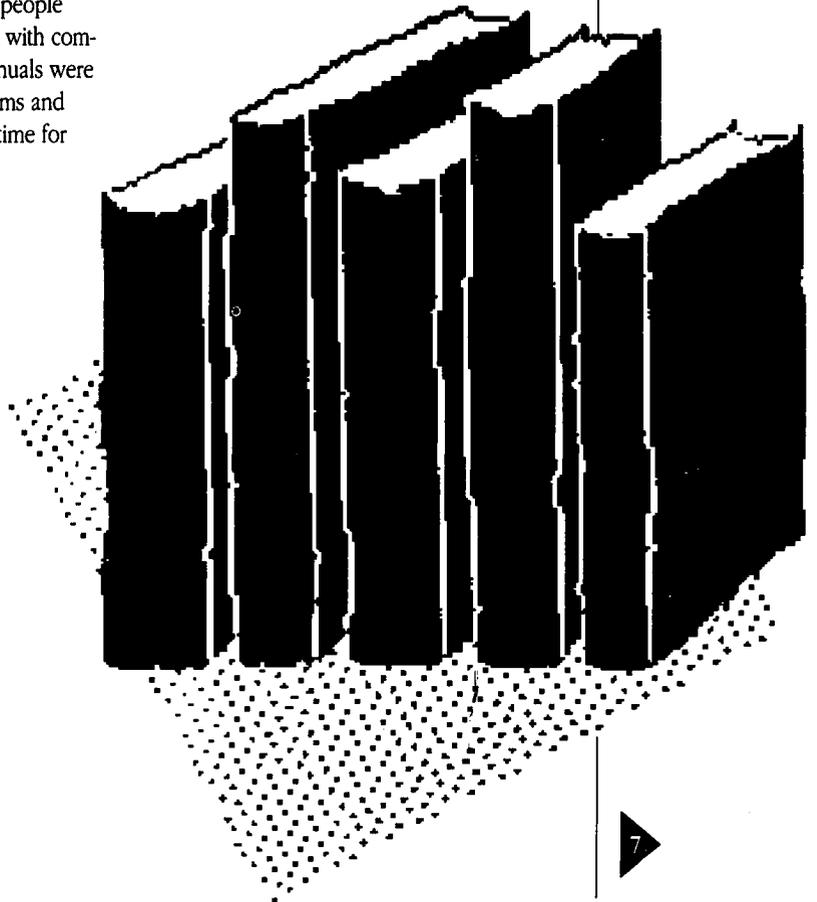
If the information you need is not contained in the manual that came with your product, you'll be looking for books produced by the Technical Publications group.

In the past, your only recourse was your local Apple dealer. But that often was an iffy proposition. Dealers never seemed to carry the books people were asking for. Compared with computers and peripherals, manuals were low-profit, special-order items and dealers simply didn't have time for them.

To get around this problem, Apple began working with book publishers and their distribution channels—namely, retail bookstores. Today, Addison-Wesley Publishing Company prints and distributes an entire line of books written by Apple called the Apple Technical Library. These books can be found in all major retail book outlets.

In addition, Apple began encouraging people outside Apple to produce high-quality books about Apple products. Publishers who maintain Apple's quality standards are now granted the right to use the Apple Press imprint. These books can also be found at retail bookstores.

So, for those of you who want to know more about your Apple product, head for the nearest bookstore. The Apple Technical Library and books with the Apple Press imprint are your best bet for quality information on technical subjects concerning your Apple.



Apple Pays Half— Until March 14

Apple Computer has extended its money-saving rebate offer on Apple-branded software and peripherals until March 14, 1987. As reported in the October issue, if you purchase an Apple IIgs system that includes the Apple IIgs CPU, any Apple monitor, and a first Apple disk drive, Apple pays half—up to \$250—on any Apple software and peripherals you purchase on the same day at the same store.

See your local authorized Apple dealer for complete details. But don't delay. Rebate forms (available from your dealer) must be postmarked by April 15, 1987. There's just enough time to tell a friend.

MDS Upgrade Extended

If you own the Macintosh 68000 Development System (MDS) version 1.0, you can still get an MDS 2.0 upgrade package. The offer has been extended until February 28, 1987. The upgrade package includes the same three disks as the MDS 2.0 product, along with a 64-page update manual explaining the differences between the two versions (you will still need your old manual).

To obtain the package, back up your MDS disk 1 and send the original disk (as proof of purchase) along with \$25 (plus sales tax for California residents) and your name and address to: Apple Computer, Inc., MDS 2.0 Upgrade, 467 Saratoga Avenue, Suite 621, San Jose, CA 95129.

Staff

Director: *Cathy Hoolihan*

Contributors: *Ellen Leanse,*

Guy Kawasaki

Coordination: *Apple Creative Services*

Editor: *Janet Joers*

Design and Production: *Aplin & Uno*

© 1987 Apple Computer, Inc. Apple, the Apple logo, AppleLink, ImageWriter, and LaserWriter are registered trademarks of Apple Computer, Inc. Apple IIgs, Macintosh, MacDraw, MacPaint, MacWrite, and UniDisk are trademarks of Apple Computer, Inc. CompuServe is a registered trademark of CompuServe, Inc. Microsoft is a registered trademark of Microsoft Corporation. MORE is a trademark of Living Videotext. PostScript is a trademark of Adobe Systems, Inc. WriteNow is a trademark of Airus, Inc.

Apple Technology

Continued From Page 2

and Cricket Draw by Cricket Software. Next, the illustrations were saved directly in PostScript™—the page description language for LaserWriter created by Adobe Systems. The photos you see were scanned using a New Image Technology scanner and then processed into PostScript using LaserPaint software, by Knowledge Engineering.

The page layout was done with JustText by Knowledge Engineering. The final integration of the text and graphics was accomplished in QUED, a text editor by Paragon Courseware. Finally, the mechanical artwork was produced on a Linotron 100 and sent to the printer.

In next month's issue, you'll get an inside look at the production process and find out how we use these tools and the Macintosh to create the finished product. In later issues, you'll be meeting the people behind the tools as we cover specific aspects of publishing Quick Connect from a desktop. See you then!

Guy Kawasaki

Continued From Page 3

Q. What's the most unusual User Group presentation that you ever made?

A. That's easy, the Pentagon Macintosh Users Group. There was more brass in that room than Pier 1 Imports. I offered them an open Macintosh prototype for a ride in an F-16. One officer from the Air Force wanted to know about new laser printers, so I asked him about the Stealth. He laughed. So did I.

Q. What are your favorite applications and what do you use your Macintosh for?

A. My favorite applications are WriteNow™, MacWrite™, AppleLink®, MORE™, MacDraw™, and MicroPhone. I think that WriteNow is the most elegant Macintosh word processor. I use MORE and MacDraw for all my presentations with overheads. AppleLink is the Apple Computer E-Mail system. When my wife lets me, I use MicroPhone to conference on CompuServe® at home. I also have a Radius full page display.

Q. If you were run over by a truck, what would you like to be remembered for?

A. First, for creating a great group of people called Software Product Management. I'm very attached to my people. Second, for getting the best software for any personal computer for Macintosh. Third, for unbundling MacWrite and MacPaint™. By the way, did I bleed six colors?

The Kraft Quickstick

Reviewed by Bob Lewis

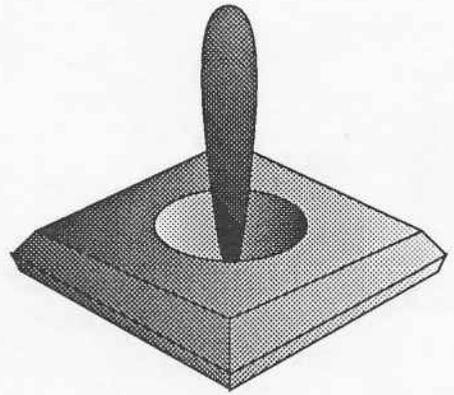
“With Quickstick, games that were a chore with the mouse reverted back to what they were meant to be: entertaining.”

As the Game SIG Leader for the Macintosh, I have had the chance to play many of the different entertainment programs designed for the Mac. As we all know, the mouse is an excellent tool to work with, but is it really beneficial when it comes to playing games? There have been many times I have played *GridWars*, *MacCommand*, *Airborne* or some other game that required quick and precise movement of the mouse and the mouse would fall flat on its face (or off the mousepad). Let's face it, most games (especially arcade style games) work better with a joystick.

Until recently there has been no alternative to how we play games on the Mac. Kraft Systems has solved that problem with the Quickstick. For the last month, I have had the chance to test one out. I found the stick provided very quick and fluid movement on the screen. Games that were a chore with the mouse reverted back to what they were meant to be: entertaining. On almost all games played, my scores drastically increased. I began to play games that I had not touched in over a year.

Quickstick fits comfortably in the palm of your hand, thus eliminating the hassle as to where to place the mouse. This also allows for easy passing from one player to another for multiple player games. It requires less desktop space because you only have to manipulate the joystick. Its 5-1/2 foot cord allows you to ease back into your favorite chair as you zap those nasty mallards in *Feathers in Space*. Its design blends in well with the Macintosh in that it has been finished in the same color and style as the computer itself.

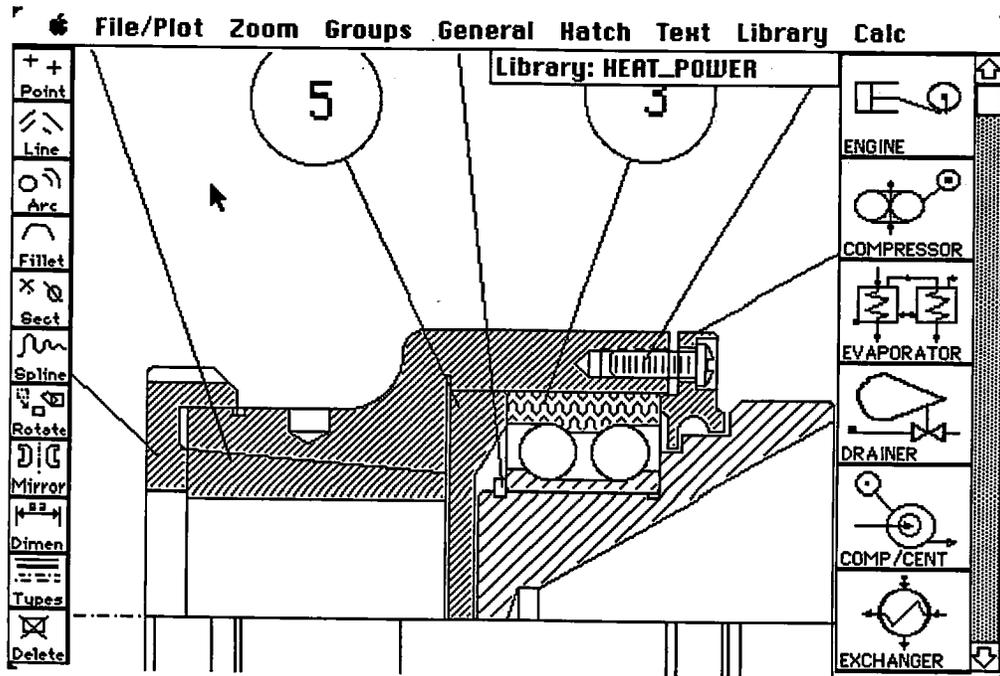
Unlike the one button on the mouse, Quickstick has three, allowing more versatility and comfort to the user. I found the button in the stick to be most useful when playing the “shoot 'em up” style games. Adding to the stick's versatility is the fact that you can also set the stick in what Kraft calls the “free floating mode” or the “spring centered mode.” In the “free floating



mode” the stick acts just like the mouse. I found this mode most useful when playing the “shoot 'em up” games and in most other applications that would normally involve usage of the mouse. In fact, I wrote this article using the Quickstick instead of the mouse. The “spring centered” mode causes the cursor to be center oriented when the stick is released. I found this mode most useful when playing games like *Harrier Strike Mission* or *Championship Star League Baseball*.

Although I found the Quickstick to be a positive alternative to the mouse, it does have one small flaw in it. Every once in a while as I slowly moved the cursor to within about one quarter inch of the edge of the screen, the cursor would suddenly jump the remaining distance to the edge. Since this does not seem to happen too often, I don't find this to be a major problem. Also, be prepared to go through an adjustment period. Since the Quickstick has a different feel in comparison to the mouse, it may take a little time to adjust to it.

In conclusion, if you are thinking about replacing your mouse or just want an alternative to it, the Kraft Quickstick may be right for you. The three-button model lists for \$79.95, and a two-button model lists for \$69.95. I prefer the three-button model over the two-button because, the third button is located at the top of the stick. This is particularly useful when you have to “click and drag” from the menu. There is also a Kraft Quickstick for the Apple IIc. If you have more questions about the Quickstick, you can write to Kraft Systems, 450 W. California Avenue, Vista California, 92083 or call (619) 724-7146.



Precision Drafting on the Macintosh

For the Professional, MGMS CAD Beats MacDraw and MacDraft

Reviewed by Ronnie Haws

MGMS CAD is a good computer-aided design system for the Macintosh. *MGMS CAD* is the drafting part of a numerical controlled (NC) machining program. All drafting done with this system will show the precision required by a NC machine.

You typically enter a few key points using both mouse and keyboard. Then using snap-to-a-point, projection, and intersection-of-lines, you can construct the basic drafting. You can sit down and do very accurate geometric construction! Use a few fillets, tangents and arcs, and you have a drawing the lesser systems (*MacDraw* and *MacDraft*) can't touch. Using the various systems, try and draw a crane hook from a catalogue page. Print it out and examine the results; you will see what I mean.

Palette Activates Menus

MGMS CAD has a palette on the left side of the screen showing eleven icons that have their own menus. The first icon represents the Point menu.

MGMS CAD has ten different ways to make points. Next is the Lines menu with a dozen selections. There are nine different ways of drawing circles and arcs.

Now for the great inputs, the fillets and tangents in seven different ways, and intersections of lines and arcs in ten different ways. The next menu, Splines, contains convenience features such as contours, slots, D-holes, hex and assorted shapes. Next down on the palette is the Rotate menu which moves, duplicates and rotates groups. This is a very important part of the *CAD* system and is used considerably.

The Mirror menu is a time saver. You can mirror about an axis anywhere, at any angle. The Dimension menu has thirteen options. From the Line menu you can select three line styles (1 pixel, 2 pixels, and 3 pixels wide), a dashed line, and a centerline. The final icon represents the delete function. You can delete any entity or undo it. You can also delete an area, but be careful—there is no undo.

MGMS CAD supports desk acces-

sories. It does copy and paste with the clipboard in text or PICT format. You can add an old drawing or merge an old file into a new one. The zoom features of this program are the best I have seen; in effect you select an area like MacPaint and then that area fills the screen. They claim a 100 to 1 ratio, and one keystroke gets you back to the original view.

Grouping Is Important

In *MGMS*, the grouping plays an important role in any unit of entities that must be handled together. *MGMS* can group objects by entities or by region. One of the ways *MGMS* implements layers is by making various groups visible and invisible. I could use, in addition to visible and invisible, a selection of patterns for group display.

The general menu looks innocent enough but with this program it has importance. *MGMS* handles scale different from most. In the Macintosh, the drawing is always full scale. So for a plant layout of 2000 feet on a side, your drawing size would need to be 24000 x

24000 inches.

When you plot or print, you must choose a paper size and a scale to print. You can also let the program automatically scale the drawing to fit your paper. If you chose a scale where the drafting is bigger than the paper, the program will let you decide what to put on the paper by positioning a flashing rectangle. When you print on the ImageWriter or LaserWriter, you can pick out which sheets you want printed and which you want skipped.

Well, back to the other items on the general menu. **Organize** apparently helps the program organize itself. If you try anything complicated with the program and it fails, ask it to organize itself; that improves its response dramatically. The repaint is simply a repaint. To speed things up, the program does not repaint or organize unless requested. One of the problems that I have with this method is that after an organization and repaint, any isolated points on the drawing vanish. If you want to keep them, one way is to draw a circle at the point of .001-inch diameter.

Then one pixel will stay and save your point. The last item of importance is the selection of drawing dimension or temporary dimensions. When in temporary dimension, you can measure or temporarily dimension any item, and it won't be there after the next repaint. Very useful.

Library Powerful and Useful

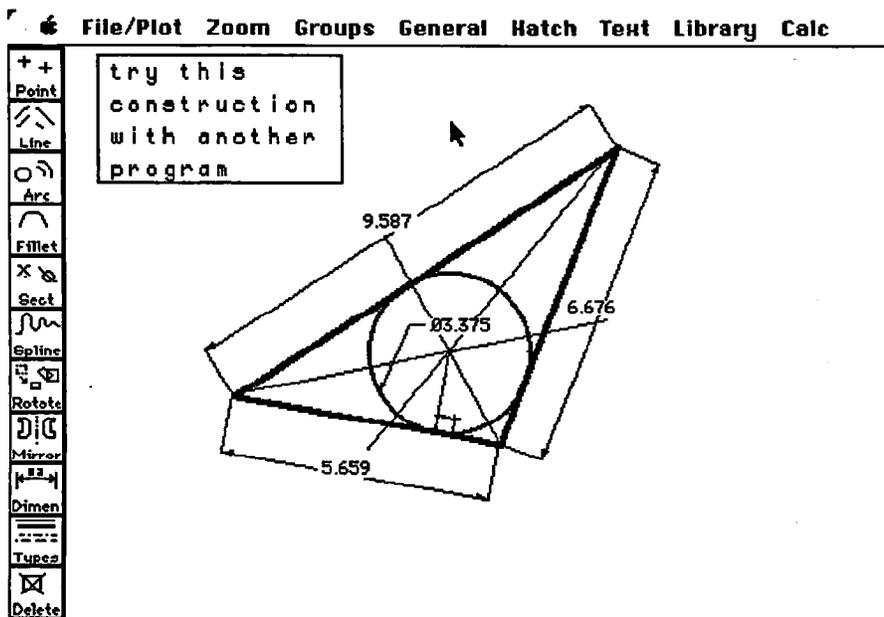
The library is a powerful and useful function. Any group that has been made can be stored in the library. When you put a group into the library, it is identified by the name you gave it or a default name the program gave it and a small icon picture of the part. When stored in the library, each symbol has a key point designated by you. Using the key point one can move the group quickly and with precision. Scaling of groups coming from the library is another option. You can animate the assembly of a machine. This requires another use of layers. Symbol storage is limited only by disk space.

MGMS CAD comes with a program *MGMS GEOMETRY*. You can select a section by entity or surrounding it with a selection rectangle. The area selected turns gray to show you what you did select. It gives the area, perimeter, X c.g., Y c.g., moment of inertia about X, and moment of inertia about Y. A mechanical engineer can use that on odd structural shapes.

The Text menu creates a new menu structure. You no longer have access to the desk accessories, but in one second you can be out of text edit and use them, so not a big loss. You have cut, copy, and paste with the clipboard so you have access to text from other programs. Control over text is good, and it can be placed as desired. The main prob-

lem with *MGMS* text is that what you see is not what you get. Dimensions on *MGMS* have the same problems. You can do them on the screen and they look fine. Print them on the ImageWriter or plot them and they are typically on top of something. You can adjust the output on one device. The screen, ImageWriter, and plotter are all different. What you see is definitely not what you get. A preview would help.

This program is optimized for a plotter. A full-scale plot has the draft perfectly on scale. If you don't believe me, get out your micrometers and calipers. But printing on the ImageWriter has problems. The scale is not true and the dimensions are messed up. If the drawing is "D" size and printed on the ImageWriter using full scale, the dimensions will be .29-inch high, which is much too big. It gets on top of everything. If you will change the view size to "B," and then to look at the "D" size drawing, use the scale of view of .4 so that you can view all. Then print, and the dimension will be only .15 inch high, which is acceptable. While this method is not perfect and it is troublesome, it does give you some control over dimension size and allows you to use dimensions on the LaserWriter and ImageWriter output. Note that dimension and text are different, text is a selectable percent of drawing size at the time of its creation and does not change with drawing size afterwards.



Ronnie's challenge: duplicate this drawing with MacDraw or MacDraft.

A Full-sized Complaint

Now for a full size complaint. I have tried to print full scale. I drew a 5 by 5 inch square and printed it on an ImageWriter I with a MAC+. I used *MGMS CAD*, *MacDraw*, and *MacDraft*. I used seven different ImageWriter drivers dated from Jan 16, 1984 to (v 2.3) May 28, 1986. In every case the very best that I could do was 5.06 X 5 inch, which is not acceptable. It should be off by one dot at the most. Apple Computer please correct!

MGMS CAD when compared to *MacDraft* is very very fast. When you get a full drawing with a lot of groups and dimensions, the time starts adding up. It makes no time difference on a repaint whether you have the whole drawing or a small corner, the whole thing is

done each time.

This program is easy enough to use. I read the manual and did the tutorial in a few hours. I then started doing productive work. After that, I watched a pro at work with the system and that showed me a lot in CAD technique. *MGMS* is flexible and capable.

The Macintosh interface is done well. The only odd item in it is the moving of the cursor to the left to escape from last selection. This is easy to learn and it is quick. The menus have some control characters installed so that you may use quick keystrokes. *MGMS* is *Tempo* compatible for power users. The first thirty minutes you will feel odd because the scale handling, mouse escape, and large size of menu selections are awkward. After that, you will fumble around saying to yourself, "Where did I see that before?" Soon you will be at home with *MGMS* and then struggle when you go back to *MacDraft* or *MacDraw*.

MGMS CAD Wish List

My wish list includes a what-you-see-is-what-you-get on plotter, *ImageWriter*, and *LaserWriter*. They all should be able to produce true scale output. I would like easy direct control of dimension size. While doing geometric construction, you typically create a new point by the intersection of two lines. If one of the lines happens to be part of a group, this will not function—I sure wish it did. At present, you must ungroup to do this. The present lines for drawing, 1 pixel, 2 pixel, and 3 pixel wide could use some help with patterned lines (well we don't have color).

As with new and complicated programs, *MGMS* has an occasional rough edge. Fortunately, *MGMS* usually has more than one way to skin a cat. Upgrade Technologies is continuing to improve this program in smoothness and capabilities. I think this program is good for the mechanical engineer. If I did not have *MGMS CAD*, I would have to go back to pencil and paper because I cannot make engineering drawings with *MacDraft* or *MacDraw*.

MGMSStation v 2.05. \$799. Upgrade Technologies. Requires 512K. Copy protected.

DESKTOP PUBLISHING SERVICE BUREAU

15% OFF
any typesetting order
with this ad.

- Linotronic Phototypesetting
- Laser Printing
- IBM PC or Macintosh

Desktop publishing becomes professional when you bring your IBM PC/XT or Apple Macintosh files to MicroType for typesetting. We can help your business add the economy of

	WESTHEIMER	BUFFALO SPEEDWAY
	ALABAMA	
EDLOE	MERCER	
	RICHMOND	

desktop publishing while improving your brochures, manuals, newsletters, etc. MicroType, a professional graphics firm, offers typesetting, design and printing services.

MicroType is your one-stop for everything desktop.

MICROTYPE™

3433 W. Alabama, Houston, Texas 77027 • 713/963-8717

Moving?

If you are moving, be sure to notify the membership chairman of your new address and telephone number. Send a letter addressed to HAAUG to the attention of Neal Scott or call him with that information.

Neal Scott — 890-0532

HAAUG
P.O. Box 610150
Houston, TX 77208

Gaming on the Mac

by Bob Lewis

In all Macintosh publications, there is always a tip section on how to get the most out of different applications designed for the Mac—except for games. Starting with this issue of the *Apple Barrel*, I will give tips and clues to help you get the most out of your games. But first a word from our sponsor. The *Apple Barrel* wants you!!! If you have a game out there that you're crazy about, why not write a review of it and submit it to the *Apple Barrel*. Enough said.

Shanghai—Work on removing your tiles from the outside to the inside. This will give you a better chance at clearing the dragon.

Rogue—When fighting a monster (or monsters), try to get yourself in a doorway. This will allow you to handle one creature at a time.

Wizardry—Low on gold? Enter the training grounds and create some new characters. Once created, just

steal the gold. The more characters you create, the more gold you can accumulate.

Cyborg—Want to get out of the forest? First find the string which you will cut with the microlaser. Then find the sneakers and lace the sneakers with the string. This will stop the sneakers from falling off your feet. This will also allow you to climb a certain tree for the food needed to feed the lizard.

Transylvania—After entering the UFO, check your inventory. You may be in for a surprise.

OrbQuest—To get to the *Isle of Mystics*, you will have to walk on water. You may get more than you expect when you visit the temple.

Uninvited—Keep getting killed on the first floor hallway? Leave those hallway doors alone. Go upstairs.

The material needed to kill that ghost can be “swept” out in one of those second floor rooms.

Cyborg—Have you found the black cube yet? Never judge a cube by its cover.

Down Hill Racer—Try to keep yourself as close to the center of the course as possible. This will prevent you from wiping out and improve your time.

Crimson Crown—It will take an amphibian to get the object in the lake. Those who touch the possessor of the crown can be set free.

Got a game tip? Give me a call at 242-0990. Who knows, it might wind up in the *Apple Barrel* with your name next to it. Remember, the Game SIG gathers at each meeting at 11:00 am. Hope to see you there.

SCS **Sprague Computer Services**
Bruce Sprague • HAAUG #784
(713) 360-1000



Lowest Apple Prices In Houston!
Mac Plus/LaserWriter and Apple IIGS Specialist
Memory Cards, SCSI Hard Disks, Drives and Modems
Systems Set Up, Checked Out, and Demonstrated

Quality Apple/Mac Products and Reputation of
Honest Service and Support Since 1983

Agent for Authorized Apple Dealer
Applied Engineering - Capetronics (BSR)
Distar - ProAPP



Encode

Re Kramer
713-358-6687

Special Orders Welcome

For Sale

Apple III (128K), Apple III disk drive, Apple III CRT, NEC dot-matrix printer, AppleWriter III, VisiCalc III, Pascal, Universal Parallel Interface Card, System software, SOS, utilities, and emulation software.

Contact Jay O. Gallagher—621-1987

\$750

Moving?

If you are moving, be sure to notify the membership chairman of your new address and telephone number. Send a letter addressed to HAAUG to the attention of Neal Scott or call him with that information.

Neal Scott — 890-0532

HAAUG
P.O. Box 610150
Houston, TX 77208

**It used to take up to \$15,000
and a video technician to
project real-time PC images.
Now anybody can do it
in five minutes for \$1270.***

- 1.**
Plug the unit into your PC.
- 2.**
Place it on your overhead projector.
- 3.**
Begin your real-time presentation.

New KODAK DATASHOW System

Just think of all the applications.
Call for details:

(713) 528-7119

*Sales, service, and rental of
video projectors and monitors
for data display. 10%
discount for HAAUG members
(limited offer).*



1336 West Clay St.
Houston, Texas 77019

**SONY®
Panasonic.**



Eastman Kodak Company
Motion Picture and
Audiovisual Products Division

ASTRO AUDIO VISUAL CORP.

Houston Area Apple Users Group
Apple Barrel
P.O. Box 610150
Houston, TX 77208

Address Correction Requested

BULK RATE
U.S. POSTAGE
PAID
HOUSTON,
TEXAS
PERMIT 3936

Mem # 523 Expires: Courtesy
Robin A. Cox
5401 Rampart #662
Houston, TX 77081-1329

Meeting Dates 1987

March 21, 1987*
April 18, 1987
May 16, 1987
June 20, 1987
July 18, 1987
August 15, 1987
September 19, 1987

*This meeting is at the Stouffer Greenway Plaza

